

# SESSION 01

(Keynote)

## Keynote Session 1

THURSDAY November 8, 2012

ROOM **Festsaal**

09:30-10:30hrs

### 01.001

## Continuing professional development – The journey to autonomy

**A. Moore, M. Donaghy**

Brighton (United Kingdom)

### Learning objectives

- To explore the concept of autonomy in clinical practice
- To consider the range of CPD opportunities available to physiotherapists.
- To analyse how CPD may link to clinical autonomy.
- To consider how clinical autonomy may impact on professional identity and responsibility.

### Description

This session explores the concept of autonomy and the role that CPD may have in the development of autonomous practice. It considers undergraduate training, post registration education and doctoral level education. In the session consideration will be given to the spectrum of increase in autonomous practice and the way the view or description of autonomy has changed over the decades.

The session will focus on extended scope and specialist practitioners and consultant roles where physiotherapists may work alongside members of the medical profession in relation to diagnosis, prescription, injection therapy and referring for diagnostic tests such as blood tests, scans and X rays. The session considers the importance of CPD at all levels, importantly acknowledgement will be made of gaps in CPD/professional development avenues and how these are currently potentially being filled. The session will end by focusing on potential issues related to the potential impact that clinical autonomy may have on professional identity and responsibilities.

### Implications/conclusions

This session highlights the benefits of CPD relating to autonomy but also raises some questions in relation to autonomous practice perhaps clouding professional identity.

## SESSION 02

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.20

11:00 – 11:45hrs

**02.001**

### **BSc program in physiotherapy starting with early clinical placement linking science and practice: Educational overthrow or overchallenge of supervisors?**

**C. Grüneberg, M. Handgraaf**

**University of Applied Sciences - Hochschule für Gesundheit, Bochum, Germany**

#### **Purpose:**

Physiotherapists' should be capable of integrating evidence-based practice (EBP) and clinical guidelines within the day-to-day practice of physiotherapy. The purpose of this study was to examine if study questions for students concerning EBP facilitate knowledge translation perceived by clinical supervisors during the clinical placements.

#### **Relevance:**

Although there is a growing awareness of evidence-based practice among physiotherapists in Germany, implementation of EBP has proved to be one of the great challenges in education and clinical practice. There are many reasons why research evidence may not translate into evidence-based physiotherapy. Several studies identify practitioner barriers (education, attitudes and beliefs, interest and perceived role, and self-efficacy) and organizational barriers (perceived support and resources) to physiotherapists' implementation of EBP.

**Description:** The clinical placement of the students (3rd semester, 37 students) took place in 27 institutions. All institutions were evaluated.

#### **Evaluation:**

A cross-sectional mail survey was conducted. All data were analyzed descriptively.

**Conclusions:** The preliminary results of this study suggest that an active knowledge translation of the clinical supervisors is triggered by the study questions of the 3rd semester. Additional research is needed to understand active knowledge translation in such a special constellation of novice students and clinical supervisors.

**Implications:** Research gaps remain regarding which knowledge translation strategies impact positively on patients health care and patients health outcomes. There is a need for continuing education of the clinical supervisors to enhance skills and self-efficacy to search and critically evaluate the research literature and to solicit patient preferences among clinical supervisors. Educational programs like learning in a community of practice of novice students and clinical supervisors seems to facilitate knowledge translation.

## SESSION 02

(Poster Presentations)

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Thursday, November 8, 2012

ROOM C.E.20

11:00 – 11:45hrs

02.002

### **Turning knowledge into action. Competences for evidence-based physiotherapy in stroke rehabilitation. Theoretical foundation of a pedagogic concept for a project for the degree program in physiotherapy at University of Applied Sciences, Salzburg, Austria**

**M.-L. Seisenbacher**

**University of Applied Sciences , Puch/ Salzburg, Austria**

**Purpose:** Analysis of specific, quality-orientated, university-level didactics for the acquisition of competences with respect to evidence-based physiotherapy methods for stroke rehabilitation; practice transfer through the process of understanding and applying these methods based on the domain-specific requirements.

**Relevance:** Evidence-based practice has changed the approach of the physiotherapeutic process within the last years.

In physiotherapy familiarity with EBM and its integration into the didactic concept has become a basic skill. Physiotherapy students must be well prepared to deal with the growing amount of evidence-based physiotherapy methods. They have to choose the appropriate treatment approach for a specific pathology within a specific framework.

In consequence it is not enough to teach guidelines in scientific literature research and the usage of databases. To obtain a realistic overview of the application of evidence based physiotherapy methods within a specific objective, the didactic concept has to be practically orientated as well. For that reason a project orientated tuition has been applied within the 5th semester of physiotherapy education at the university of applied sciences-level in order to increase the match of theoretical knowledge and practical understanding of evidence-based physiotherapy methods in stroke rehabilitation.

**Description:** Method: A qualitative case study in the context of the degree program in physiotherapy at University of Applied Sciences, Salzburg, Austria. The thesis uses a qualitative research design with a multi-stage case study approach in a university framework. Qualitative methods for data collection are: »analyses of documents«, »problem focused interview« and »theoretical coding«. Demonstration of the practical consequences: In groups of 5 students a topic concerning evidence-based physiotherapy methods in stroke rehabilitation has to be chosen. The timeframe for the project phase is 4 to 12 weeks.

The pre-selection of the following methods had been made by the author:

- Constraint induced movement therapy
- Mirror training      • Repetitive training
- Treadmill and automated locomotion therapy
- Robot-assisted therapy of the upper limb
- Functional electrical stimulation

Project guideline:

- Create a project plan
- Plan two sessions of tuition with the lecturer
- Accomplish literature research, apply a »critical appraisal« on the selected scientific papers
- Focus on application of the methods on specific patient groups, pathologies, rehabilitation phases
- Find centers and clinics, where the methods are applied on patients
- Arrange interviews with physiotherapists, who are familiar with these methods
- Produce videos, find clips on the net

Integrate a practical tuition of the particular method in your project presentation

Timeframe for the presentation is 90 minutes

**Evaluation:** Evaluation and clinical impact: The evaluation is based on an individual analysis of the group process related to the interest in the topic, the workload, the gain of knowledge, the theory / practice transfer and an open group feedback session.

**Conclusions:**

The active engagement of the students within the approach results in a better practical understanding of the theoretical findings of evidence based methods in stroke rehabilitation.

Suggestions for future work

- Longer project periods
- Optimal positioning of the project in the curriculum
- Improving networking with clinics, where the methods are used - excursions
- Evaluation of the questionnaire for the outcome measurement of the projects

**Implications:**

In future the students will have to deal with a high amount of upcoming evidence-based treatment methods in the working field. Within that context the didactic approach increases the student's skills for self-controlled life-long learning and a critical examination of the topic.

## SESSION 02

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.20

11:00 – 11:45hrs

02.003

### **A model for collaboration - starting point in physiotherapy leading to interprofessional and continuing education in the context of work, environment and health**

**C. Gummesson, E. Holmström, J. Unge, E. Horneij**

**Lund, Sweden**

**Purpose:** The aim with the poster presentation is to present and discuss experiences from the interactive work to construct a case database within the interprofessional area Work, Environment and Health.

**Relevance:** To advance the Professional Profile for physiotherapists means to deepen the evidence based knowledge and skills in areas related to physiotherapy but also to practice collaboration with other professionals. Further, to develop educational tools in collaboration may be one way to find common ground for interprofessional education opportunities. Work environment and health is a wide and multi-professional research area and is in some countries also a specialization in physiotherapy/ergonomics. For the university education it is a challenge to prepare students to integrate science and practice. Working life includes team work and it is an important issue for the educational institutions to prepare the students for realistic circumstances and offer the students practice opportunities for collaboration with students from different programs and faculties. These opportunities are important for undergraduate as well as graduate students, and for continuing education purposes. The complexity of the topic also allows for collaboration between faculties, such as health sciences, law, economy, and sociology. Active learning models have shown to be important for effective learning. One example is the case method, a teaching approach where the students experience a realistic situation from working life which usually has one or more actors facing a problem. The students are put in the role of decision making. In the process they have to analyze the situation and consequences. By using appropriate scenarios from »real life« the students will practice to analyse a course of events and to discuss and argue how to act in their professional roles. Discussion from evidence based knowledge is promoted and team-work can be practiced.

**Description:** To facilitate the use of the case method we have, in cooperation with teachers from other faculties and working life, started to construct an interactive case-database. It is a cooperation between the Division of Physiotherapy and the Work Environment College at Lund University, Sweden. The method consisted of several integrated tracks. One part was the developmental process of the interactive interface. Another track was the process of developing guidelines for case writing with this team approach with a variety of perspectives on Work, Environment and Health. Further one track was to develop cases in collaboration with professionals in working life, organizations and authorities. We aim to share our experiences with the case database work and the case method in an interprofessional master specialization in physiotherapy, occupational therapy and nursing within the area Work Environment and Health.

**Evaluation:** The experiences of the developmental process from cases in physiotherapy to an interprofessional case database will be presented.

**Conclusions:** It is an ongoing process to formulate cases based on true stories and situations from working life. The cases are presented in a narrative way, with medical professionals or representatives from working life as actors. The database is intended to be used and continuously developed by teachers and students, and also by professionals in working life involved in work environment and health.

**Implications:** There is a need for learning models that gives relevance and meaningfulness to learners at different educational levels and with different perspectives. To use realistic working life situations may inspire to collaboration. This supports students in the learning process and decision making in a realistic manner, potentially facilitating the transfer of knowledge and skills. The use of a common database may be one way to increase interdisciplinary collaboration.

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**Bringing the evidence into practice:**

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Thursday, November 8, 2012

ROOM C.E.20

11:00 – 11:45hrs

02.004

### **Enhancing respiratory physiotherapy in collaboration between physiotherapy education and work life partners**

**L. Piironen<sup>1</sup>, S. Kolehmainen<sup>2</sup>, R. Nikander<sup>2</sup>**

<sup>1</sup>Helsinki, Finland, <sup>2</sup>Helsinki Metropolia, Helsinki, Finland

**Purpose:** The mission of higher education institutes in Finland is to provide and develop adult education in order to maintain and upgrade work life competencies alongside of professional education. The provision of services for people with respiratory diseases confronts significant structural challenges due to multiple service providers and lack of effective continuum of services. The purpose of this project was to develop client-centered respiratory physiotherapy practice by building cross-sector collaboration between physiotherapy education and professionals and organizations working among people with respiratory problems. A well-functioning network brings together the expertise and knowledge between different health care parties e.g. private and public health care and third sector.

**Relevance:** Chronic respiratory diseases represent a challenge to public health because of their frequency, severity, projected trends, and economic impact. For example COPD is expected to become one of the leading causes of death in the world by 2030. There is a strong evidence supporting physiotherapy for the good of patients with respiratory diseases. The collaboration between education and work life fosters the two-way learning and the development of professional expertise. To be able to work in a client-centered way it is necessary to know all service providers in the field and to have common aims.

**Description:** The project has proceeded through the following phases during year 2011: 1) Invitation of the interested parties, 2) Joint planning of the project aims and activities, 3) Definition of current situation and recognition of expertise of different partners, 4) Visions for future, needs of clients and challenges for professionals and 5) Meetings to follow up progress. Three teachers and representatives from ten organizations have participated in the project activities. The partners are physiotherapists from primary and specialist health care, private practitioners and health care professionals from nongovernmental organizations. The main outputs from the collaboration are: building the network and introducing the partners with each other, a digital platform established with the description of the competence of partners, description of future client with respiratory problems, assessment of care path, ideas for assignments and final projects for students.

**Evaluation:** The usefulness of the project was evaluated from different perspectives; Students, clients, education and work life partners. The feedback was encouraging and there was strong support to continue the collaboration. The project succeeded in building up the network but a common opinion was that there are still many things to accomplish for the best of clients with respiratory diseases.

**Conclusions:** All partners were eager to continue after the life of the project and new partners are willing to join the network. Collaboration between education and work life is beneficial from many perspectives but most important is the integration of theory and practice.

**Implications:** The provision of effective respiratory care services requires a well-functioning network between all service providers. It is important that physiotherapy students get acquainted with this network during their studies.

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02.005

### **The approach of the disease process by physical therapy clinical instructors, a Brazilian experience**

**S. S. Castro, Y. H. G. Silva, C. F. Leite**

Universidade Federal do Triângulo Mineiro - UFTM, Uberaba, Minas Gerais, Brazil

**Purpose:** To verify the use of BPS model in the learning process by clinical physical therapy instructors.

**Relevance:** The biopsychosocial (BPS) model proposes that the disease process results from the interaction of biological, psychological and social factors and it can be an alternative to the biomedical model, which considers only the biological aspects. Considering that the rehabilitation process has been deeply influenced by the biomedical model, a shift to the BPS model could have faster and better results on the recovery of patients. However, the implementation and effective use of this model in physical therapy implies suitable training for physiotherapists. In this case, the clinical instructors should also dominate some concepts to help undergraduate students to learn and apply the BPS model.

**Participants:** All the 18 clinical clinical instructors of the physiotherapy course participated in this research. They were mostly women and acted in the main physiotherapy fields: pulmonary, orthopedics, neurology, public health, ergonomics and hospital physiotherapy.

**Methods:** Qualitative research with clinical instructors from a physical therapy course in a Brazilian public university. All the clinical instructors were asked to participate. The data were collected using a qualitative questionnaire that holds the following questions: »Do you usually pay attention to the emotional reactions of your patients?«; »What do you think it is important to the clinical training of the students for the treatment of the patients?«; »Do you think it is important to know the history of the patients or do you think it is more useful to focus on the disease?«.

**Analysis:** The interviews were qualitative and anonymously analyzed by the Collective Subject Discourse (CSD). According to the authors the CSD is a way, neither mathematical nor metalinguistic, to represent or reproduce the thought of collectivity, separating the main ideas on the speech and calculating their frequency.

**Results:** Almost all instructors reported that they usually consider the emotional state of the patients during the clinical training of the students; a small proportion of them did not say anything about psychological component of the BPS model in their answers. The instructors reported as important components for the formation or training of the students: the respect for the patients; the humanization of care; among others. Some interviewed instructors answered that the history of the patients, the daily activities, the environment, the social aspects and the family aspects are important to the formation or training of the students. A few others said that they usually pay more attention to the disease.

**Conclusions:** The majority of the clinical instructors reported the use of one or more components of the BPS model in the learning process or training of the physical therapy undergraduate students. More research should be carried out in order to confirm the real application of the BPS model, as well as hear the point of view of the students about the subject.

**Implications:** The encouragement of the use of the BPS model in the clinical training of the physiotherapy students could result in a better clinical skills for the undergraduated students, who will care of the patients with not only biomedical approaches.

## SESSION 02

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.20

11:00 – 11:45hrs

02.006

### **Does the bachelors physiotherapy education in Bulgaria positive effect to involve science in practice?**

**R. G. Tasheva**

National Sports Academy, Sofia, Bulgaria

**Purpose:** The history of physiotherapy education in Bulgaria started in 1947 with the title »therapeutic gymnastic« at the High School for Physical Activity. The school's traditions developed in conjunction with more competence-based education. Is this a real change in quality of knowledge and skills of the physiotherapists in Bulgaria?

The purpose of this study was tracing out and to sharing the experience by bringing the evidence into practice during the third term of physiotherapists (PT) in Bachelor's level at the National Sports Academy (NSA), Bulgaria.

**Relevance:** The key aim of the education in Bachelor's level at NSA is to guarantee professionalism of the physiotherapists. Is it possible to develop the physiotherapy students' potentialities through applying the evidence into practice? How and where to organize this students' practice during the terms? Do the practical lessons at the University suffice to link knowledge and skills?

**Description:** There's strong focus in this report on teaching of Postural problems, spine, chest and foot deformities – I part of Orthopedic and Traumatology (Muscle-skeletal disorders) during the third term. This period is when the physiotherapy students in Bulgaria for the first time meet the clinical practice supervised by an academic from the NSA. During the period 2000-2011 there's a good look only at 224 Bachelor's students. Academic lectures are 8 academic hours clinical and 12 hours physiotherapy. The spectrum of knowledge includes also 33 hours teaching and practical training for the specific functional tests and physiotherapy. The next 30 hours students assess children and elaborated on an exercise program to reduce of the muscle imbalance and to improve the postural control at the school.

**Evaluation:** The first two years (2000/2001-2001/2002) students have been educated in practical lessons with applying functional tests in postural problems, spine, chest and foot deformities only at the University. At the time of the practical exam the students demonstrated some problems with explanation how to work different tests and how to design the physiotherapy program. The next period - from 2002 until 2011 the students supervised by the academic from the NSA and pediatricist assessed 782 children (410 girls and 375 boys) from school »Jordan Jovkov« – Sofia. Every next year there are examined average 47 children. General from 1398 children 64, 04% are with postural problems. All students are elaborated on particular exercise complex and some of them are involved in researches as a case study, Bachelors and Masters Thesis.

**Conclusions:** Conceptual level of the physiotherapy education in Bachelor's degree at the NSA includes useful knowledge developing skills during the practical classes. This process brings up students in recognition of biological, psychological and sociological aspects of physiotherapy.

**Implications:** The practical classes at the University are not sufficed to link knowledge and skills. To develop the physiotherapy students' potentialities through applying the evidence into practice is indispensable to extend the educational practice in actual circumstances.

## SESSION 03

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

### 03.001

#### **Comparative study of skin folding of dominant and nondominant hemibodies in spastic hemiplegic after stroke**

**O. G. D. Macedo<sup>1</sup>, E. F. D. Silva<sup>2</sup>, M. S. N. D. Lima<sup>3</sup>,**

**P. H. F. D. A. Barbosa<sup>3</sup>, E. F. Martins<sup>4</sup>**

<sup>1</sup>Brasilia University, Ceilandia, Distrito Federal, Brazil, <sup>2</sup>Brasília, Brazil, <sup>3</sup>Brasília, Brazil,

<sup>4</sup>Universidade de Brasília, Brasília, Brazil

**Purpose:** To compare skin folds in the dominant and nondominant halves of the body in a group of spastic hemiplegic after Stroke.

**Relevance:** Adipose tissue measurements have been standardized for years and employ skin fold measurements taken from the right half of the body because it is believed that there is symmetry between the two halves of the body and because most individuals present right-side dominance. This leads to technical difficulty in performing this procedure in cases after Stroke, especially among hemiplegic patients, due to the asymmetry between the two halves of the body.

**Participants:** Ten individuals (six male and four female) with spastic hemiplegia after Stroke.

**Methods:** We measured body mass in kilograms (kg) with a digital scale, the body height in centimeters (cm) with a stadiometer, skin fold in millimeters (mm) with a skin fold caliper model Sanny and estimated body fat percentage by the equation prediction of Jackson Pollock seven- skin fold.

**Analysis:** Each skin fold was measured three times to calculate the average. We performed a descriptive statistic to obtain the mean and standard deviation of the age, weight and height. For comparison between the two halves of the body, Student's t test for dependent samples was used.

**Results:** The average age of the group was 59.98 + - 15.96 years (ranging from 29.6 to 75.1 years), the average body mass was 65.39 + - 20.03 kg (range, 47, 5 to 107.6 kg) and the average height was 157.4 + - 11.34 cm (range 143-175 cm). In analyzing the data, there was statistically significant only for the biceps (p = 0.017) and triceps (p = 0.009) skin folds. The subscapular (p = 0.163), mid-axillary (p = 0.304), thoracic (p = 0.181), sura-iliac (p = 0.393), abdominal (p = 0.448), thigh (p = 0.150) and calf medial skin folds (p = 0.440) showed no statistically significant difference. Lean body mass (p = 0.389), fat mass (p = 0.391) and fat percentage (p = 0.465) also showed no statistically significant difference.

**Conclusions:** The conclusions are that when comparing the hemibodies involved and uninvolved people with spastic hemiplegia after Stroke has differences statistically significant only for the biceps and triceps skin folds.

**Implications:** Data suggest that the mean value of the two halves of the body should be used for adipose tissue measurement when evaluating body composition in individuals with spastic hemiplegic after stroke, especially when the bicipital and tricipital skin fold were used.



## SESSION 03

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

03.002

### **Empathy and burnout in private practice physiotherapists**

**J. P. Saganha, M. Figueiredo-Braga**

Department of Medical Psychology, Faculty of Medicine, University of Porto, Porto, Portugal

**Purpose:** Empathy can represent a major role in the relationship between physiotherapists and their patients. Submitted to particular work context, carrier conditions and exposed to high demands, physiotherapists become more susceptible to burnout. Empathy and burnout can represent opposite roles in clinical relationship, be influenced by gender, working conditions and circularly influence each other. We hypothesized that empathy and burnout can represent opposite roles in

physiotherapy clinical relationship, be influenced by gender and working conditions, and circularly influence each other.

**Relevance:** Empathy can represent a major role in the relationship between physiotherapists and their patients, increasing the professionals' ability to cope with emotions and feelings and enabling the optimization of physiotherapy process. Defined as the ability to identify and understand patient's emotions and perspectives and the expression of that awareness, empathy has been linked to positive clinical outcomes, adherence to treatment and higher patient's and professional's satisfaction. Empathic skills could furthermore, enhancing physiotherapists' personal accomplishment, exert a protective effect to high demands and stressful work contexts. Exposition to disability, physical and psychological pain and exigent organizational environments have been regarded as responsible for burnout in physiotherapy professionals. High emotional exhaustion and depersonalization that characterize burnout are frequently associated with diminished quality of interpersonal relationship, reciprocally influencing empathic skills in physiotherapy settings.

**Participants:** A cross-sectional observational study was conducted in a population of 106 physiotherapists in exclusive private practice, select by convenience in private health care institutions of the north of Portugal. The majority were female - 70 (66%), with ages between 22 and 44 years. Professional experience in multidisciplinary teams was similar in both sexes (4.9 Sd 4.4). The participation was voluntary and all the subjects received verbal and written information about the study and provided written informed consent. The confidentiality was assured by codification.

**Methods:** An original questionnaire elaborated for the present study, and used to collect relevant social-demographic information (sex, age, marital state, educational level, professional characteristics and working conditions). In order to evaluate empathy, the Portuguese version of Jefferson Scale of Physician Empathy(JSPE) was used, adapted to physiotherapists. This self-report scale was designed to assess health care professional's empathy in clinical settings. The scale measures three empathy dimensions: Perspective Taking, Compassion and Standing in patient's shoes. The Portuguese version of Maslach Burnout Inventory (MBI), provides a measure of Burnout in health care professionals. The scale permits to assess emotions and feelings related to work. Three subscales emerged from the data analysis, each one measuring one burnout syndrome dimension: Emotional exhaustion, Depersonalization and Personal accomplishment.

**Analysis:** The statistical analysis of data was undertaken using Predictive Analytics SoftWare Statistics (PASW®) version 18.0. T-test was used for quantitative variables, with a 95% Confidence interval (CI). For the study of categorical variables the Pearson chi-square test was used. Correlations strengths between the subscales of Jefferson Scale of Physician Empathy (JSPE) and Maslach Burnout Inventory (MBI), and between these scales and demographic characteristics were measured using Pearson correlation. P values lower than 0.05 were considered statistically significant

**Results:** Physiotherapists studied revealed adequate levels of empathy (115.3 - SD 9.8), significantly higher in more educated ( $p=0.018$ ) and in female professionals ( $p=0.009$ ). Moderate to high levels of burnout were detected, distributed homogeneously by gender, with 49.1% in Emotional Exhaustion, 33.9% in Depersonalization and 31.2% in Personal Accomplishment subscales. Burnout level was significantly related to number of work hours per day ( $p=0.031$ ). More empathic physiotherapists showed lower levels of Emotional Exhaustion ( $p=0.021$ ) and Depersonalization ( $p=0.000$ ). Higher Empathy scores were associated with higher Personal Accomplishment (lower burnout) ( $p=0.000$ ) regardless professional gender.

**Conclusions:** In the studied population, higher empathy was associated with higher educational level and female gender, but was not correlated with age, clinical experience and working load. As expected, burnout level, particularly Emotional Exhaustion, was significantly related to work load.

Adding to the recognized benefit of an empathic relationship in clinical outcomes, the present results underscore the value of empathy in promoting personal accomplishment and protect professionals from Emotional Exhaustion and burnout.

**Implications:** This study can be used to recommend to educators and employers the implementation of empathic skills training in physiotherapists, emphasizing its ability to enhance professional satisfaction and resilience to high professional demands.

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**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**03.003**

### **Electromechanical finger trainer combined somatosensory stimulation for rehabilitation of paralysed fingers in subacute stroke patients: pilot study**

**D. Munari<sup>1</sup>, C. Werner<sup>2</sup>, A. Bardeleben<sup>2</sup>, N. Smania<sup>1</sup>, S. Hesse<sup>2</sup>**

<sup>1</sup>Neuromotor and Cognitive Rehabilitation Center, Verona, Veneto, Italy, <sup>2</sup>Medical Park Berlin, Berlin, Germany

**Purpose:** The primary aim is to investigate the efficacy of the eletromechanical finger in conjunction with peripheral stimulation for sensorimotor and functional recovery of paralysed fingers in subacute stroke patient.

**Relevance:** Following a stroke, impairment of upper limb function is one of the most common and challenging sequelae and upper limb paresis is found in more than 80% of all stroke patients, 30% to 40% regain some dexterity after 6 months. Although hand motor impairment contributes enormously to the ensuing disability in activities daily life. In the last decade several robotic system have been developed for upper limb recovery after stroke and the positive effects were demonstrated. Although a variety of robotic systems are being used for the practice of gross reaching movements after stroke, the use of robotics for wrist and hand rehabilitation is much less developed. Up to our knowledge, few previous clinical reports in stroke patients were carried out by using machine-assisted movement of paralysed fingers. In a pilot study, a novel eletromechanical finger trainer Reha-Digit (Reha-Stim, Berlin, Germany) in patients who have experienced a stroke was designed and tested and the results demonstrated that such as treatment could improve active movement in the paretic hand and avoided the increase in tone. Peripheral stimulation in addition to robotic system could be an innovative option to improve upper limb recovery. Several studies demonstrated that sensorimotor stimulation enhances motor recovery in patients who have experienced a stroke.

**Participants:** Ten participants were recruited from the Neurological Unit, Medical Park Berlin Humboldtmühle Ag, Berlin, Germany over the period from October 2010 to March 2011.

**Methods:** The inclusion criteria were: (a) a first-ever stroke (cerebral, subcortical lesions) confirmed by computed tomography or magnetic resonance imaging, resulting in a mild to moderate paresis of the upper limb, (b) stroke interval between 4 and 12 weeks at study onset, (c) age between 18 and 90 years, (d) Fugl-Meyer motor assessment score for upper limb between 10 and 21, (e) severe upper limb paresis with no or only a palpable volitional activity of wrist and finger extensors (i.e., Medical Research Council 0 or 1), (e) absent or moderate elbow, wrist and finger spasticity, (f) in-patient participating in a comprehensive rehabilitation programme. The exclusion criteria were: (a) presence of shoulder pain insensitive to standard therapy, (b) swollen hand impairing finger joint mobility with no fist possible, (c) arthritis of the finger joints and forearm skin ulcers. Before and after treatment, the patients were evaluated by mean of clinical scales (Fugl-Meyer motor assessment, Medical Research Council, modified Ashworth Scale, Rivermead Assessment of Somatosensory Performance) and instrumental evaluation (Primary Somatosensory Evoked Potentials). Each participant received a total of 50-minute session every workday for 4 weeks (total 20 sessions). The training programme consisted of 20 minutes on an electromechanical finger trainer Reha-Digit and 30 minutes of peripheral electric stimulation of paretic hand.

**Analysis:** Statistical analysis was carried out using SPSS 16.0 for Macintosh. The difference between tests before and after treatment were compared with nonparametric Wilcoxon test.

**Results:** The patients showed significant improvements in the Fugl-Meyer motor assessment and Medical Research Council score. No increased in spasticity was observed.

**Conclusions:** A combined robotic and peripheral nerve stimulation treatment could improve upper limb movements in subacute stroke patients. Nevertheless, a lager number of patients and comparison with a control group are needed to confirm the results.

**Implications:** Peripheral stimulation in addition to robotic finger movement device could be an innovative option to improve upper limb recovery.

## SESSION 03

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**03.004**

### **Anterior knee laxity before and after soccer training, a comparison between male and female soccer players**

**C. Köhler**

Umea University, Stockholm, Sweden

**Purpose:** The aim of this study was to evaluate anterior knee laxity before and after soccer training, and to study if there was a gender difference and a different grade of anterior knee laxity between the dominant and non dominant leg.

**Relevance:** ACL is a common injury in football and it has been noticed that female players are injured 2-10 times more often than men. Since women generally have a greater joint laxity than men, this study was carried out to see if the knee laxity increased more with women than men and if that was the case could this be a risk factor for women to be hit by an ACL injury.

**Participants:** One team consisting of male players from third division and one team of female players from first division were asked if they could participate in the study. 17 men from division 3 and 12 women from division 1 accepted to take part in the study. The age of the participants was 17-28 years. Mean age for men was 22,5 years and for women 20 years.

**Methods:** The instrument which was used was a KT-1000 arthrometer. The participants were measured before and directly after 90 minutes soccer training. All tests were carried out by one test leader with a very good experience of using a KT-1000 arthrometer.

**Analysis:** A power calculation was carried out before the start of the study and it showed that 10 people were needed in each group.

Wilcoxon's sign rank test was used to analyse changes of knee laxity after training.

Mann Whitney U-test was used to measure changes between men and women in anterior knee laxity.

Wilcoxon's sign rank test was used to measure difference between dominant and non-dominant leg.

**Results:** Soccer training for 90 minutes showed a greater knee laxity compare before and after training in both men and women. No significant gender difference was noted on laxity in the anterior cruciate ligament. No difference in anterior knee laxity was showed between the dominant and non dominant leg.

**Conclusions:** The study showed that anterior knee laxity increases after 90 minutes soccer training. The grade of stretching of the anterior cruciate ligament does not showed a significant gender difference. No difference in anterior knee laxity was showed between the dominant and non dominant leg.

**Implications:** In our study we found that anterior knee laxity increased after 90 minutes soccer training and it could be important to stress the importance for soccer players to train the hamstring muscles in order to minimize the risk of ACL injuries.

## SESSION 03

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**03.005**

### **Applications of the gait analysis for teaching in the field of childhood neuromuscular disfunctions**

**J. Martez-Gramage, J. J. Amer-Cuenca, E. Segura-Ortí**

Universidad CEU Cardenal Herrera, Moncada, Spain

**Purpose:** The main aim of this project was to integrate clinical evidence-based physiotherapy for CP children in the learning approach of physiotherapy in children with cerebral palsy (CP) for undergraduate students. The secondary aims of this project were: to develop a musculoskeletal assessment and gait scales prior to the instrumental evaluation of gait; to learn the performance and interpretation of the energy expenditure during gait in cerebral palsy (CP) children; to learn about video capture systems for gait analysis; to learn about kinematic interpretation of gait in healthy children and CP; to know about how to correlate the musculoskeletal assessment, gait scales, energy expenditure in order to undertake clinical decisions or evaluate the therapeutic intervention;

**Relevance:** The inclusion of clinical evaluations with real patients during the undergraduate studies is very important for the students to understand how theory fits into practice, and how important is to practice evidence-based physiotherapy by accurately assess patients and conclude if interventions objectively improve patients health status.

**Description:** Assessment was performed at the Analysis of Human Movement Laboratory (AHML) at the Universidad CEU Cardenal Herrera (UCH CEU) in Valencia, Spain. They were undertaken during the practical teaching hours of the subject 'Clinical Physiotherapy II' and 'Special methodology for Physiotherapy', from 2 to 4 practical sessions depending on the subject. Children were selected at the Orthopedic Surgery Unit of the Hospital. The gait analysis procedure started with the information to the child family about all the steps to be undertaken in the assessment. Once the family signed the consent students were responsible for the musculoskeletal assessment of the child, the preparation of the surface electromyography by the location of the electrodes and the pulse oximeter fitting. The child was asked to walk in the frontal and sagittal plane of the video recording for the kinematic assessment. Finally, the group of students assessed the video recording and discussed about the clinical findings. This assessment was summarized and sent to the Orthopedic Surgery Unit at the Hospital as a decision tool for selecting between surgery, botulinum toxin or brace for each child.

**Evaluation:** From 2009 to 2011, 12 assessments were performed during the practical teaching of the subjects mentioned before. Students and families reported a high level of satisfaction with this assessment tool.

**Conclusions:** The assessment of real patients during the practical teaching at the university is a good tool to teach students the contents of the subjects and they are highly satisfied with the experience.

**Implications:** Binding evidence-based clinical practice as an education tool helps students to understand the importance of the contents taught on the different subjects that include the Physiotherapy Degree.

## SESSION 03

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

03.006

### **Comparative study of skin folding of dominant and nondominant hemibodies in spastic hemiplegic cerebral palsy**

**O. G. D. Macedo<sup>1</sup>, J. G. Carazzato<sup>2</sup>, E. D. S. Meirelles<sup>2</sup>, A. de Paula<sup>2</sup>,  
C. A. dos Santos<sup>2</sup>, R. Bolliger Neto<sup>2</sup>**

<sup>1</sup>Brasilia University, Ceilandia, Distrito Federal, Brazil, <sup>2</sup>São Paulo, Brazil

**Purpose:** To compare skin folds in the dominant and nondominant halves of the body in a group (A) of spastic hemiplegic cerebral palsy and in a group (B) of normal volunteers.

**Relevance:** Adipose tissue measurements have been standardized for years and employ skin fold measurements taken from the right half of the body because it is believed that there is symmetry between the two halves of the body and because most individuals present right-side dominance. This leads to technical difficulty in performing this procedure in cases of cerebral palsy, especially among hemiplegic patients, due to the asymmetry between the two halves of the body.

**Participants:** 20 individuals with cerebral palsy and spastic hemiplegia with the mean age of  $24.6 \pm 5.6$  years (ranging from 16.1 to 38.1 years) and a 30 normal volunteers with the mean age of  $25.3 \pm 3.8$  years (ranging from 19.0 to 34.11 years).

**Methods:** Body mass, height and skin folds were measured, and the percentage of body fat was estimated by adipose tissue measurement and densitometry.

**Analysis:** For comparison of nonparametric values, the Wilcoxon test was used for pairs of dependent samples and the Mann-Whitney U test was used for pairs of independent samples. For comparison of different techniques for body composition evaluation, linear regression and ANOVA F-value tests were used. A significance level of 5% was adopted for all comparisons ( $P = 0.05$ ).

**Results:** Statistically significant differences were observed between the dominant and nondominant halves of the body for biceps, triceps, thoracic, suprailiac, thigh and midcalf skin folds in group A; the biceps, subscapular, midaxillary, suprailiac, abdominal, thigh and midcalf skin folds in group B; and the percentage fat obtained by adipose tissue measurement in both groups. Statistically significant differences were observed for the triceps skin fold when the dominant halves of the body in groups A and B were compared. Statistically significant differences were also observed for the biceps, triceps, thigh and midcalf skin folds as well as the adipose tissue measurements between the dominant and nondominant halves of the body in the two groups. The percentage fat as estimated by densitometry was significantly correlated with the adipose tissue measurement.

**Conclusions:** There were statistically significant differences between the skin folds in the dominant and nondominant halves of the body, both in group A and in group B (greater in group A). There was a statistically significant correlation in the percentage fat as estimated by densitometry and as measured by adipose tissue in groups A and B.

**Implications:** Data from group A suggest that the mean value of the two halves of the body should be used for adipose tissue measurement when evaluating body composition. Data from group B casts doubt on the currently accepted notion that measurements obtained only from the right half of the body are sufficient for analysis of body composition.

## SESSION 04

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

04.001

### Physical therapists profile in school context based in dimensions of international classification of functionality

C. S. M. P. Pereira<sup>1</sup>, M. Sousa<sup>2</sup>, C. Leitao<sup>1</sup>

<sup>1</sup>Escola Superior de Saúde Dr<sup>o</sup> Lopes Dias, Castelo Branco, Portugal, <sup>2</sup>Escola Superior de saúde Dr<sup>o</sup> Lopes Dias, Castelo Branco, Portugal

**Purpose:** The main aim of this study is to describe the intervention of Physiotherapists working in pediatrics in school context. The specific purpose were: describe the physical therapists intervention in the school; describe the practice in reference to the process of Physiotherapy as describe by the WCPT and analyze the practice by reference to International Classification of Functionality (ICF).

**Relevance:** It is important to describe the practice of physical therapy in schools according to the conceptual model of the functionality, for three reasons: a) studies have shown that physiotherapists working in the school context have specific skills, allowing them to adapt the contextual practice, guides the evaluation, planning, goal setting and intervention b) the use of ICF allows physiotherapists to support their decision making, providing an assessment and intervention focused on functional profile of each individual taking into account the structures and body functions, activity, participation and contextual factors; c) The description of the clinical practice promotes a feedback of clinical reasoning models implemented in the training of physiotherapists.

**Participants:** Because there is no record of the total population of pediatric physical therapists working in schools in Portugal we use a sample of 25 physical therapists that answer to our questionnaire

**Methods:** study of descriptive methodology, with quantitative and qualitative data collection.

The instrument used for data collection was a electronic questionnaire distributed to 74 public schools. The questionnaire had 46 questions - 24 open-response questions and 22 multiple-choice questions, validated by an expert panel.

**Analysis:** Data analysis was made through descriptive analysis of frequencies, cross tabulations and graphs analysis. This analysis was performed at each of the different stages of physical therapy process (as referred by the World Confederation for Physical Therapy) and discussed according to the ICF.

**Results:** - the sample of physical therapists work for 18.77 hours/week with the children in schools and follow an average of 13 children per week. PT's spend in clinical intervention 83.96% of time, evaluation / examination (subjective and physical) 5.17% of time, planning the intervention 5.08% of time, goal setting 3.92% of time, training parents and educators 1.87% of time. 82.61% of the therapists feel that they are part of a multidisciplinary team.

The instruments most referred by physiotherapists in the assessment of children were: Evaluation according to Bobath concept (65.22%), Gross Motor Function Measure (GMFM) (34.78%), Pediatric Evaluation Inventory (PEDI) (17.39 %), Assessment of Mental State and clinical observation (13.04%). 8.70% of respondent therapists report not using any measuring instrument. Only 43.48% of respondents referred that they define Functional Diagnosis. Of These,100% of physiotherapists reported items related to the Function domain, 60% of items are related to Structures domain, 40% related to the Activity and Participation domain and the Environmental Factors domains.

The objectives of treatment most referred were: a) motor stimulation of the children (82.71%), b) functions related to muscle tone and c) alignment and positioning of body structures (69.57%).

The most referenced Strategies were: a) playing activities; b) facilitation of movement (78.26%); c) parents, teachers and non-teaching staff education (69, 57%).

Most common expected results of physical therapy intervention were: a) child's independence in school activities (73.91%) and b) child participation in school activities (69.57%).

**Conclusions:** The Physical therapists questioned in this study in the examination value the collection of information in the domain body functions, as evidenced by the assessment instruments used. When defining intervention goals is again the domain of body functions and body structure the most representative. However intervention strategies fall into the domain of the Activity and Participation and Environment Factors.

We concluded that the conceptual model of the functionality is not included at all stages of the process of physiotherapy, that could influence the results obtained in this area of intervention

**Implications:** Implications: the area of school health values the context of the child. If the physical therapist focus evaluation and goal setting in the domain of human function may affect the results of therapy.

Not taking in to account all the health dimensions of ICF, as described by WHO, in the evaluation and goal setting by Physical Therapists in of school context could affect the results of therapy intervention. It would be important to verify if the curriculum of physiotherapy courses encompass all relevant areas of function.

## SESSION 04

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

04.002

### **The integration of Physical Therapy assessment and treatment contents: a strategy to promote clinical decision-making and lifelong learning**

**R. H. Hasue<sup>1</sup>, C. Fu<sup>2</sup>, S. M. A. João<sup>1</sup>**

<sup>1</sup>University of São Paulo, São Paulo, São Paulo, Brazil, <sup>2</sup>São Paulo University, São Paulo, São Paulo, Brazil

**Purpose:** The aim of this study is to report the students perception over the integration of Physical Therapy assessment and treatment contents, developed as a strategy to promote clinical decision-making and lifelong learning.

**Relevance:** Traditionally, the Physical Therapy curricula are organized by disciplines, whose contents are fragmented and disjointed. There is little integration between theory and practice, which leads to the removal of students from the early years of the course of the clinical setting. The student is not stimulated to be the subject of the learning process itself, limiting their abilities and skills in. Therefore, the strategies of analysis and problem solving depend on the content, skills and abilities which are taught in separate disciplines of the curriculum. In Brazil, the general procedures to patient's examination are taught in the discipline called »Methods of Clinical and Functional Assessment«, while the therapeutic exercises are taught in the discipline called »Kinesiotherapy«. Although separated in different disciplines, functional assessment and treatment strategies must be managed together during clinical practice. Since the disciplines of »Methods of Clinical and Functional Assessment« and »Kinesiotherapy« constitute the core of the formation of a physiotherapist, it is necessary to integrate both contents to stimulate problem solving abilities, clinical decision-making and lifelong learning.

**Description:** Two classes were developed with the purpose of integrate the assessment and treatment contents. The first class was about »Assessment and treatment of Range of Motion«. The students were divided into pairs and instructed to analyze in each other the range of motion of the shoulders and hips, before and after passive mobilization. The second class was about »Assessment and treatment of Balance«. The students were divided in four groups. Each group was instructed to evaluate and stimulate the balance in one of the four conditions: in prone position; in sitting position; standing in a board and standing up from kneeling over foam. All the teachers of both disciplines ministered the classes together, and participated in the discussion about the integration of the contents at the end of each class. It was emphasized the importance of raising hypotheses for functional diagnosis, of the establishment of treatment strategies and of the reassessment to check the hypothesis. Twenty students agreed to participate in the study. At the end of each class, they completed a questionnaire to evaluate the class itself, the integration of the contents from both disciplines, and the teaching methods used. Each question was answered using a Likert scale (1 - very bad, 2 - bad, 3 - fair, 4 - good, 5 - very good). The descriptive analysis was performed using the percentage of the most frequent answers to each question.

**Evaluation:** The first integrated class (»Assessment and treatment of Range of Motion«) was rated as »good« and »very good« (scores 4 and 5) by 63% of the students. Better scores were obtained in the second integrated class (»Assessment and treatment of Balance«), with 90% of the students' evaluation being »good« and »very good«. Around 68% of the students considered the integration of the contents »good« and »very good«. The teaching methods used during the integration were considered »good« and »very good« by 85%.

**Conclusions:** This first experience to join contents was well evaluated by the students. This strategy should be used to integrate other contents and disciplines in the curriculum. An integrated Physical Therapy curriculum can provide better clinical decision-making and lifelong learning.

**Implications:** This experience can be useful to educators in order to bring theory to practice and also to develop an integrated Physical Therapy curriculum.

## SESSION 04

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

04.003

### **The influence of secondary education on the level of academic achievement of the first year physical therapy students**

**D. Kiseljak, V. Filipovic, O. Radenovic**

University of Applied Health Studies, Zagreb, Croatia

**Purpose:** The aim of this research is to determine the influence of different types of secondary education on the level of academic achievement in the course Clinical kinesiology which is a part of the first year study programme of physical therapy at the University of Applied Health Studies in Zagreb.

**Relevance:** The assumption behind the research is that there is no significant influence of the type of secondary education on how successful students are in completing the Clinical kinesiology course in the first year of their studies.

Clinical kinesiology course in the first year of physical therapy study programme integrates general medical knowledge and is also the first professional course of study which makes it a good indicator of how well students perform in their first year of study.

**Participants:** The examinee sample consists of 269 first year students of physical therapy divided into groups G1 and G2. Group G1 consists of students which graduated from secondary school for physical therapists, where syllabus comprises general medicine subjects and practical training. Group G2 is divided into three subgroups (G2-G, G2-M, G2-D). Subgroup G2-G consists of students who finished comprehensive schools and they do not possess any previous vocational knowledge, while subgroup G2-M consists of students who attended a nursing school and subgroup G2-D are students who have graduated from some other vocational secondary school whose syllabus includes health care subjects. The entire G2 group, including the subgroups as well, did not have any physical therapy training while subgroup G2-G did not have any health care subjects at all during their secondary education.

**Methods:** The data about the influence of secondary education on the level of academic achievement in the course Clinical kinesiology has been gathered from the results of a preliminary exam at the end of the first semester and the exam at the end of the academic year. How successful the students are has been evaluated by using grades from 1 to 5.

**Analysis:** The results have been analysed by a t-test and a variance analysis.

**Results:** The results of the research indicate that in the Clinical kinesiology preliminary exam the students from group G1 (the ones that finished the secondary school for physical therapy) had a certain advantage, and this advantage is significant when compared to groups G2-M and G2-D, which include students who attended a nursing school or a vocational secondary school with health care subjects. In relation to G2-G group of students who have no previous formal vocational knowledge (students who attended comprehensive schools), group G1 did not exhibit any significant differences in knowledge and skills in preliminary testing results.

Furthermore, no significant differences were identified in the final exam between the groups G1 (students who finished a secondary school for physical therapy) and other subgroups; G2-G (comprehensive school), G2-M (nursing school) and G2-D (other types of secondary schools). No differences in the results were found between the subgroups as well.

**Conclusions:** The research confirms the assumption that the type of secondary school the students of physical therapy attended does not affect how well they perform in the Clinical kinesiology course.

**Implications:** The application of research results is intended to improve curriculum and increase academic achievement of the first year physical therapy students.



## SESSION 04

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**04.004**

### **Assessment of muscle strength in patients hospitalization for 3 days**

**J. P. C. Matheus<sup>1</sup>, R. Zille<sup>2</sup>, M. Cruz<sup>3</sup>, J. Rodrigues<sup>3</sup>**

<sup>1</sup>Campus UnB Ceilândia, Brasília, Brazil, <sup>2</sup>Campus UnB Ceilândia, Brasília, Brazil, Brazil,

<sup>3</sup>Campus UnB Ceilândia, Brasília, DF, Brazil

**Purpose:** Immobilization syndrome affects every individual who remains at rest for a prolonged period causes changes in all body systems. It is known that reducing the immobility of the functional reserve of the musculoskeletal system resulting in atrophy and weakness. However, it is still debated whether these abnormalities may be present within the first days of rest.

**Relevance:** The study aimed to evaluate the muscle strength of upper and lower limbs in patients undergoing hospitalization for three days.

**Participants:** The study included 25 patients (16 men and 9 women) with mean age  $54 \pm 15$  years and mean weight  $71.4 \pm 12.1$  kg, admitted to the outpatient clinic of Medical University Hospital.

**Methods:** Each patient answered a questionnaire with personal data, anthropometric and relevant information such as the occurrence of other hospital and / or use of drugs. Shortly thereafter, were assessed twice with the first day of hospital stay (day 0) and second, after three days of hospitalization (day 3).

**Analysis:** In each evaluation was measured handgrip strength in both upper and lower limb joint force, using a modified sphygmomanometer as described in the literature.

**Results:** The results were significant reductions ( $p < 0.05$ ) in average strength of grip in both the upper right ( $151.1 \pm 69.3$  mmHg to  $137.9 \pm 66.5$  mmHg) and left upper limb ( $151.9 \pm 142.3 \pm 66.1$  mmHg to  $63.2$  mmHg). And compared to the average strength of the lower limbs was also observed a significant reduction ( $p < 0.05$ ), with evaluation on day 0 equal to  $135.1 \pm 39.0$  mmHg and in three days equal to  $128.9 \pm 41.1$  mmHg. Hospitalization sharply restricts the physical activities of individuals subjected to it, and to have deleterious effects widespread, the musculoskeletal system is certainly one of the first to change. In our study, we observed that 3 days of hospitalization were sufficient to generate significant reductions in muscle strength of upper and lower limbs. Although no histologic studies carried out in the muscles, as would be involved in many aspects ethical limiting, it is possible to believe that the reduction in strength were found consequent atrophy of the muscle fibers, as described in the literature.

**Conclusions:** From these results, we conclude that a hospital stay of only three days was able to produce significant reductions in muscle strength, evidencing the importance of early physical therapy in patients.

**Implications:** This finding implies the need for a more comprehensive approach to patients, even for a short period. We also emphasize the need for the physiotherapist to monitor these patients.

## SESSION 04

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

04.005

### **Clinical reasoning on an evidence based framework**

**G. A. Meerhoff<sup>1</sup>, V. de Graaf-Peters<sup>1</sup>, P. van der Wees<sup>2</sup>, S. Beurskens<sup>3</sup>,  
R. Swinkels<sup>3</sup>, R. Nijhuis-van der Sanden<sup>4</sup>, R. A. de Bie<sup>5</sup>**

<sup>1</sup>Royal Dutch Society for Physical Therapy (KNGF), Amersfoort, Netherlands, <sup>2</sup>Harvard Medical School, Boston, MA, USA, <sup>3</sup>Zuyd University of Applied Sciences, Heerlen, Netherlands, <sup>4</sup>Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands, <sup>5</sup>Maastricht University, Maastricht, Netherlands

**Purpose:** Background: When developing Physiotherapy guidelines and/or statements one focuses on description of proven effective physiotherapy fitting to the needs of patients. However, we've seen that students find it hard to make appropriate choices in the clinical reasoning process, predominantly as a result of the overload of outcome measures advised in the guidelines and the fact that implementation of shared decision-making is thought to be difficult, especially in case of comorbidity.

**Objective:** To develop two evidence based three dimensional models which can be used as algorithms one for the clinical reasoning process in general (for example to support in shared decision making and comorbidity issues) and one for outcome measure selection in specific. Both algorithms must be designed to assist students in making a more deliberated evidence based decisions in the clinical reasoning process.

**Relevance:** The importance of these algorithms for the physical therapy students is the fact that, the implementation of guidelines is expected to be accomplished more easily. This increase in guideline implementation will increase the number of physical therapists who perform their treatment based on scientific evidence, which in turn will improve the standard of our field.

**Description: Methods:** A Delphi method with stakeholders (patients, physiotherapists, researchers) was used to develop the framework based on the algorithms, in which guidelines and/or statements can be organized. The outcome of this Delphi method was that the guidelines and/or statements had to be divided in several modules (e.g. disease/disability, clinical reasoning, outcome measures and treatments). The information within these modules functioned as the outcome of the two algorithms, clinical reasoning and outcome measure selection.

**Evaluation: Results:** Two consensus based three dimensional frameworks were constructed and built in a website, which serves the student in choosing patient specific information for the clinical reasoning process and the selection of outcome measures. Even in case of comorbidity there was no problem since modules from different diseases/disabilities could be chosen. Thereby this website facilitates in the provision of evidence based information, which can easily be found through the advanced search machine of this website, which is constructed based on the algorithms. With this instrument the purpose of this website is to encourage the educational process to be given in a structured way, based on the latest available evidence, published in the guidelines of the Royal Dutch Society for Physical Therapy (KNGF).

**Conclusions:** Discussion and Implications for educational institutes

At the congress the framework and a prototype of the website will be presented. Further research is needed to study the effect of the framework on the implementation of evidence based practice in students.

**Implications:** In the educational field, it is necessary to actively implement the new framework during different courses. This active implementation will make students familiar with the new system and make sure they will be able to use all the benefits during both their studies and their active career.

## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**05.001**

### **Interprofessional teamwork with physiotherapy and nursing teachers in simulation learning**

**O. Pyöriä<sup>1</sup>, J. Dillström<sup>2</sup>, H. Sarén<sup>2</sup>**

<sup>1</sup>Mikkeli University of Applied Sciences, Savonlinna, Finland, Savonlinna, Finland,

<sup>2</sup>Savonlinna, Finland

**Purpose:** The purpose of the present special interest report »Interprofessional teamwork with physiotherapy and nursing teachers and students in simulation learning« is to present a pilot simulation case, which was planned by physiotherapy and nursing teachers and implemented by physiotherapy students. The main goal was to develop interprofessional simulation training to promote teamwork with physiotherapy and nursing teachers and students.

**Relevance:** Simulated learning and interprofessional education (IPE) are becoming increasingly more prevalent in health care curricula because of alarming incidences of medical error and growing concerns about patient safety. As the focus shifts to patient-centered care, health care professionals will need to learn with, from and about one another in real-life settings in order to facilitate teamwork and collaboration. The integration of simulation into IPE is an innovative approach in health care education and training. Simulation provides a positive learning experience in which students can refine their patient skills and collaborate with interprofessional team members in a risk-free environment.

**Description:** Two physiotherapy and two nursing teachers and 10 physiotherapy students participated in the pilot simulation case. The teachers planned the postoperative case for the simulation patient together with the technical assistant. The simulation case was planned for three physiotherapy students and the instruction was to provide postoperative guidance and mobilization to the patient. After abdominal surgery the patient's status was unstable and he was connected to the monitor. During the physiotherapy treatment session the simulation patient developed supraventricular tachycardia.

The situation demanded the physiotherapists to decide on appropriate treatment and actions to care for the patient. This allowed them to learn from mistakes and act on their own judgement. Practical simulation training integrates both practice of basic skills and the experience of scenario-based training.

**Evaluation:** After the situation the students, together with the teachers debriefed the treatment session and the students could justify their decisions and bring out their feelings. It was important that the students received feedback from the experience to make sure that their learning goals were reached. Our experience is that providing feedback to the students is important and highly valued. A climate of trust and an encouraging atmosphere between the participants are crucially important in achieving a successful simulation outcome.

**Conclusions:** The main outcome of the pilot simulation case was that the physiotherapy students themselves began to see the benefits of teamwork with nurses. This promising pilot simulation case gave information to both physiotherapy and nursing teachers on how to develop learning experiences as interprofessional team members.

**Implications:** In the future simulation cases will further be developed through interprofessional teamwork in order to develop the collaboration and communication skills of nursing and physiotherapy students.

## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

05.002

### **Incorporation of the ethical reasoning in the new curriculum of the degree in physiotherapy of the University of Valencia**

**J. Casaña Granell, G. V. Espí López, M. Aguilar Rodríguez, M. L. Sánchez Sánchez, L. Dueñas Moscardó, S. Pérez Alenda, M. P. Serra Añó, J. M. Blasco Igual, N. Estevez**

**Fuertes**

University of Valencia, Valencia, Valencia, Spain

**Purpose:**

The objective of this work is to expound a pilot educational model for the teaching-learning of professional ethics, developed in the School of Physiotherapy of the University of Valencia (UV), with the purpose of incorporating ethical reasoning to the new curriculum of the Degree.

**Relevance:** During the practice of their profession, physiotherapists confront moral dilemmas and have to face them showing an ethical professional conduct. Preparing physiotherapists to respond to these conflicts, requires fostering in them the ability and will to commit themselves to moral reflection.

**Participants:** During the current academic year, we have carried out, with the students of third year, a pilot project for the teaching-learning of professional ethics, in the context of clinical internships.

**Methods:** We considered that the hospital and outpatient environment may help the learning process and make students sensitive to the problems and ethical dilemmas specifically concerning the profession.

We followed a partly on-site model in which, to the usual development of the clinical internship, that takes place during the whole year, we added, during the first four-month term, the ONLINE tracking of a reading list that students had to read and work on, through the resolution of activities, varying depending on the time schedule of the subject.

During the second term, students, organized in small groups, have combined clinical internship with attendance to work sessions where, guided by an instructor, they have developed ethical reasoning for the resolution of situations detected by themselves in their clinical practice, using role-play activities and applying some of the analysis methods of ethical cases.

The analysis of the questionnaires pre and post test (in process at the moment of sending this abstract) will show us: whether students' knowledge about professional ethics has improved, whether they are now prepared to confront the ethical problems that may arise in their future professional practice and, above all, whether this programme has achieved to improve their attitude towards the practice of a just, responsible and honest profession.

**Analysis:** The analysis of the questionnaires pre and post test (in process at the moment of sending this abstract) will show us: whether students' knowledge about professional ethics has improved, whether they are now prepared to confront the ethical problems that may arise in their future professional practice and, above all, whether this programme has achieved to improve their attitude towards the practice of a just, responsible and honest profession.

**Results:** The academic and professional independence achieved by the Physiotherapy and its markedly social orientation within the health care area, where the patient is approached from a holistic point of view, requires an ethical professional conduct.

**Conclusions:** We rely on the establishment of the Título de Grado (undergraduate degree in the EHEA context) as the starting point for the ethical reflection and values education of the physiotherapists-to-be.

**Implications:** Further develop knowledge of the profession ethical



## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

05.003

### **Incorporation of the new technologies to the degree in physiotherapy of the University of Valencia**

**G. V. Espí López<sup>1</sup>, J. Casaña Granell<sup>1</sup>, J. M. Blasco Igual<sup>2</sup>, J. C. Benítez-Martínez<sup>1</sup>, C. Igual Camacho<sup>3</sup>, M. C. Blasco<sup>2</sup>, N. Estevez Fuertes<sup>3</sup>**

<sup>1</sup>University of Valencia, Valencia, Valencia, Spain, <sup>2</sup>UNIVERSITAT DE VALENCIA, Valencia, SPAIN, Spain, <sup>3</sup>UNIVERSIDAD DE VALENCIA, Valencia, Spain

**Purpose:** The transformation of Diplomatura (Spanish three-year university degree) into Grado de Fisioterapia (EU four-year university degree in Physiotherapy), within the framework of the European Higher Education Area (EHEA), entails an important challenge at the methodological level, where the teaching tools and resources, helped by the new technologies, acquire an essential role in the teaching-learning process.

Last academic year (2009-10), the School of Physiotherapy of the University of Valencia introduced the Título de Grado (undergraduate four-year degree within the framework of the EHEA). In the current year, classes have been split into two groups, in order to facilitate the use of more participative methodologies. It has required great effort to adapt means, resources and methodologies to the current needs of our students, which arise from the acquisition of new competences.

**Relevance:** The objective of this work is to analyze to what extent the new information and communication technologies (ICT) have been incorporated to the Degree in Physiotherapy of the University of Valencia; and also their benefits for the teaching-learning process.

**Description:** A review of the academic guides (syllabus) of all the subjects of first, second and third year (introduced in the near future) of the degree, together with our own experience as lecturers of the first years of the degree, has provided us with information about the methodological changes and the use of new ICT, for the acquisition of new competences.

**Evaluation:** - In lectures, new ICT make possible an instant access to the Internet in real time, enriching the exposition of the lecturer.

- In practical classes, ICT helps drawing clinical practice reality up to the class, through the showing of up-to-date videos and images of the physiotherapy techniques to be practiced in the class.

- New ICT facilitate the discussion of clinical cases at any moment during the class.

- Students can check the current scientific evidence about a particular technique or physical therapy treatment, in real time.

- The processes of evaluation, recording of marks and management of activities are sped up.

- The tutoring process is more fluid and accessible, thanks to the incorporation of the new on-line method.

- The use of the «Aula Virtual» (Virtual Classroom), facilitates the communication between the lecturer and the student, serving as a platform supporting all the materials generated by the subject, noticeboard for a quick spreading of any changes or unexpected situations, and a useful tool for the management of activities and tasks, with the consequent saving of printed paper.

- The new ICT enable students to follow certain subjects when they cannot attend class for professional reasons.

**Conclusions:** The use of the new ICT in the teaching-learning process, in the first years of the Degree in Physiotherapy (EHEA context) of the University of Valencia:

- Makes the instructor-student communication more fluid.

- Allows more involvement of the lecturer in the tracking of their students' progress.

- Facilitates the understanding of theoretical contents.

- Facilitates the understanding of techniques taught in practical lessons.
- Makes possible to juggle studies with work timetables.
- Contributes to environmental sustainability.

**Implications:** The use of the ICT improve quality of the teaching-learning process

## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

**05.004**

### **Game-based learning in a physiotherapy context – a way to enhance and develop new pedagogic areas?**

**J. Unge, E. Horneij, E. Holmström, C. Gummesson**

Lund, Sweden

**Purpose:** The purpose of this presentation is to share results from a pilot project and discuss opportunities and challenges in the development and implementation of game-based learning.

**Relevance:** E-learning has become a more and more familiar part of the physiotherapy education and a new branch of this tree is game-based learning (GBL). This technology has several benefits as it gives the student new tools and a new context which are defined by Tang et al 2009, Prensky 2001 and others. According to the activity theory games allow the students to participate and experiment in a non-threatening, virtual environment. The concept of situated learning states that games can provide safety and a variety of virtual environments. The experiential theory states that during game play, students gain knowledge through direct experiences.

Simulated situations has been used in flying education and other contexts for a long time. One way to develop simulated situations are by serious games. The serious games create an arena for realistic interactive scenarios where the sophisticated questions raised in a physiotherapeutic situation can be addressed. This technology might develop new thoughts, which could be an important part of learning processes and practice of knowledge transfer and adaptation to a variety of situations.

The new generations are already into the world of games. This will facilitate the adoption to use games in higher education. Games allow a unique opportunity to create a realistic situation where decisions lead to consequences, reflection and feedback, based on scientific knowledge. Further, no third party is influenced in a negative way.

**Description:** The realistic scenario with its emotional onset can be used to enlighten several important and sublime aspects of the work as physiotherapist. Games could be used as learning tools, but also as a way to perform examinations.

To create a game structure a scenario was defined. Possible decision tree and side tracks were developed. The aim is to let the students experience consequences of their decision making and steps taken. For each decision, alternative different following episodes will arise. The episodes may be video clips, sound or written information.

**Evaluation:** In an ongoing pilot project the game-based learning prototype will be evaluated for future relevance in education.

**Conclusions:** Pilot study is ongoing and experiences and conclusions will be presented and discussed at the congress.

**Implications:** An exciting aspect is the possibilities to vary game-based learning as to obtain learning goals. It could be made in a very simple but effective way, without losing any of the benefits, but also as a sophisticated product. Likewise it is possible to apply this pedagogic approach on all levels of the education – for undergraduate as well as graduate students and for continuing education.



## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

05.005

### **Physiotherapy education - the chance of co-operative learning**

**B. Siebenhofer, B. Gödl-Purrer, B. Salchinger**

FH Joanneum, Graz, Austria

**Purpose:** To discuss the advantages of thinking of physiotherapy degree programs as co-operative learning programs.

**Relevance:** Physiotherapy degree programs and programs of other related professions like nursing fight a lonely battle against a lack of understanding of the universities of the driving forces within these degree programs, increasing difficulties to meet employer expectations and increasingly less interested providers of placement opportunities.

**Description: Participants: Methods:** Using the model of co-operative learning for the degree programs of »applied human sciences« the chances of a fruitful learning experiences and shared ownership to learning outcomes of students are highlighted.

**Analysis:** Analyzing co-operative learning as a model for physiotherapy education.

**Evaluation: Results:** Physiotherapy degree programs show a lot of similarities to co-operative learning degrees. Students are for example used to alternating times of attendance at university and placement periods.

Practical learning can not only take place at the university, clinical experience at the work place is crucial for the achievement of professional competencies.

Ethical codes and professional attitudes are modeled against professional practice seen during clinical placement. Theoretical knowledge is grounded during placement times to become relevant in everyday clinical work.

**Conclusions:** Adopting the model of co-operative learning can widen the possibilities of didactic options and the involvement of the placement partner within the degree programs of physiotherapy and other »applied human sciences« leading to an educational partnership and shared ownership of the educations of physiotherapy graduates skills and competencies.

**Implications:** Questions arising at the clinical placements, therefore the later work places, are brought back to university and linked to theoretical expertise starting an ongoing cycle of knowledge transfer to and from university and working environment.

## SESSION 05

(Poster Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.02

11:00 – 11:45hrs

05.006

### **Capacity for work of physiotherapists teachers of institutions of higher education in the city of Londrina / Brazil**

**M. G. Grott, C. S. Trelha**

Universidade Estadual de Londrina, Londrina, Paraná, Brazil

**Purpose:** Characterize the physicaltherapists teachers in Higher Education Institutions (HEIs) of Londrina-Paraná-Brazil about the socio-demographic and to verify its current capacity for work.

**Relevance:** Due to the aging process of the working population, themes related to work ability and occupational health become a point of interest for research. In the environment, degradation processes are originated in most part for the type of work and the way it is organized. With this view, and several demands related to the post of teacher, has been more and more associated with physical health conditions and mental health shown by this class.

**Participants:** the sample consisted of 58 teachers from HEIs physiotherapists from the city of Londrina, Brazil. The study included professionals of both genders and the criteria for exclusion were to be on vacation or away from work.

**Methods:** We performed a cross-sectional study and We used the questionnaire with questions about demographic characteristics and the Work Ability Index (WAI) that evaluates the ability to work from the perspective of the worker, providing a score ranging from 7 to 49 points, obtained from ten questions (60items) synthesized in seven dimensions.

**Analysis:** The descriptive analysis is presented as a normal distribution (mean and standard deviation or median and quartiles) for continuous data and absolute and relative frequencies for categorical data. The program used to do statistical analysis was SPSS v.15.

**Results:** Of the 58 teachers who participated in this research 37 (63.8%) were female and 21 (36.2%) were male with mean age of 38.71 ( $\pm$  8.09) years. Regarding marital status the majority 72.4% said they are married, single 20.7%,3.4% separated, widowed 1.7% and 1.7% other. Teachers are graduates on average for 16.02 ( $\pm$  7.67) years. About professional development 14 (24.1%) teachers reported having complete expertise, masters incomplete were 5 (8.6%) and 14 (24.1%) complete masters, doctorateincomplete 7 (12.1) and 16 (27.6) complete doctoral and 2 (3.4%) reported havingpost-full doctorate. As for WAI 27 (46.6%) are with good capacity, 21 (36.2%) excellent, 9 (15.5%) moderate and only 1 (1.7%) low capacity for work.

**Conclusions:** The WAI shows that most teachers have good workability, But the average year of graduation was not high, so are professionals who still have some years of work until their retirement.

**Implications:** It is appropriate spend attention to the health of this class to improve their ability to or not decrease it.

## SESSION 06

(Poster Presentations)

**CPD – A range of opportunities, a range of new solutions in the world of lifelong learning**

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

**06.001**

### **15 years of Croatian Academy for Developmental Habilitation in the process of lifelong learning of physiotherapists in Croatia**

**D. Milascevic<sup>1</sup>, I. Klacic<sup>1</sup>, S. Philipps<sup>2</sup>, V. Mejaski Bosnjak<sup>3</sup>**

<sup>1</sup>University of Applied Health Studies, Zagreb, Croatia, <sup>2</sup>Croatian Academy for Developmental Habilitation, Zagreb, Croatia, <sup>3</sup>Children's Hospital Zagreb, University of Zagreb, Medical School, Zagreb, Croatia

**Purpose:** Presenting the process of continuing professional development for physiotherapists in the field of developmental habilitation in Croatia through activities of Croatian Academy for Developmental Habilitation. The main activities of Academy focus on education of professionals in pediatric rehabilitation, informing and educating parents, preschool and school teachers in the implementation of therapeutic methods in children with neurodevelopmental disorders, publications on pediatric rehabilitation for professionals and parents. The specific goals are promotion of interdisciplinary approach in pediatric rehabilitation, implementation of diagnostic and therapeutic methods used in early childhood which are still lacking in Croatia, harmonization of pediatric rehabilitation in whole Croatia.

**Relevance:** At the time the Academy was founded formal higher education of physiotherapists in Croatia was at the level of two year program (120 ECTS). Activities of the Academy went parallel with the improvements to the formal education in Croatia. 15 years later, education system for physiotherapists in Croatia offers bachelor and master degree program in physiotherapy formally started as a part of Bologna process in 2005 (3 year bachelor + 2 year master degree study). Students who participated in these courses were also specially credited in the applying procedure for Master degree program in physiotherapy, and later in realization of specific program contents.

**Description:** Croatian Academy for Developmental Habilitation was founded in 1997 at Children's Hospital Zagreb. Courses organized with the goal of implementing new diagnostic and treatment methods were lead by international experts in their field. Some of those courses are Munich functional developmental diagnostics 1-3 year, Early communication and interaction, Sensory integration by J. Ayres, Vojta Therapy Course, Basic and Advanced NDT Bobath Courses, as well as Gross Motor Function Measure, MACS, PEDI and other assessment methods courses. The Academy actively collaborates with European Academy for Childhood Disability, and the result of this collaboration was 20th Conference of European Academy for Childhood Disability organized in Zagreb, Croatia in 2008.

**Evaluation:** Academy organized interdisciplinary courses as a part of lifelong learning process for physiotherapists, along with doctors and other members of habilitation team, acquiring practical skills necessary for clinical practice, as well as mentoring students in clinical part of their formal education. 400 members of the Academy are interdisciplinary experts, doctors and therapists with different specialties coming from all the areas of Croatia, working in the field of developmental disabilities. All the courses organized by the Academy are recognized by Croatian Council of Physiotherapists and valued in licensing for physiotherapists.

**Conclusions:** Academy for developmental habilitation has invaluable contributed to development of continuous professional development of physiotherapists in Croatia, but also it contributed to promotion of formal education of physiotherapists at entry undergraduate and graduate level by training teachers, lecturers and assistants who work in the specific area of physiotherapy in pediatrics. This contribution is evident in general development of physiotherapy profession in Croatia, as well as in recognition of professional roll of physiotherapists within the habilitation teams.

**Implications:** Improving parallel systems of continuing professional development for physiotherapist in the field of developmental disabilities.

## SESSION 06

(Poster Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning**

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

06.002

### **Clinical academic model – Opportunities and challenges for the physiotherapy profession**

**J. P. Mullan<sup>1</sup>, S. Green<sup>2</sup>**

<sup>1</sup>University of the West of England, Bristol, Bristol, United Kingdom, <sup>2</sup>University of the West of England, Bristol, United Kingdom

**Purpose:** A model is in development whereby physiotherapy and other health and social care academics will work in clinical practice as an established part of their university employment, covering the workload and responsibilities of a matched clinical colleague. Simultaneously, the partner clinical colleague will work in the university, covering the workload and responsibilities of their partner academic. This creates a type of ongoing job share arrangement involving two staff across two organisations. This report aims to explore the challenges and opportunities such a model may present for the physiotherapy profession.

**Relevance:** In a rapidly changing health service in the UK, it is vital for universities and practice to maintain the relationships historically brokered via the Strategic Health Authorities. This model is seen as both a strategic and practical example of collaborative partnership working. In turn, the resultant academic and clinical staff professional development will enhance the student and patient experience. The model between practice and academia may be applicable throughout Europe.

**Description:** The model for the clinical academic will be variable for individual pairs of staff according to identified need and professional development aims e.g. part weekly job share to more flexible exchange periods between practice and academia. It is not proposed that there will be a »one model fits all« solution. The model will be evaluated to explore the opportunities and challenges from both the university and practice perspective, keeping the staff experience as central and looking at the potential for staff development across organisations. In the context of physiotherapy, the partner organisations may include the National Health Service (primary, secondary or tertiary care) social enterprises, sports clinics, and charities.

The challenges include staff development needs for both a return to practice for academic staff and a development of educational skills for clinical colleagues. Apart from staff development investment, the project aims to be cost neutral with individual staff contracts being unchanged. Logistics and patient /student continuity will have to be overtly considered at all stages. Commitment, positivity and flexibility will be required at strategic and operational levels from both practice and the university.

The model creates an opportunity for practice to be placed at the heart of all that is achieved within the physiotherapy programme, with its teaching staff and curriculum being particularly contemporary and credible. It facilitates bridging of the theory/practice gap by both academic and practice staff at the forefront of the education of future physiotherapy students. It also affords excellent staff development opportunities and opens up career pathways that integrate both academia and practice e.g. professorial roles/joint professional roles.

**Evaluation:** Evaluation will be via a cross organisational working group and qualitative staff feedback. Additionally student module evaluation and the National Student Survey will be used to assess the impact of the model on student experience.

**Conclusions:** This model embraces the concept of lifelong learning enabling individual physiotherapy clinicians and academics to develop or redevelop skills and attributes as part of work based learning, thus allowing them to further their career opportunities. In turn it has potential to enhance the student experience for future generations of physiotherapy graduates, providing them with »added value« within their learning.

**Implications:** From a university perspective, it provides the university with a unique selling point to help attract future students in the current competitive undergraduate market. It will also overtly highlight to future and current employees of both the university and partner practice organisations their commitment to continual professional development of their staff. It may evolve into a wider model that is applicable and recognised across the UK and Europe.

## SESSION 06

(Poster Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

06.003

### Perceptions and attitudes of clinical physiotherapists in Cyprus on continuing professional development and education

A. Samara

Nicosia General Hospital, Cyprus, Limassol, Cyprus

**Purpose:** The purpose of the study is

- to investigate perceptions of clinical physiotherapists in Cyprus on the necessity and usefulness of CPDE
- to examine what are the motives and barriers for CPDE of physiotherapists
- to explore preferences on CPDE.

**Relevance:** A physiotherapist should be characterized of intention for personal growth, professional maturity and responsibility, attributes which gains from continuing professional development and education (CSP, 1995; WCPT, 2011).

Profits of CPDE include better intervention and approaches of patient, clinical sufficiency, self-confidence and continuation of profession exercise.

Bibliography has shown the importance and diversity of perceptions of physiotherapists as for the motives and the obstacles indicating cost, initiative, distance, and specialisation needs as important factors in the decision of attendance in learning activities (Austin & Graber, 2007).

Only recently has physiotherapy began to evolve in Cyprus, indicating need for CPD and improvement of services.

**Participants:** Participants were selected to be working at Nicosia General Hospital as it is the only hospital in Cyprus that has all medical specialisations and variety of clinical incidents.

24 clinical physiotherapists ( 22♀, 2♂) of different:

- age ( 41.7% between 31-40)
- education ( 30% MSc, 70% BSc)
- work experience ( mean 14.15 yrs , mean 8.64 yrs in hospital).

**Methods:** The study is a descriptive evaluation.

A questionnaire was developed according to Robson (2007), Gunn and Goding (2009) and Chesson (1993). The questions examined perception, attitudes and preferences on CPD including demographic information. Validity of the questionnaire was cross-examined, and reliability was achieved by using closed and open questions.

**Analysis:** Descriptive and correlation (Pearson's r) statistical analysis was conducted by SPSS 16.0. Internal reliability was examined for the questions on attitudes towards CPD (Cronbach's alpha, 0.800).

**Results:** Participants overall felt that CPD was useful for practising physiotherapy (45.8%), and personal development (47.8%). Only 20.8% thought that CPD was necessary for work promotion while 21.7% know the usefulness of portfolio.

Most participants recognise different types of CPD activities despite the few opportunities in Cyprus (66.7%).

No significant statistical difference was found between age, or education and CPD. Strong correlation was found between type of CPD and self-subsidy ( $r = .463$ ,  $p < 0.05$ ). Few participants are part of a scientific team and willing to participate in research or as conference speakers.

Main barrier for CPD were lack of money (48%), days off work (17%) and distance (24%). Main motives were specialised knowledge (26%), gain of clinical skills (30%), and personal development (35%).

**Conclusions:** It emerges that physiotherapists have a positive attitude towards CPD and its significance for clinical competence and personal development. The majority prefers hands-on seminars (Turner, 2001) and not conferences. There is participation in CPD activities irrelevantly of age, training and clinical placement. Main motive is acquisition of knowledge and main barriers was lack of money and feelings of guilt towards burdened colleagues (O'Sullivan, 2003).

**Implications:** This is the first study conducted in Cyprus related to Continuing Education which provides and records basic knowledge of CPDE elements. It is the pilot study of investigation nationwide.

## SESSION 06

(Poster Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning**

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

**06.004**

### **Teaching social responsibility: crossing borders into community engagement and advocacy**

**S. G. Klappa**

St. Catherine University, Minneapolis, MN, USA

**Purpose:** This study explored the experience of physical therapist students as they participated in an international service-learning opportunity in an impoverished region of the Dominican Republic. The purpose of the educational opportunity was to provide North American, Dominican, and Haitian student physical therapists with an international interprofessional clinical experience with physicians, nurses, physical therapists, and prosthetists. Pro bono services were provided in an area of the Dominican Republic (DR) with a great need for rehabilitation services called a Haitian batey or community. The hypotheses of this study were that North American, Dominican, and Haitian physical therapy students participating in a short-term international interprofessional service-learning immersion experience will: 1) Deepen their professional formation; 2) Increase awareness of health disparities and policy issues; and 3) Articulate a social responsibility action plan for becoming a change agent.

**Relevance:** International interprofessional experiences such as this community immersion experience help prepare therapists for differing professional roles, environments, and contexts for interprofessional practice.

**Participants:** Participants were Doctor of Physical Therapy students (n=12) from the United States attending a Midwestern physical therapy school as well as Haitian (n=6) and Dominican (n=6) physical therapy students attending school in the Dominican Republic.

**Methods:** Ethnographic methods were used in this study and included participant observation, interviews, and focus groups. Students provided therapy for five days in small teams supervised by therapy instructors from both the United States and the DR. Two physicians, a nurse, and a prosthetist from the DR also assisted the team.

**Analysis:** Student reports of their experiences were collected by oral narrative and reflective course evaluations. Interviews were logged via an audio recorder for later review and transcription. Data analysis included coding for emerging themes, member checking, and conducting an external audit. Similar themes were identified among all three groups of students.

**Results:** Students learned many things about themselves and others. They reported improved self confidence, improved creativity in treatment, increased awareness of links between health disparities and health policy, and a better understanding of their role as advocate.

**Conclusions:** Students who participate in international interprofessional rehabilitation teams will likely develop a deeper personal concept of social responsibility, confidence in their ability as an advocate, and respect of diversity than they would otherwise experience if only participating in typical clinical experiences. Students see themselves as advocates or change agents as part of their professional roles.

**Implications:** Dominican and Haitian students met with professors and administrators at their school to develop an action plan to provide physical therapy clinical experiences for the batey community. American DPT students felt empowered to return to the USA and examine health policies and advocate to decrease health disparity in their communities. Faculty from both universities deepened their commitment to work together to provide interprofessional experiences. All groups were able to better describe a broader picture of health and wellness that was linked to social responsibility.

Strengths of the study were that rapport was built between the participants and the researchers through the process of participant observation. Limitations are that a sample of convenience was used. Studying how future perceptions between the three groups change as a result of working together would be interesting.

## SESSION 06

(Poster Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

06.005

### How can they educate us? People with spinal cord injury share their physiotherapy experience

K. Pill<sup>1</sup>, L. Pääbo<sup>2</sup>

<sup>1</sup>University of Tartu, Tartu, Estonia, <sup>2</sup>Tartu, Tartumaa, Estonia

**Purpose:** Physiotherapy as a profession aims at a holistic biopsychosocial approach. Physiotherapy education, however, tends to put less emphasis on the social aspect when in fact physiotherapy should include the perspectives of those who are directly influenced by it, that is, clients.

**Relevance:** While physiotherapists are experts in their field, clients are experts in living with a certain health condition; combining the two in a collaborative and mutually respectful way might help attain better physiotherapy outcomes. Therefore, clients can be viewed as informal educators contributing to physiotherapists' lifelong learning opportunities.

**Participants:** This study sought to explore the physiotherapy experiences of 8 people with spinal cord injury (SCI) from different parts of Estonia (all male, mean age 31 years, wheelchair users for an average of 7 years). Participants were selected by using snowball sampling in cooperation with The Estonian Union Of Persons With Mobility Impairment.

**Methods:** Semi-structured interviews were carried out. Interviews were tape-recorded, transcribed and thematically analyzed.

**Analysis:** Thematic analysis and encoding were used.

**Results:** First, the participants described mostly positive experiences with physiotherapy. The benefits were seen as: activity-related (being able to dress, write and propel the wheelchair better), promoting general well-being (feeling more stronger), providing positive emotions, preventing complications (contractures) and reducing negative symptoms (spasticity). Thus, physiotherapy promotes clients' physical self-efficacy, improves their functioning and prevents secondary complications. Second, the importance of a good client-physiotherapist relationship was emphasized. »Having one's heart in it«, good communication skills, positivity, listening, motivating, friendliness, trust and respecting client's autonomy were mentioned as important qualities in a physiotherapist. This demonstrates how, in addition to professional competencies, general competencies are highly valued by clients. Third, when it comes to negative aspects, there was a general concern about the limited access to physiotherapy, that is, the participants felt that the government-funded physiotherapy was not sufficient and, at the same time, they could not pay for physiotherapy themselves due to insufficient social benefits.

The aforementioned themes were reflected in the participants' recommendations for physiotherapists (and physiotherapy students): they wanted a collaborative relationship, to be motivated to achieve further goals and to be involved in the decision-making process. These findings support the importance of client-centredness: if physiotherapists consider their clients' perspectives and thereby increase their involvement and empowerment, this might help to achieve better physiotherapy outcomes.

**Conclusions:** In conclusion, this group of people with SCI valued physiotherapy and found it beneficial but identified problems with accessibility to physiotherapy. They also emphasized the importance of client-centred approach and general competencies.

The strength of this study is a qualitative and client-centred approach to physiotherapy education. However, due to the qualitative nature of this study no generalizations can be made. Hence, further work should explore if these findings apply to a larger group of people with SCI.

**Implications:** Survey findings should be taken into account in physiotherapy curriculum-development to emphasize general competencies in the learning process.

## SESSION 06

(Poster Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning**

Thursday, November 8, 2012

ROOM A.-1.04

11:00 – 11:45hrs

**06.006**

### **Physiotherapy education and practice in the context of Lifelong Learning**

**S. J. Yantcheva, L. O. Kraydjikova**

National Sports Academy, Sofia, Bulgaria

**Purpose:** The aim of our study was to examine the correlation between Lifelong learning and Physiotherapy education and practice.

There are several forms of continuing education in our University (National Sports Academy – Sofia, Bulgaria). The academic degrees are Bachelor, Master and PhD. Beside, we have different qualification forms for practicing physiotherapists, organized by our University and Bulgarian Association of Physiotherapists.

**Relevance:** Physiotherapy profession is developing through the joint efforts of academics and practicing physical therapists. The integration between theoretical and practical knowledge is the key of the coherent professional development. The sufficient integration of theory and practice in Physiotherapy Education is an important mission for Physiotherapy prosperity. The development of new ways and methods for learning in collaboration between the life experience and the High education is one of the main perspectives nowadays. We have an experience in developing a new collaboration between High schools and Medical establishments. Synchronized participation of students, clinical professionals and teachers is a way to facilitate the formal and non-formal knowledge integration in practice.

**Participants:** The participants of the study were 100 students in Master's physiotherapy program. They have accomplished also different qualification courses.

**Methods:** Questionnaire in order to examine student's opinion of the motivation for Lifelong learning, perspectives of personal professional development, special interest areas, effective forms of education, learning in the working place and enlarge the possibilities of this type of learning.

**Analysis:** Percent distribution.

**Results:** The personal professional development is realized with more practice (72%), but balanced between theoretical knowledge and practical skills (23%). The special interest area is musculoskeletal dysfunctions (76%). Physiotherapists accept the student-centered teaching (69%).

**Conclusions:** In conclusion physiotherapists have high motivation for continuing education. They approve the possibilities for learning in working environment by discussions on definite cases. The personal professional development is realized with balance between theoretical knowledge and practical skills

The future work will be to develop the integration of theoretical and practical knowledge and metacognitive skills to foster professional growth in physiotherapy.

**Implications:** The implications are good possibilities for Lifelong learning and developing the professional competences.



## SESSION 07

(Poster Presentations)

### Education and employment policies: Challenges in Europe

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

#### 07.001

### Developing an evaluation and assessment policy in physiotherapy education

T. Rotsaert<sup>1</sup>, D. Beckwée<sup>2</sup>, P. Vaes<sup>1</sup>, E. Kerckhofs<sup>1</sup>

<sup>1</sup>Vrije Universiteit Brussel, Brussels, Belgium, <sup>2</sup>Vrije Universiteit Brussel, Brussels, Agree, Belgium

**Purpose:** We describe an educational innovation project which aims to create a department-wide evaluation and assessment policy that corresponds with a coherent and rational competence-based curriculum. This project was initiated by the department of Physiotherapy at the Vrije Universiteit Brussel (VUB) and is situated within an eight year cycle quality audit by a Dutch-Flemish quality assurance agency. In this audit, educational goals and their assessment procedures will become an important quality standard. Also, the revision of the aimed learning outcomes and the way this is brought to practice, are fundamental aspects of the audit.

**Relevance:** In the past decade educational research has shown that assessment of and for learning becomes an important factor in the realization of educational effectiveness. Implementing changes in evaluation procedures within the context of university courses often challenged with resistance. In order to cope with these barriers, a department-wide policy offers a basis for the implementation of the aforementioned assessment culture and fosters growing awareness on the topic.

**Participants:** In a first phase six representatives of the six teaching units. In a second phase all teaching staff of the department.

**Methods:** Physiotherapy education at VUB is provided by six different teaching units which are governed by the department board. One of the future tasks of this board will be the guidance of teachers to set up appropriate evaluation methods.

With this demand in view, representatives of all teaching entities were invited to participate in a workgroup. This workgroup is under supervision of the department board and is coordinated by a specialist in educational studies. First, a common evaluation and assessment policy document will be developed which describes the departments vision on evaluation, in accordance with the educational vision (which is grounded on competence). Furthermore it will provide reflection tools and tangible tips for teachers to introduce alternative formative and summative assessment forms. This policy document operates as a reference document in the whole process. Second, teachers are offered a course specific document where statistics on students results will be gathered, currently used evaluation methods will be mentioned and a matching of the course specific learning goals with the department-wide competence matrix will be made. This explicit representation, which facilitates a constructive on-topic discussion, situates the course within the whole curriculum and makes it possible to detect strengths, weaknesses and possible gaps. This fosters the intent to create a homogeneous educational approach where assessment of and also for learning can take place. Third, listed shortcomings will be evaluated and altered by the teacher with support of the workgroup. This process is iterative; competences are constantly under influence of new input from science and practice, which makes it necessary to reevaluate the taken steps. Doing so, we tend to create well-balanced learning environments where formative and summative evaluation is used.

**Analysis:** Not applicable

**Results:** Even though this is a work in progress, first findings show a more open attitude towards an evaluation and assessment culture.

**Conclusions:** Creating a department-wide evaluation and assessment policy is essential for the transition to an educational culture where assessment is seen as a valuable tool for learning. Due to the raised awareness on the department level, teachers start to see evaluation as an equally important phase in the educational process.

**Implications:** Creating an assessment culture in physiotherapy education is an important step in the realization of high quality learning environments.

## SESSION 07

(Poster Presentations)

### Education and employment policies: Challenges in Europe

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

07.002

### The international classification of functioning, disability and health as a theoretical postulate to outline the practice of physical therapy for the interprofessional work

E. F. Martins, A. D. M. Martins

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**Purpose:** To establish a conceptual model of interprofessional practice to enhance interdisciplinary actions within team works, ensuring professional identity and defining shared zones. This analysis was more precisely focused for physical therapy, occupational therapy and nursing. This model present advantages of the combined practices that encourages sharing and applying of knowledge and working tools to the group work in order to promote functional health of individuals, families and communities.

**Relevance:** The concepts of functioning and disability proposed by International Classification of Functioning, Disability and Health (ICF) provided elements to postulate a theory of interprofessional practice that identifies zones of shared practice that instead of serving as a territory of dispute between different professions, becomes space for combined actions within the expertise of specific activities of each professional. In Brazil, although it is encouraged interprofessional team, there is evidence of the inefficiency and difficulties to consolidate it in the public health system. Nevertheless the professional differences have balked the purpose of the unity. The difficulties are about sharing and applying their knowledge and working tools to the group work and that accompanies controlling feelings among the team. Thus, this theory focuses on the similarities between the team in the light of ICF using the particularities as bonus of the work.

**Description:** Assuming that health professionals would perform their actions to promote functioning within its own expertise and that the functioning is ensured by components as defined by ICF; there is an entrance of action for each ICF component, directly related with one professional expertise (direct way) that reaches zones of action (shared zones) related with expertise of the other professional (indirect way). By this model, even having each professional a direct way of influence determined by their actions, one interferes indirectly in the direct way of the other professional. Physical therapy actions instrumentalized by prophylactic and therapeutic use of the physical agents (mechanical, electromagnetic, thermal and others) directly influences functions and structures of the body with rebound on the activity and participation and interacting with contextual factors (environment and personal), while occupational therapy actions instrumentalized by the use of human activities (daily activities, recreational, leisure and others) directly influences the activity and participation with rebound on the functions and structures of the body interacting with contextual factors. Finally, the nursing actions by individual and/or collective care directly influences the environmental and personal factors with rebound on the functions and structures of the body as well as activities and participation. The intervention field where each professional directly acts also becomes an indirect field of action for other professional performances, characterizing the shared zones.

**Evaluation:** We have experienced this model with students interprofessional education, interprofessional teams and groups with students interacting with interprofessional teams. It was evidenced that by this theoretical model, a professional identity is conceived and the professionals understood that there are situations when their knowledge and tools will be shared (shared zones) reinforcing the team goal and avoiding resentful feelings.

**Conclusions:** In this theoretical model the mix of professional expertise can be organized avoiding difficulties about sharing and applying different knowledge and working tools among physical therapists, occupational therapists and nurses. Moreover, it allows to recognize the similarities among the team in the light of ICF using the particularities as bonus of the work and to reinforce professional identity for interprofessional work.

**Implications:** There are a lot of studies about interprofessional education for physical therapy, occupational therapy and nursing students. However, interprofessional team works in Brazilian services are rare. When in a group of health professional work a professional decides to work alone or stays resentful with other colleagues, the purpose of the team work can be spoiled. Uniting a way of thinking about shared zones would ease the channels of exchange information and experiences. The goal of the health working team is one: the subject welfare. The means could be: to explore concepts defined by ICF.

## SESSION 07

(Poster Presentations)

### Education and employment policies: Challenges in Europe

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

07.003

### Demands for physiotherapists in the field of outpatient physiotherapy practice in Germany

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**Purpose:** Physiotherapy in Germany is currently characterized by changes in the educational system. The increased offer of study programs is representing the rapid progress of academization, which began in the year 2001. Reasons for this development are the increasing demands in the health-care system, resulting from the demographic changes. Multimorbidity, chronic diseases and increasing costs require new structures in the health-care services and the introduction of alternative concepts by the different health-care professionals. The current laws regulating physiotherapy education in Germany focus on biomedical aspects and the technique basis of physiotherapy. The demands resulting from the view of physiotherapy as a patient-centered service delivery are not sufficiently taken into account yet.

**Relevance:** Most of the patients, referred to physiotherapy in Germany are covered by the public health insurance system, which is why the treatment time is limited by the insurance companies. Physiotherapists can decide on a time range between 15 to 25 minutes. Taking into account the complexity of the tasks and challenges in patient-centered service delivery, this given time seems to be short. The aim of this research project was to analyze the challenges and demands physiotherapists in outpatient practices face in everyday work to derive implications for the changing educational system and the health-care politics.

**Participants:** Five employed physiotherapists with different professional experiences and qualifications were selected for the interviews. They all work in private practices in Northrhine-Westfalia, Germany. Participants were contacted via phone.

**Methods:** The study was conducted following the Grounded Theory approach. For data selection an interview guideline was developed to focus on the following aspects: time, communication, description of the field of outpatient practice, work tasks and the treatment situation. The interviews were conducted with the aim to develop and describe central concepts, which describe the demands from the view of the physiotherapists.

**Analysis:** According to the Grounded Theory approach open and axial coding was conducted with each of the five interviews. Therefore the interviews were coded line by line to develop categories for each interview. In the next step the categories were compared and summarized or refused. In that process central categories evolved, which were refined and described.

**Results:** The identified demands can be referred to the levels of the framework conditions and the treatment process. The framework conditions are characterized by a constant lack of time in outpatient physiotherapy practice. This can be seen as a result of the inconsistency of temporal procedures and the tasks, which need to be done during the available time. The demands within the treatment process are characterized by planning, communication and the patient-therapists-relationship. Planning of the process does not play a role in everyday practice, due to the uncertainty of the patients problems. Communication is seen as a difficult aspect for the interviewed therapists: spending more time on communication than treatment often causes inner conflicts. The patient-therapist-relationship is characterized by a closeness, which is difficult to handle especially for novice physiotherapists. The mentioned challenges on both levels interact with each other and frequently overtax the physiotherapists.

**Conclusions:** Physiotherapy is defined as a patient-centered service delivery. Interaction is a central attribute to physiotherapy. The results of the present study emphasize, interaction as a central task of physiotherapy must be considered more intensively in physiotherapy education. It has to be integrated systematically in physiotherapy training. In political discussion physiotherapists should emphasize on the significance of interaction in order to optimize structural conditions for patient care. The current educational and political situation does not allow physiotherapists to provide patient-centered service delivery as it is defined.

**Implications:** To offer a good quality service, it is essential to realize the important role of interaction in physiotherapy. Therefore it is not sufficient for education to focus only on biomedical aspects, but also to develop pedagogic concepts that take into account the demands resulting from interaction between the patient and the therapist. Some proposals can be made, like optimizing the education of clinical supervisors and to integrate enough time for self-reflexion.

## SESSION 07

(Poster Presentations)

### **Education and employment policies: Challenges in Europe**

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

**07.004**

### **Promoting corporate social responsibility in university programs: the case of the master in musculoskeletal disorders rehabilitation**

**M. Testa<sup>1</sup>, A. Siri<sup>2</sup>**

<sup>1</sup>University of Genova, Savona, Italy, <sup>2</sup>University of Genova, Genoa, Italy

**Purpose:** The European Council made a formal proposal for stimulating Corporate Social Responsibility (CSR) across European Firms »to become the most competitive and dynamic knowledge-based economy in the world, capable of maintaining sustainable economic growth with more and better jobs and greater social cohesion« (Lisbon European Council, 2000:2).

Taking Europe 2020 strategy as a central point of the new framework, Universities should encourage a culture of continuous quality development and improvement of the education and training systems by adopting a well-conceived CSR strategy.

The present paper aims to identify a way of promoting strategically CSR in a University Master-1st level degree.

**Relevance:** The paper deals with the role that professionally-oriented courses can play by strongly promoting their knowledge, and by boasting their cultural attractiveness in terms of competitive advantage for the territory, being them the main and strongest link towards the society and the future.

**Description:** The study utilized three data collection

**Methods:** semi-structured interviews; focus group; and secondary data analysis, including university social reports and formal documentation of the master course

**Evaluation:** A model is designed to aid program director in the accountability, i.e. in the acknowledging, assuming responsibility for and being transparent about the impacts of your policies, decisions, actions, products and associated performance.

**Conclusions:** The research resulted in the development of a model for mastering corporate social responsibility for university and students. This model has been implemented and its efficiency tested. Studies based on the knowledge of the differences and needs of students and which meets the public interests and long term demands of the labor market, are a crucial in order to better communicate and interact with stakeholders.

**Implications:** Practical relevance

This innovative approach is particularly interesting since the literature does not cover, until now, the importance of adopting a social responsibility strategy within an University course, in order to foster public policies for development.

#### **Research implications**

Future researches may expand to provide indicators for measuring the impact of adopting CSR at University programs and to evaluate how the implementation of CSR at a University course will reinforce the credibility of this special kind of public organizations service.

## SESSION 07

(Poster Presentations)

### **Education and employment policies: Challenges in Europe**

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

#### **07.005**

### **Italian Parkinson Network and knowledge transfer in physiotherapy: new challenges and step for the future**

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<sup>1</sup>University of Trieste, Trieste, ITALY, Italy, <sup>2</sup>University of Messina, Messina, Italy, <sup>3</sup>University of Genoa, Genoa, Italy

**Purpose:** To create an Italian Network to improve Physical Therapy care in Parkinson disease

**Relevance:** Bringing the evidence into practice; linking science and practice in education

**Description:** Following the Implementation's Project the Dutch national guideline for physiotherapy in PD (2004, Royal Dutch Society for Physical Therapy, KNGF) in August 2010, the development of a European guideline for physiotherapy in Parkinson's disease (PD) has started. It concerns a collaboration of member organizations of the European Region of the World Confederation for Physical Therapy (ER-WCPT) and it involved 14 countries including Italy. Starting from this important event we promote the development of a physiotherapist (PT) network across Italy with the aim of an active participation at this implementation's project. PT expert in Parkinson's disease rehabilitation but also colleagues interested in this field were invited to join this network so as to build and sustain new evidence based professional career. Through different dissemination processes (mailing list, newsletter on Italian Association Physiotherapists (AIFI) website, meeting and conference) in less than one year 166 PTs joined this network. We organized three meetings to share information about the a European guideline for physiotherapy in Parkinson's disease (PD) development and we organized the first Italian Congress for PT interested in the evidence based rehabilitation for people with PD during an the most important Italian conference on PD and Movement Disorders (LIMPE, Venice 2011). Indeed, because EU Guideline proposed an European Survey to gain insight in barriers in current care of PD, the Italian Network was involved in the translation and dissemination process. Over 4,000 physiotherapists has provided answers about their expertise, the care they provide for persons with Parkinson's and barriers they perceive in providing optimal Parkinson's care across Europe (19 countries). The Italian contribution was important with more than 600 answers provided by PT across all the regions. Another important initiative carried out of this network was the creation of special interesting group on scientific research in order to improve methodology and results and to create multidisciplinary collaborations in this field. The Italian Parkinson's Patients association was also involved in to the process of bringing the evidence into the clinical practice in the Italian Healthcare system.

**Conclusions:** Future initiative (meeting, scientific conferences, focus group ecc) are already in the building phase looking forward to the European guideline for physiotherapy in Parkinson's disease publication.

**Implications:** Bringing the evidence into practice; linking science and practice in education

## SESSION 07

(Poster Presentations)

### Education and employment policies: Challenges in Europe

Thursday, November 8, 2012

ROOM C.E.19

11:00 – 11:45hrs

07.006

### »Patient self-referral« – Developing a method to identify unconsidered competencies in different German educational systems

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**Purpose:** To identify competencies and to develop a module for physiotherapists in Germany integrating competencies required for working autonomously as a First Contact Practitioner.

**Relevance:** Introducing direct access to physiotherapy in Germany will require a generalised optimization of the physiotherapist's competence in order to reach international standards. To date there are very few scientific based statements about specific learning outcomes or competencies required to prepare German physiotherapists to work as autonomous practitioners.

**Description:** With the help of the design process for module development, guided expert interviews and the use of various internationally recognized statements (European Physical Benchmark Statement, European Core Standards of Physiotherapy Practice and German Qualifications Framework), a specific method of analyzing the educational needs of German physiotherapists was developed.

The competencies required for working as a First Contact Practitioner referred to the European Physical Benchmark Statement and were transformed into the matrix of the German Qualifications Framework. These data were compared to the competencies of a physiotherapist having completed a 3-year German vocational course and holding the Bachelor's degree of the Hochschule Osnabrück in Germany. A specifically developed grading system helped to rank the competencies and to explore the deficits.

**Evaluation:** The challenges of professional autonomy were highlighted; German physiotherapists seem to be well prepared in the profession-specific skills and demonstrate solid knowledge of physiotherapy on a scientific basis as well as in the context of service delivery and professional practice. However, education deficits were detected within the fields of professional and personal competence; especially according to their decision making, clinical reasoning and problem solving skills relating to the demands within the system of Patient self-referral, e.g. forming a diagnosis or employing appropriate referral procedures. Based on these data essential learning outcomes and fundamental competencies have been formulated.

**Conclusions:** There is neither a profile specifically describing the competencies needed for work with Patient self-referral, nor a profile describing the competencies of a German physiotherapist. This complicated the purpose to point out the requirements of a First Contact Practitioner and subsequently to detect potential educational deficits of German physiotherapists. The method used for analyzing the needs is not validated and to that stage of research the formulated learning outcomes are not representative.

However, the process for the development of a module, in combination with the method for analyzing the needs, provides a potential way in which to describe the current competency levels of German physiotherapists. Using the matrix of the German Qualifications Framework increases the transparency and comparability within Europe.

**Implications:** To further upgrade the professional competence and standing of German physiotherapists, the description of a clear profile as well as the introduction of uniform educational standards for physiotherapy in Germany is essential. The developed method can be seen as a fundament for preparing German physiotherapists for a common labour market, but it must be supported by further studies.

## SESSION 08

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 1**

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

**08.001**

### **Developing a course for clinical instructors in physiotherapy**

**R. Tock- Harpaz**

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#### **Background**

In Israel there are 5 physiotherapy education faculties for BPT. The students are required to undergo 1000 hours of clinical practice in different fields of physiotherapy. The clinical instruction and guidance is provided by physiotherapists with at least two years of experience in their field of expertise, and who went through a qualification course. There are several courses for clinical instructors (CI) in Israel. Those courses differ in content and teaching methods. In our course we've decided to adopt a different pedagogic approach based on both experience in CI and an academic qualification in education.

#### **The developing process**

We focused concurrently on three aspects: Knowledge, Teaching skills, Values and Ethics. Our basic assumption was that the physiotherapists participating in the course are trained professionals in their own fields. What they lacked, in our perception, was knowledge and skills to help them become learning facilitators for their students. Additionally, clinical instructors must have the ability to debate and cope with ethical issues regarding physiotherapy practice and regarding their position as instructors.

**Description:** First, we identified the goals of affiliation in physiotherapy and defined the job description of a clinical instructor. Second, we defined the properties of knowledge and skills required from a clinical instructor in order to achieve those goals. For example: the student is expected to perform a full interview and examination and to explain the clinical conclusions based on them. In that context, the clinical instructor is required for observation, assessment and feedback skills. Those skills are a result of knowledge of both physiotherapy and teaching.

**Evaluation:** The third aspect, regarding values and personal development is a critical component in turning the clinical instructor into a role model. This component is developed throughout the course by engaging in ethical dilemmas and decision making as instructors and in guiding students in coping with different ethical dilemmas.

#### **Conclusions:** Results

The clinical instructors qualification course was composed of 60 hours of group discussions, individual tasks and instruction skills exercises such as performance assessment, feedback, clinical discussion and clinical test. The participants were required to practice instructor-student interaction in role-playing and to assess performance by watching video clips taken in clinical education sites. Each participant had to turn-in a detailed instruction plan and schedule for his own working-place and field of expertise.

#### **Recommendation**

The anonymous feedback from the course showed high levels of satisfaction from the contents of the course and a high sense of readiness for instructing students. In order to re-evaluate the course, we recommend to exam the levels of satisfaction within the course participants after a few periods of clinical instruction.

## SESSION 08

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 1**

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

**08.002**

### **Stress in freshman Physiotherapy students at the University of Málaga (Spain)**

**M. R. Iglesias Parra<sup>1</sup>, M. T. Labajos Manzanares<sup>1</sup>, A. M. García Guerrero<sup>2</sup>, F. J. Barón López<sup>1</sup>, M. J. Casuso Holgado<sup>3</sup>**

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**Purpose:** To assess the degree of stress perceived by students who began studies of Physiotherapy, addressing academic and personal factors.

**Relevance:** The widespread impact of perceived stress in the field of health, welfare and performance (Stephoe 2000; Muñoz, 2004, Sandin 2003), evidence is seen more in the first years of study (Muñoz 1999) which is variable by titration (Dutta 2005) and lack knowledge about it with specific and validated instrument (Barraza, 2005; polo 1996, vineyard and Caparros 2000).

**Participants:** 47 freshman Physiotherapy students of the University of Málaga (Spain).

**Methods:** Descriptive-analytical and transversal. With an instrument designed and validated for this (Boujut, E. Bouchon, M. 2009) using digital questionnaire, confidential and voluntary.

**Analysis:** Reliability analysis using Cronbach alpha, descriptive statistics frequency type, mean, median, standard deviation, etc.. And differences, measures of central tendency and dispersion: Using SPSS 1.5.

**Results:** The degree of stress perceived by freshman physiotherapy students in the sample regardless of gender is medium, with an average 42.72 (SD 9.87).

Taking gender into account the women in the sample have a mean of 43.54 (SD 1.39 ET 8.48) for women and 40 (ET4, 14 DT 13.74) for men and this difference is statistically significant (SD 0.30).

In the various factors which includes the questionnaire, taking into account gender, no significant differences in the perception of them (p 0.21, 0.13, 0.35, 0.03.).

**Conclusions:** The degree of stress perceived by freshman physiotherapy students in the sample regardless of gender is medium. There are statistically differences between genders.

**Implications:** The entry into the University, is considered a set of highly stressful situations because the individual can experience, if only temporarily, a lack of control over the new environment. Institutions must help freshman students to manage potential stress.



## SESSION 08

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

#### 08.003

### The difficulties of data collection in scientific research

I. V. Balajti, K. Kósa

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**Purpose:** The aim of our project was to test various methods of data collection, among them internet-based questionnaire survey on health behaviour in order to identify the most cost-effective manner which gives at least 60% response rate.

**Relevance:** Questionnaire surveys are frequently applied in physiotherapy research in Hungary. However, face-to-face data collection requires time and human resources and is not always feasible. Internet-based questionnaire surveys are less resource-intensive than face-to-face methods but their response rate tends to be very low.

**Description:** The survey was carried out among Hungarian university students. Students of 27 faculties at six universities made up the sampling frame (N=30901) of whom five per cent was chosen by systematic sampling. That is, all students of the selected faculties were sorted by their university identification code and every twentieth was selected by the administration of universities (n=1544)

**Evaluation:** There was applying a questionnaire on paper and in a web-based version, collecting data in various arrangements. The targeted students received an electronic invitation by the university messaging system to fill a web-based questionnaire, or were invited by the same means to fill the paper-based questionnaire at a predefined place and time with or without conditional incentives.

**Conclusions:** Results of the study showed that both the paper-based and the web-based questionnaires, with or without conditional incentives, yielded response rate below 10%. In a subsequent questionnaire survey a combination of postal and internet based questionnaires were used for data collection enhanced with a small up-front gift and conditional incentive suggested by a student focus group. This data collection arrangement resulted in a 68.6% response rate.

Internet based questionnaire surveys have the potential to be cost effective and reaching large samples in a survey especially in younger target groups but since this method alone yielded a very low response rate, we recommend its combination with paper-based data collection and carefully selected incentives in order to reach a sufficiently high response rate.

**Implications:** We consider, to get to know a target population's health behaviour -for instance physical activity- or the health status, is a beneficial method to use the computer assisted data collection, using web-based questionnaires in combination with other data collection methods and incentives. This data collection method is particularly useful in a prevention field research in the physiotherapy.

## SESSION 08

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 1**

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

**08.004**

### **Quality Assurance System of Physiotherapy and master programmes of the Spanish University System**

**A. Gomez-Conesa<sup>1</sup>, C. Suarez<sup>2</sup>, S. Souto-Camba<sup>3</sup>, R. Chillon-Martinez<sup>2</sup>**

<sup>1</sup>Murcia, Spain, <sup>2</sup>Seville, Spain, <sup>3</sup>Corunna, Spain

**Purpose:** Know and review the indicators and measurement, analysis and improvement processes of the Physiotherapy and master programmes.

**Relevance:** The Internal Quality Assurance Systems (IQAS), part of the present Physiotherapy's curricula, form the basis for efficient operation of the educational programmes, and for the accreditation of the programmes.

**Participants:** Documents of the Internal Quality Assurance Systems (IQAS) of Faculty of Medicine of Murcia University

**Methods:** The IQAS allows the centres, where programmes are given, to prove the quality of the programmes and degrees, and also to show their commitment to implement means that assure and prove that quality.

As a part of the programmes design, the IQAS requires and helps to facilitate the monitoring and accreditation process.

The Murcia University's IQAS is analyzed as model of the Spanish University System. The Faculty of Medicine, Dentistry, Physiotherapy and Pharmacy is the centre where the Physiotherapy programme is given.

The Faculty Board, Director's Officer, the Quality Coordinator and the Quality Assurance Commission are the Faculty quality structure, that act coordinated. The Quality Assurance Commission comprises the Head of the grade programme and the Academic Committee.

In the Physiotherapy there are three Quality Assurance Commissions:

- 1) Coordinator and the Academic Committee of the Physiotherapy grade.
- 2) Coordinator and the Academic Committee of the Master of »Neurological physiotherapy approach in child and adult».
- 3) Coordinator and the Academic Committee of the Master of »Intervention and research in physical exercise, health and dependency»

**Analysis:** The IQAS takes into account the different stakeholders, especially students. The stakeholders are any person, group or institution interested in the centre (the Faculty of Medicine, Dentistry, Physiotherapy and Pharmacy), the programmes (grade and master programmes) or in the results obtained.

**Results:** A number of indicators must be measured and analyzed systematically, because the IQAS entails consider these indicators. The indicators analysis is the basis for continuous improve of the grade and master programmes, and for facilitating the decision making for the centre management and accountability to stakeholders.

**Conclusions:** The IQAS are similar in the centres where the Physiotherapy grades are imparted, both in Spain and other European countries. The National Agency for Quality Assurance have a similar quality policy, due in part to the agreements established within European Higher Education Area.

**Implications:** Besides the importance that quality has in the official programmes accreditation, we must stress the relevance of these results for the external stakeholders: students, employers, government and general society.

## SESSION 08

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

08.005

### Quality assessment in competency based physiotherapy education

J. B. Petersen

University College Seeland, Næstved, Denmark

**Purpose:** To ensure a transparent and competency related assessment of physiotherapy education, in order to accomplish a close relationship between competencies at entry level to the profession and challenges in current and future health practice.

**Relevance:** Perspectives and methods regarding rehabilitation and health promotion change with demographic evolution, health politics and patterns of diseases. This calls for an ever ongoing improvement and adjustment of professional competencies being achieved during physiotherapy education. At the same time the education itself is an entity, committed to monitor and improve didactics and teaching methods in alignment with these competencies.

**Description:** This competence based assessment model for education is built on a combination of three curriculum types (Glatthorn;1987), 4 levels of evaluation (KirkPatrick;1998) and single and double loop learning (Argyris & Schön;1974).

The main frame is built on a distinction between three different types of curriculum formats. 1) The written curriculum, being the formal texts behind courses and programs, 2) the taught curriculum, being what is actually going on in the contextual teaching practice, and finally 3) the tested curriculum, being the identifiable learning outcome and achieved competencies for the students. The connection between the written and the taught curriculum is based on the teachers interpretation of the written text behind the courses and the elaboration of this into didactics and teaching methods and material.

The connection from the taught to the tested curriculum concerns the relationship between teaching and learning. This is on one hand evaluated through a response level using data from students evaluation through electronic datacollection (Ennova concept). On the other hand, the connection is evaluated according to the learning level. One perspective of the learning level concerns tests and exams, where the student is being evaluated by teachers in formal settings. Another perspective is covered through a process, where the student evaluates her self, by marking her own judgement of to what level, she has achieved the learning outcomes for the course. This bilateral perspective takes place 4 times a year. Data from both perspectives are collected electronically (Survey X-act). The outcome from these evaluations at learning level and response level is implemented through a process of single-loop-learning. This supports the evolution of course content and didactics in the group of teachers and clinical educators. Formal settings and clinical visits secure close cooperation across sectors, linking university and clinical practice together.

The connection between the taught and the tested curriculum concerns the relationship between learning outcome and demands for professional competencies in practice. This connection is evaluated through the behavior level. It covers newly graduated students perceptions of the degree to which they comply with expectations in physiotherapy practice. Further more the effect level is endeavoured to cover, how satisfied employers are with physiotherapists competencies at entry level. The data from these two evaluation levels are collected through Survey X-act and is implemented through a process of double loop learning. This provides stakeholders, managers, course coordinators and teachers with information at the level of premises, in relation to the development of the written curriculum and the institutional framework supporting the education.

In this way the three curriculum types are interconnected through 4 levels of evaluation and single and double loop learning, in order to ensure a progressive and forward oriented competence based learned curriculum.

#### Evaluation:

The model shows for which purposes the different types of evaluation are collected and aimed to have an impact on. The different levels function individually, but creates a synthesis, supporting alignment in the relationship between education and current practice in physiotherapy settings.

It is an on going challenge to assure responses from the students both regarding the evaluation of the response and learning level regarding their own perception of the study and their achievement of learning outcomes. Steps are being taken to make module evaluation part of the approval of the course modules.

#### Conclusions:

This model produces several perspectives of evaluation and requires an on going attendance from all staff levels. Further more it involves students attention on their learning outcome, and supports a student centered approach.

Future development requires a more thorough involvement of patients perspectives on the outcome of physiotherapy services. To combine assessment data from entry level students, stakeholders and patients is regarded as crucial in a competence based education.

**Implications:** Educational development can take place in close connection to current clinical practice and future demands for professional competencies.

## SESSION 08

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 1**

Thursday, November 8, 2012

ROOM A.-1.03

11:00 – 11:45hrs

**08.006**

### **Use of ICT tools to promote knowledge construction, collaboration, self-assessment and clinical reasoning in cardiorespiratory physiotherapy teaching and learning**

**A. A. Lopes, H. Atalaia**

Escola Superior de Saúde do Alcoitão, Alcabideche, Portugal

**Purpose:** The aim of this study was to implement and evaluate the use of information and communication technology (ICT) tools like Wikis, Interactive Clinical Cases and Online quizzes as innovative means of teaching and learning. We also try with this project to promote in physiotherapy students (bachelor level) the creation of knowledge, collaboration, self-assessment and becoming more explicit in their clinical reasoning process.

**Relevance:** With the advent of new uses of information and communication technology (ICT), web-based learning is becoming an important component of today's teaching and learning process in higher education institutions. Wiki is an innovative mean of creating, editing, and disseminating information in an online environment. Interactive Clinical Case allows students to interact with each other using virtual patient or simulations. Online quizzes provide instant feedback, allow students to better evaluate their understanding of the subject and facilitate exam preparation. Furthermore, the availability of these additional learning tools could increase their motivation to study.

**Participants:** In this project we selected second year students (bachelor level) enrolled in the curricular unit related to cardiorespiratory physiotherapy provided in our institution.

**Methods:** Two types of evaluation were performed using a questionnaire, in the middle of the process, comprising questions about format and content, and a final evaluation at the end of the process centered on the student feedback about all the process. The questionnaires were built to the purpose of this study and comprised of close and open questions.

**Analysis:** Descriptive analyse were perform about the ICT usage and satisfaction, and also qualitative analysis of the students feedback.

**Results:** The main results reflect the sucess and pitfalls of the international trend toward the ICT integration in Teaching and Learning. All the students enroll in the study participated and use at least one of the tools provide, report high levels satisfaction and acknowledge the importance of this tools in their learning process.

**Conclusions:** With this project the students created a collaborative and evolutive reference book in the topic of Cardio-Respiratory Physiotherapy using several sources of information and evidence and used the Interactive Clinical Case and Online quizzes as a resource to develop competences in this area. The future challenge is the dissemination of this resources and methodology's through the entire physiotherapy course in all the different areas of physiotherapy practice.

**Implications:** The integration of ICT tools into the teaching/learning and curriculum in physiotherapy education could facilitate and promote reflexion, groupwork, peer-assessment and autonomous perspective towards education and lifelong learning. The basis of an every evolving reflective professional.

## SESSION 09

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 2

Thursday, November 8, 2012

ROOM A.-1.02

11:00 – 11:45hrs

#### 09.002

### Regular physical activity of physiotherapy students: is there a need for more physical activity through study program?

**M. Horvat, Z. Pukljak Iricanin, L. Jakus, A. Pavlakovic**

University of Applied Health Studies, Zagreb, Croatia

**Purpose:** To investigate the level of regular physical activity among physiotherapy students and to investigate students' perceptions concerning benefits and barriers for participating in regular physical activity.

**Relevance:** Since physical activity and physical fitness are important parameters for physiotherapist everyday work and physiotherapists are expected to be good role models for their patients, we were interested if there is a need for including more physical activity in study programs.

**Participants:** 180 first and second year graduate students of physiotherapy in the University of Applied Health Studies in Zagreb, Croatia (50 male and 130 female).

**Methods:** The short form of International Physical Activity Questionnaire (IPAQ) was used to estimate the level of physical activity. The IPAQ asks about specific types of activity: walking, sitting, moderate and vigorous intensity activities. The results are expressed as metabolic equivalent-hours per week (MET-hour/week). Croatian version of Exercise Benefits/Barriers Scale (EBBS) (Sechrist, K. Sechrist, S. Walker, N. Pender, 1985) was also used, with author's permission. The benefit component in EBBS is comprised of 29 items categorized into five subscales: life enhancement, physical performance, psychological outlook, social interaction and preventative health. The barrier component included 14 items categorized into four subscales: exercise milieu, time expenditure, family discouragement and physical exertion. Data on socio-demographic variables were also collected.

**Analysis:** Data obtained were analyzed using the Statistical Package for the Social Sciences (SPSS).

**Results:** Median total physical activity for the whole sample was 73,7 MET-hour/week. Median physical activity in MET-hour/week was 23,1 for walking, 8,0 for moderate and 16,0 vigorous physical activity. On weekly basis, most of the students (61%) meet criteria to be classified as having vigorous physical activity, 23% are moderately and 15% are low active. Male students are significantly more active than female students ( $t = 2,9$ , d.f. 136,  $p < 0.01$ ). The greatest perceived benefits were physical performance and psychological outlook, while the greatest perceived barriers were family discouragement and physical exertion.

**Conclusions:** Most of the physiotherapy students are vigorously or at least moderately active. We conclude that there is probably no great need for increasing the amount of physical activity in existing study programs. Students feel strong benefits from regular physical activity, mostly because of its' impact on their physical performance and psychological outlook. However, there is a certain amount of low active students so we should consider identifying and motivating them for increasing physical activity level. Taking into account barriers they perceived as greatest should help.

**Implications:** This study should provide information on level and motivation for regular physical activity among physiotherapy students. This should help in deciding whether there is a need for including more physical activity in study program.

## SESSION 09

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 2**

Thursday, November 8, 2012

ROOM A.-1.02

11:00 – 11:45hrs

**09.003**

### **IP (Intensive Programme) – A challenge for students and teachers in Europe**

**D. Gerards, L.-J. Jie**

Zuyd University of applied sciences, Heerlen, Netherlands

**Purpose:** To share experience about IP's.

**Relevance:** Multilateral working in an IP project with partners from different countries and different specialities allows a solid framework for students and teaching staff to create a wider and more in-depth knowledge network in European- oriented health education. It gives the project partners (in this IP partners from Finland, Turkey, Portugal and the Netherlands) the opportunity to put into practice their international objectives on vision and strategy, in which cooperation is a main topic. By sharing and elaborating on different point of views in knowledge, its overall quality will increase. The development of professionals that are needed in European health care in the near future, is facilitated by an open and challenging environment where learning experiences can be shared. Working together in an international project with several partners increases transparency and allows benchmarking among health practitioners in different countries and promotes collaborative practice.

**Description:** In the project, titled MAND (a Multiprofessional Approach of Non-communicable Diseases) students were obliged to focus not only on the traditional interventions of their own future professions but on all multi-professional interventions. Students have used epidemiological data to support a change in health care from a more reactive main frame of health care towards a more proactive and preventive community-based health care. They were provoked to promote health and play an advisory role for the public and many patient/client groups concerning non-communicable diseases, with a focus on patients suffering from diabetes. Preventive strategies were taken into account to develop guidelines for one of the most frequently arising complications of obesity, diabetes and put this into a European perspective. They also developed competences of testing and training patients with NCD's (and especially diabetic) in a multi-professional team.

**Evaluation:** The digital Questionnaire Erasmus Intensive Program (IP)

**Conclusions:** Working in an IP: a big challenge!

**Implications:** Formal as well as informal learning strategies are important perspectives when creating new innovations. By offering a challenging learning environment, where students and teachers are spending intensive time together (2 weeks), gives a new and flowing opportunity to concentrate on a topical subject.

## SESSION 09

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 2**

Thursday, November 8, 2012

ROOM A.-1.02

11:00 – 11:45hrs

**09.004**

### **Stability of physiotherapy students in their learning strategies and academic performance**

**N. Moreno Morales, M. J. Casuso Holgado, M. T. Labajos Manzanares, F. J. Barón López, A. I. Cuesta-Vargas, M. Gonzalez Sanchez**

1 UNIVERSIDAD DE MALAGA (ESPAÑA), Málaga, Spain

**Purpose:** To know the behavior of cognitive learning strategies and metacognitive or control of the study, and academic achievement in both academic years.

**Relevance:** The interest in studying the determinants of learning and academic performance in college students is increasing significantly in recent years (Garavalia y Gredler, 2002; Pintrich, 2004; Valle, Cabanach, Rodríguez, Núñez y González-Piñeda, 2006; Zimmerman, 2000).

**Participants:** The sample consisted of 57 students of Physiotherapy, University of Malaga (Spain) first and second years with a mean age of 22.2 ( $\pm$  5.13).

**Methods:** Longitudinal study with no intervention, requesting a cohort of students of Physiotherapy, University of Málaga, participation throughout his career to fill the instruments: Cognitive Strategies Questionnaire Learning and Study (CECAE) and the Questionnaire Control Strategies study (ECE), and simultaneously, access to information on their academic record throughout their training. This cohort has been followed during 2008-09 and 2009-10 courses, continuing at present its monitoring process. The variables studied are: selection, organization, processing, storing, success rate, rate of return and average mark.

**Analysis:** Variables are created that represent the variation produced in each of the dimensions of cognitive, metacognitive and academic performance. We used student t-tests for paired samples to examine whether these variables have a significant change over time.

**Results:** The average variations are not significant. We found a high stability in cognitive and metacognitive strategies, but not in academic performance indicators.

**Conclusions:** Physical Therapy university students are stable in cognitive and metacognitive strategies used in learning, not so in the academic performance.

**Implications:** This will help teachers and administrators to plan teaching and learning methods according to the strategies employed to study the philosophy of the European Higher Education Area, in order to achieve success in this way in the training of students in Science health.

## SESSION 09

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 2**

Thursday, November 8, 2012

ROOM A.-1.02

11:00 – 11:45hrs

09.005

### Relevance of the CPD and LLL process for the professional practice of respiratory physiotherapy in Spain

L. González, S. Souto, A. López, J. Saleta, R. Fernández, A. Lista

University of A Coruña, Spain

**Purpose:** National laws in Spain establish a common portfolio of health services for all the national territory in the Health System. It is included as a provision, in the hospital based services, the rehabilitation of patients with recoverable functional deficit of the respiratory system and as one of the modalities for this development, the respiratory physiotherapy (RP). The aim of this study is:

- to identify the degree of education that the physiotherapist working in hospitals recognize to have about the intervention methodology of RP.
- to establish the relationship between the level of education (academical degree, postgraduate courses, activities related to LLL) and the used of the assessment and treatment procedures of RP

**Relevance:** Professional practice of RP in hospitals needs of a high degree of specialisation. This study try to emphasize how the level of education and expertise of the professionals have a real impact on the kind of procedures of RP they used, increasing the effectiveness of his practice and improvement the quality of patient care.

**Participants:** 284 physiotherapist that are responsible of the physiotherapy services in the hospitals that belongs to the National Health Service of Spain.

**Methods:** Descriptive of prevalence study.

A questionnaire with 5 sections and 12 items was designed and sent by mail to all the participants.

**Analysis:** An analysis of lineal tendency was made. It was use the SPSS 16.0 to analyse the dates. The quantitative variables are presented in percentages and absolute value

**Results:** Of the 284 questionnaires that were sent to the hospitals, 99 were analysed (34,8%). In 75 (75,8%) [CI95%: 66,1-83,3] of the replied hospitals there are RP as a resource for treatment the patients. Of them, 51 (51,5%) of the answers showed to have training or education in RP.

In relation to the assessment and its procedures, it is observed a tendency to as more high is the level of education or training more high is the number of those polled that make the assessment of the patient and consults the clinical history. It is observed a positive tendency in the use of auscultation ( $p < 0,001$ ), the assessment of the maximum expiratory pressures ( $p = 0,019$ ), the pulsoximetry ( $p < 0,001$ ) and the six minutes walking test ( $p = 0,005$ ).

In relation to the use of therapeutic methodologies and the level of education, there wasn't found any results with statistics significance in the application of manual or mechanical vibrations, percussion or postural drainage. However, it is observed a negative tendency, which means: minor the level of education or training is, mayor is the use of these techniques. On the contrary, the tendency is positive and statistically of significance in the use of endogenous vibration ( $p = 0,016$ ), the flow expiratory increase ( $p = 0,029$ ), the ELTGOL ( $p < 0,001$ ) and the Autogenic drainage ( $p = 0,004$ ).

**Conclusions:** A mayor level of education or training is linked to a mayor degree of complementation of the assessment as a first phase of the physiotherapy attention process. This fact is reproduced in all of the exploration procedures that were consulted. A mayor level of education is linked to a mayor prevalence of the therapeutic procedures that supports the autonomy of the patients. On the contrary, a minor level of education is linked to a mayor prevalence of the therapeutic procedures that are more dependant of the direct physiotherapist intervention. It is perceived a low use of the instrumental procedures, both in the assessment and in the treatment procedures. That could point to the fact of a limited material resource in the hospitals.

**Implications:** The stakeholders of the Nacional Health Services and of the hospitals in Spain must considerer the need of specialization through CPD and LLL process for the Physiotherapist that works in the rehabilitation of patients with recoverable functional deficit of the respiratory system. They have to support this process, and to provide them with the necessary equipment for a high quality standard of care.



## SESSION 10

(Symposium)

### **Symposium 1**

Thursday, November 8, 2012

ROOM Festsaal

11:50-12:50hrs

#### **10.001**

### **Autonomy: Challenges of translating autonomy into practice**

#### **L. Holdsworth**

Health Services Research & Effectiveness, United Kingdom

Learning objectives:

1. To describe the Scotland and the UKs fifteen year journey of establishing patient self referral within the public funded healthcare sector.
2. To explore the associated challenges this posed in terms of translating autonomy into practice
3. To convey the extent to which these challenges are also experience in other countries worldwide

#### **Description:**

UK physiotherapists have been autonomous practitioners since 1978 however this has not translated into NHS services until more recently. A national trial 2003-05 in Scotland established the efficacy of this approach but also identified that there were a range of professional issues that hindered translating autonomy into practice. Subsequent experience in conducting a multi centred international trial in seven worldwide countries confirmed many of this issues and identified challenges not experienced within the UK. Dr Lesley Holdsworth will provide an overview with regard to this experience highlighting the key issues that professionals need to consider when wishing to practice autonomously.

#### **Implications/Conclusions:**

The scope of practice of physical therapists internationally is embracing a fully autonomous role. Being fully aware of the challenges this poses will help individuals, organisations and educational bodies plan for and mitigate these issues.

## SESSION 10

(Symposium)

### Symposium 1

Thursday, November 8, 2012

ROOM Festsaal

11:50-12:50hrs

10.002

### Professional qualification and CPD against the backdrop of dynamic societal developments

A. Lizak, Poland

#### Learning objectives:

- to convey a subjective employer's perspective on advantages and disadvantages of current qualifications in different countries.
- to outline specific challenges concerning our profession in rapidly changing post-socialist societies
- to explore tentatively common and discriminating features of qualifications of physiotherapists in different countries in Europe (and beyond) from a CPD-instructor's perspective
- to sketch expectations of an employer-practitioner concerning competences of his employers and thus also concerning qualifying programmes and CPD programmes in a European context
- to outline what qualifications are necessary in order to enable physiotherapists to become more confident and assertive service delivers in health systems which are increasingly characterized by market mechanisms as well as by demands for evidence concerning effectiveness and efficient use of resources.

**Description:** This paper does not maintain to be a scientific paper but it is to convey the perspective of an employer-practitioner, who has run physiotherapy practices in Poland and Germany and who has given classes in CPD in a number of other countries, namely South-Korea, Brazil, Russia and Japan.

Taken from this range of experience the paper reports observations concerning similarities and differences of competence profiles in different countries. It also contrasts what an employer needs his employees to be able to do with what they learn (in terms of both clinical reasoning and practical terms) during qualifying programmes and CPD programmes. The paper also deals with those problems and challenges physiotherapy is confronted with, which seem to be specific for those societies, which in recent decades have undergone a rapid conversion from socialist to market economy.

#### Implications/Conclusions:

In order to deliver professional and efficient services physiotherapists must be endowed with practical/technical competences as well as with so-called »academic« competences. Current programmes stress either one or the other.

Efforts should be undertaken to better integrate academic competences and practical skills.

Lack of practical, communicative and academic skills obstruct the development of the potential of physiotherapy

Delivering services in a health systems dominated by market mechanisms means walking a »thin red line«.

Efforts should be made to promote exchange programmes for developers of programmes, instructors and students of both qualifying and CPD programmes to enable physiotherapists to learn from each other and to facilitate a European physiotherapy labour market and a strong European physiotherapy profession

## SESSION 11

(Keynote)

### **Keynote Session 2**

Thursday, November 8, 2012

ROOM Festsaal

14:00-14:45hrs

#### **11.001**

### **Continuous professional development – A tale of two cities. Myth or legend?**

**J. Xerri de Caro**

University of Malta, Malta

‘Contemporary life is not about a linear progression through societally ordered stages...’

(Billet, S. 2010 p. 410). On the contrary, modern day situations would appear to require that persons are prepared for unexpected expectancies such as a change in occupation, or a change in the form of employment (e.g. a promotion), redundancy, periods of unemployment and other life expectancies such as divorce or relocation.

The focus of this paper is to conceptualise on the elements of Continuous Professional Development with a purpose of placing it into the context of physiotherapy and using the principles of lifelong learning as a unit of analysis.

Continuous professional development is exactly what it claims to be: continuous – professional – development; and that finds itself ‘revitalising’ the receiver irrespectively of his/her age or level of employment/occupation. This fits into the framework of lifelong learning. Yet, continuous professional development presents with its own challenges, ideals, barriers and opportunities.

The metaphor of ‘the tale of two cities’ is intended to portray the issues of continuous professional development as viewed from the vantage points of the service provider and service receiver – two distinct entities within the same country; both aiming to enhance physiotherapy but with a different focus. The issues are various and range (not exhaustively) from employability, professional development, legal implications for practice, recognition and the link to a qualifications framework.

This paper shall present a number of reports that highlight the elements of continuous professional development for physiotherapy across Europe and aim to also provide an insight into the understandings or misunderstandings of lifelong learning within the physiotherapy education community.

The scope of this paper shall be to allow the reader to draw resonance between their circumstances and their thoughts on the topic, by opening to and allowing a critical thinking (reflection) and understanding of what constitutes continuous professional development and lifelong learning; and to form an informed opinion that may ultimately lead towards a revision of implementation practices or a stimulation for implementation.

## SESSION 12

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.19

14:55-16:10hrs

12.001

### **Mentored clinical practice in orthopaedic manipulative therapy programmes along the dimensions of the IFOMPT standards document**

**J. Langendoen**

SC IFOMPT, Kempten, Germany

**Purpose:** Management of patients with neuro-musculoskeletal dysfunctions under supervision is traditionally part of IFOMPT recognized post-graduate educational programmes. The international federation of orthopaedic manipulative physical therapists is the oldest subgroup of the WCPT and has a standards committee (SC) installed for quality management (QM) since 40 years. QM included two major changes in the last decade. The first change has been the introduction of evaluation of educational programmes in theory and practice within the scope of a national monitoring process by external assessors. The evaluative report aims to support the nationally recognized manual therapy association (MO) of IFOMPT, in their efforts to improve the educational programmes and to meet the standards of IFOMPT.

The second change was in the guidelines for educational programmes. All MO's agreed 2008 on the new standards document (SD), which is now outcome based instead of contents based. Theory teaching and clinical instructions are now leading to competencies that are defined according ten dimensions with three levels: knowledge, skills and attributes. This has to fit in seven possible roles the therapist is to be trained in. Mentored clinical practice (MCP), treating patients under supervision, aims to apply and develop knowledge, skills and attributes at an advanced level in the management of real patients with neuro-musculoskeletal dysfunctions, disabilities and participation restriction (ICF of the WHO).

It is estimated that a minimum of 150 hours of MCP, spread throughout the whole period of the educational programme, are required to reach the level of competence in each dimension as described in the 2008 SD. The changes in the guidelines challenge students as well as mentors and the organising institution. The institution may had to develop a complete new curriculum for the educational programme. The foundation of any programme now is the science of clinical reasoning with countless options. For example, classically, a manual therapy method may have been based on a single leading science such as arthrokinematics. At present, arthrokinematics may still be clinically relevant in a patient, however only after clinical reasoning processes did indicate that. For the student, it implies that the same knowledge and skills have to be acquired, however only are to be applied appropriately in practice, if biomechanical reasoning did indicate its relevance.

The ten dimensions comprise a critical use of:

- 1: evidence based practice
- 2: biomedical sciences
- 3: clinical sciences
- 4: behavioural sciences
- 5: comprehensive knowledge base of OMT
- 6: clinical reasoning
- 7: communication skills
- 8: sensitivity and specificity of handling
- 9: research, as well as
- 10: continued professional commitment

Competencies in the first nine dimensions can be developed and evaluated in MCP. Firstly, this requires training and evaluation of mentors, development of clear marking criteria and transparent evaluation templates. Secondly, the organisation has to create a suitable environment with appropriate patients. Thirdly, rather than only being evaluated, the student becomes an ideal opportunity for learning how to apply all knowledge, skills and attributes in individual patient situations as well as to search, to critically evaluate, to synthesise, to hypothesise and to apply new knowledge individually, immediately and adequately, which is level 7 (masters level) of learning. At last, as at least 150 hours of MCP is recommended, the financial challenge of this intensive learning rather than evaluation process has to be overcome.

In this presentation, an optimal process of patient management over four sessions in a one therapist supervised by one mentor situation will be demonstrated, highlighting the difficulties and possibilities. In four sessions with the same patient, the complete scope of management from the initial semi-structured subjective examination with building up hypotheses in different categories up to the formulation and performance of an overall, progressive management plan can be developed and evaluated.

In practice MCP with four students and one supervisor may be equally effective for mature, independent students. As reflection, discussion and preparation time, searching and analysing evidence can be performed between patient treatment time by the students, the supervisor is capable of mentoring up to four students.

**Relevance/Description/Evaluation/Conclusions:** not applicable

**Implications:** The SD of IFOMPT provides a new way to develop all aspects of effective patient management as well as of educational programmes in general.

## SESSION 12

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.19

14:55-16:10hrs

12.002

### **Hypothesis Oriented Decision-making in Pediatric Physiotherapy: bridging the evidence into practice and education**

**R. Nijhuis-van der Sanden, A. Overvelde**

Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

**Purpose:** Clinical reasoning is difficult to learn for professionals. This is often an obstacle in the appropriate use of clinical guidelines. Although clinical guidelines provide us information about evidence and steps to be taken in the care process, in individual patients always decisions need to be made. Clinical Reasoning is necessary in patient-centered care. The professionals needs a combination of knowledge, experience and competencies in logical thinking but also empathy, skills for motivational interviewing, patient empowerment and reflection.

The goal of the study was to test to what extent implementation of an evidence based Statement based on the Hypothesis Oriented Algorithm for Clinicians (HOAC-II) can change the knowlegde and reasoning in pediatric physical therapists.

**Relevance:** A lot of guidelines are already available in Physiotherapy, however adherence to guidelines is often low. Therefore we choose to develop an Evidence Based Statement (ES) answering the most relevant questions in daily clinical practice. In this case the ES focused on children with Handwriting problems. Most of the pediatric physiotherapists in The Netherlands do treat these children half of their time, but it seems to be that there is overtreatment.

**Participants:** About 10-15 groups of 10 pediatric physiotherapists participated in a postgraduate programme with five working groups of three hours. We expect in total about 100 participants. These pediateric therapists are working in practice already for several years and the challenge is to motivate them to reflect on their clinical reasoning and to incorporate new evidence into practice.

**Methods:** This study was done in a pre-post design. All participants were asked to fulfill an online questionnaire with 55 statements they had to answer with yes or no. The statements were related to the evidence statement and focused on relevant decisions in diagnostics, intervention and multidisciplinary consultancy. The study material is made up in such a way that each group can work at their own. Moreover, they have to bring up own cases from practice and are asked to motivate choices made and to compare them with the advises in the ES. The peers need to play the role of critical reviewer. If applicable, they can use an Internet discussion board or e-mail to consult experts. We hypothesize that an active reflective way of learning will enhance the reasoning process.

**Analysis:** Descriptive statistics will be used to present the outcomes. Moreover, it will be tested if professional characteristics influence the outcome.

**Results:** Results will be presented on the congress. At this moment the programmme is started and retest will be taken before summer.

**Conclusions:** Based on the results conclusions will be formulated on the feasibility to change behavior in practice using a ES and the barriers and facilitators experience and reported in the working groups.

**Implications:** Implications for ES development, the effect on clinical reasoning using The HOAC-II and advises for educational trajectories will be formulated.

## SESSION 12

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.19

14:55-16:10hrs

**12.003**

### **Translation and evaluation of test-retest reliability and validity of the Persian version of IKDC Questionnaire in Iranian patients following ACL and Meniscal operations**

**A. Norouzi**

Shahid Beheshti University of Medical Sciences, Tehran, Iran, Islamic Republic of

**Purpose:** The present study had sought to translate, and evaluate test-retest reliability, internal consistency and construct validity of the version of the IKDC in Iranian patients following ACL and meniscal operation.

**Relevance:** The purpose of the study was to conduct a cross-cultural assessment of the translated version of IKDC questionnaire in Iranian patients

**Participants:** 1

**Methods:** After translation based on Quality Of Life Assessment protocol, the IKDC, KOOS, and SF-36 Health Survey were administered to a sample of 101 patients following ACL and meniscal operation. Test-retest reliability using Intra-class Correlation Coefficient, internal consistency using Cronbach's alpha, and construct validity were tested by correlating the IKDC scores with KOOS subscales including pain, symptoms, ADL, recreation and sport activity, Quality Of Life and with physical component summary as well as mental component summary of the SF-36 Health Survey. In addition, construct validity was measured by Pearson's correlation coefficient and Spearman's correlation coefficient.

**Analysis:** Analytical analyses both qualitative and quantitative including construct validity, concurrent validity, practicality, reliability were all performed in the study.

**Results:** High Test-retest reliability was established with an ICC of 0.99. Internal consistency was 0.90. Moderate to good correlation was obtained between IKDC total score and KOOS subscales including pain ( $p < 0.000$ ), symptoms ( $p < 0.000$ ), ADL ( $p < 0.000$ ); sport and recreation activity ( $p < 0.000$ ) and Quality Of Life ( $p < 0.000$ ). Good correlation was obtained between IKDC total score and physical component summary ( $p < 0.000$ ), and fair correlation with mental component summary of the SF-36 Health Survey ( $p < 0.000$ ).

**Conclusions:** Persian version of the IKDC is a reliable and valid instrument for designing any assessment or rehabilitation program in Iranian patients post ACL and meniscal operation.

**Implications:** The translated version of the IKDC is much fruitful for the patients residing in Iran or Iranians living abroad.

## SESSION 12

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.19

14:55-16:10hrs

12.004

### **The perceptions of Danish physiotherapists on the ethical issues related to the physiotherapist-patient relationship during the first physiotherapy session: A phenomenological approach**

**J. Praestegaard<sup>1</sup>, G. Gard<sup>2</sup>**

<sup>1</sup>Metropolitan University College, Copenhagen, Denmark, <sup>2</sup>Lunds University, Lund, Sweden

**Purpose:** The aim of this study was to explore whether ethical issues rise during the first physiotherapy session discussed from the perspective of the physiotherapists in private practice.

**Relevance:** In the course of the last four decades, the profession of physiotherapy has progressively expanded its scope of responsibility and its focus on professional autonomy and evidence-based clinical practice. To preserve professional autonomy, it is crucial for the physiotherapy profession to meet society's expectations and demands of professional competence as well as ethical competence. Since it is becoming increasingly popular to choose a carrier in private practice in Denmark this context constitutes the frame of this study. Physiotherapy in private practice involves mainly a meeting between two partners: the physiotherapist and the patient. In the meeting, power asymmetry between the two partners is a condition that the physiotherapist has to handle.

**Participants:** The sampling strategy aimed at obtaining a sample of physiotherapists in private practice with a wide range of experiences due to our assumption that ethical issues can emerge in any clinical meeting.

An invitation letter introducing the subject of the study and asking for interested participants was sent out to 31 clinics across all regions in Denmark. Thereafter, the clinics were contacted by telephone and asked if they wanted to participate. Nine clinics found the study important but lacked time for participation. 21 physiotherapists were accordingly selected.

**Methods:** A qualitative approach was chosen and semi-structured interviews with 21 physiotherapists were carried out twice and analysed by using a phenomenological framework.

A semi-structured interview guide was developed and included open-ended questions. In the first interview, the questions focused on: reflections and narratives on the first session of physiotherapy in private practice, reflections about the constitution of an optimal first session, and discussions of ethical issues emerging within the first session. The second interview focused on: reflections and/or adjustments on the first interview, further reflections and narratives about optimal and/or regrettable meetings and professional conduct related to the first sessions.

**Analysis:** All interviews were analysed according to the principle of Giorgi's phenomenological analysis, modified by Malterud. The analysis followed four steps:

1. Reading all transcripts to get a general sense of the whole statement.
2. Re-reading of the material to discriminate units with meaning from an ethical perspective.
3. Abstracting the content of meaningful units within each theme.
4. Synthesising of the transformed themes into a consistent statement regarding the subject's experience. From the themes quotes were selected in order to document and root the descriptions. Finally the themes were given a conclusive headline.

**Results:** Four descriptive themes emerged: general reflections on ethics in physiotherapy; the importance of the first physiotherapy session; the influence of the clinical environment on the first session and; reflections and actions upon beneficence towards the patient within the first session. The results show that the first session and the clinical context in private practice are essential from an ethical perspective.

**Conclusions:** Ethical issues do occur within the first session, the consciousness about ethical issues differs in Danish physiotherapy private practice, and reflections and acts are to a lesser extent based on awareness of ethical theories, principles and ethical guidelines. Beneficence towards the patient is a fundamental aspect of the physiotherapists' understanding of the first session. However, if the physiotherapist lacks a deeper ethical awareness, the physiotherapist may reason and/or act ethically to a varying extent: only an ethically conscious physiotherapist will know when he or she reflects and acts ethically. Further exploration of ethical issues in private practice is recommendable, and as management policy is deeply embedded within the Danish public sector there are reasons to explore public contexts of physiotherapy as well.

**Implications:** The conclusion show that an explicit focus on ethical issues within the education is needed in order to strengthen physiotherapists consciously ethical reasoning.

## SESSION 12

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 1**

Thursday, November 8, 2012

ROOM C.E.19

14:55-16:10hrs

**12.005**

### **Experiences in master specialist education with clinical reasoning strategies using an adapted hypothesis oriented algorithm**

**J. Nuysink<sup>1</sup>, M. A. G. C. Schoenmakers<sup>2</sup>**

<sup>1</sup>University of Applied Sciences Utrecht, Utrecht, Netherlands, <sup>2</sup>Wilhelmina's childrens hospital, University Medical Centre Utrecht, Utrecht, Netherlands

**Purpose:** To develop an education program for pediatric physical therapy students to enhance clinical reasoning strategies, in which academic competencies like critical analytical reasoning, and evidence based working come to full advantage.

**Relevance:** Background: In physical therapy master education for specialists, advanced clinical reasoning skills are needed to unravel patient identified existing as well as anticipated problems with a high level of complexity.

**Description:** In our 3-yearpart time master education for pediatric physiotherapists we introduced the use of the Hypothesis Oriented Algorithm for Clinicians version II (HOAC-II). All students work during the study minimal 12 hours a week with children, often supervised by experienced and registered pediatric physiotherapists. The HOAC-II was adapted for educational use and gradually instructed in lectures, plenary discussions and problem oriented tutor sessions with students own cases. During the 3 years course, the ability to use the HOAC-II is examined four times at different levels used in case reports or a case study. Ultimately it is assessed in a specialist master proof with a high complex patient to bring the study to an end.

**Evaluation:** Formulating plausible and concise hypotheses turns out to be quite difficult for students with restricted knowledge on the subject. With growing body of knowledge and skills the ability increases to an acceptable level. Students with a high ability of analytic thinking perform the best. Students feel more confident in their practices and contacts with physicians after in depth analysis of the child's movement problems and evaluation of their intervention results. The use of the HOAC-II method has to be controlled by university teaching staff because the use of this method is not wide spread among their supervisors in current practice.

**Conclusions:** For a successful use of a hypothesis oriented method of clinical reasoning, sufficient body of knowledge and analytic capacity is needed.

**Implications:** Training of teaching staff and supervisors in practice is conditional for adoption of this method.



## SESSION 13

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.21

14:55-16:10hrs

**13.001**

### **Physiotherapy students' motivation and satisfaction with international intensive course focused on teaching physiotherapeutic assessment in clinical settings at 2009-2011**

**P. Eelmae<sup>1</sup>, N. Popov<sup>2</sup>, P. Rebelo<sup>3</sup>, J. Van Wijchen<sup>4</sup>, L. Zebitz<sup>5</sup>, L. Noronen<sup>6</sup>**

<sup>1</sup>Haapsalu Neurological Rehabilitation Centre, Haapsalu, Estonia, <sup>2</sup>National Sports Academy, Sofia, Bulgaria, <sup>3</sup>Higher School of Health Technology of Lisbon, Lisbon, Portugal, <sup>4</sup>HAN-University of Applied Sciences in Nijmegen, Nijmegen, Netherlands, <sup>5</sup>University College Lillebælt, Odense, Denmark, <sup>6</sup>Helsinki Metropolia University of Applied Sciences, Helsinki, Finland

**Purpose:** The purpose of this study was to find out students' motivation and satisfaction with international intensive course organized in clinical environment.

**Relevance:** Under the European programme Erasmus several international programmes (IP) support students and teachers for exchange in the world. The courses in question were oriented on physiotherapy (PT) education. Although the general aim of PT bachelor curriculums in Europe is the same, the structure of the curriculums is diverse, and subjects delivered as well as teaching and learning methods differ a lot. For three years an international course programme titled »Towards the Assessment of Functioning, Health and Well-being in an ICF Perspective – Changing Roles of Clients and Physiotherapists« has taken place. The courses have served a purpose of harmonizing European PT education and elaborating the understanding of difference between the biomedical and bio-psycho-social insight to the consequences of physiotherapeutic intervention and research.

**Participants:** 120 first year physiotherapy students and 42 teachers from six European higher education institutions (from Bulgaria, Denmark, Estonia, Finland, the Netherlands, Portugal) have participated in the courses between the years 2009 and 2011. The number of students from participating countries was equal. All participants were included into study group.

**Methods:** Prior to the course all students were asked to submit a registration-form where they had to describe three expectations related to the IP. The courses have taken place two times in Estonia and once in Portugal. Feedback on course content (plenary sessions, working groups, structure of study-days, teachers, and teaching materials), facilities (location, rooms and facilities, audiovisual equipments) and organization (pre course information, registration, coffee-breaks and lunch), students' motivation and satisfaction with IP was collected in writing during the last day of the course. All participating students gave feedback.

**Analysis:** For analysing students' registration forms and feedback questionnaires qualitative and quantitative analysis was used.

**Results:** Two most prevalent expectations of students were to improve professional knowledge in respect of physiotherapy assessment and to get more information about physiotherapy in different countries. All participants found that expected outcomes of the course were realized. Students were very satisfied with course content but especially with working groups and teachers. Satisfaction with organization was also high with pre-course information serving as an exception.

**Conclusions:** The majority of students have found the course to be very beneficial in professional perspective as well as a good motivator for learning. The content of the courses has met students' expectations. No cultural or nation-based differences were apparent.

**Implications:** Findings of the present study support the fact that international intensive course delivered in clinical settings is suitable form for teaching PT students from the very beginning of their education.

## SESSION 13

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.21

14:55-16:10hrs

13.002

### **An investigation into the clinical reasoning of cardiorespiratory physiotherapists using a simulated patient in a simulated High Dependency Unit (HDU)**

**D. Thackray**

Faculty of Health sciences, University Southampton, Southampton, United Kingdom

**Purpose:** The major reason for doing this study was to investigate how cardiorespiratory physiotherapists clinically reason in an acute setting. The secondary objective was to determine if a simulated patient and simulated environment could be used for research as well as teaching.

**Relevance:** Clinical reasoning is an integral component of clinical practice and plays an important part of the development of an undergraduate physiotherapist. However, it often a difficult concept for students to grasp, as it is a complex phenomenon that is not straightforward to teach.

It has recently been stated by the European Society of Intensive Care Medicine Task Force on Physiotherapy for the Critically Ill Patient that there is a need to standardise pathways for clinical decision making.

**Description:** Eight physiotherapists were recruited nationally through using a Flyer at a national ACPRC conference, and email to local trusts.

The inclusion criteria were: to be working independently as a cardiorespiratory physiotherapist; for at least 24 hours per week to have at least 6 weeks recent experience in adult respiratory care; all participants had to be familiar with out of hours working and be managing their own caseload independently. The grade was band 6 and above.

Excluded: Physiotherapy students and any physiotherapists who have not practised within the last 6 months in this speciality.

**Evaluation:** A qualitative methodological approach was used in order to capture this complex phenomenon. A simulated patient and environment were developed to form the basis of an observational study that all participants experienced. This made the study more objective than a true ethnographical study. The participants were asked to think out loud their thought processes during the assessment process and this and a debrief interview were video recorded.

An interpretive approach was used for the analysis of the videos.

The videos were uploaded to Synote: an Internet based video annotation recording software programme. Each participants' video was divided into smaller real time segments and annotated. Synmarks (mini transcripts) were created for each activity undertaken by the physiotherapist, patient and staff nurse. Titles were given to each Synmark to describe what was happening. A Tag coding system, based on the hypothetico-deductive reasoning model was used to code clinical reasoning activities.

**Conclusions:** From the general field observation of all the video data, all eight physiotherapists appeared to follow the hypothetico-deductive model when assessing the simulated patient. However, more detailed analysis of the transcripts has revealed differences between physiotherapists, particularly in how they communicated with the patient and at what stage of the assessment procedure.

**Implications:** There has been limited research into clinical reasoning in cardiorespiratory physiotherapy. Previous work undertaken has looked at the difference between the expert & novice, the characteristics of expertise, and the nature and context of decision making in the acute sector. This study adds to the knowledge base about clinical reasoning in this specialism.

The primary outcome from this study is a conceptual and procedural framework of the assessment and reasoning process that expert physiotherapists use when dealing with patients with common post operative respiratory complications.

The secondary outcome from this study has shown that simulation can be used for both research and educational purposes. In the future the video material can be re-purposed to teach clinical reasoning skills. Students can be introduced to the case study in an electronic format and be asked questions at pertinent points through the video to develop their reasoning. Appropriate video clips demonstrating good clinical practice can be shown to support the correct answer.

The students can also experience the clinical simulation to support their learning in a safe environment without real deterioration of a patient. Following their experience of assessing the patient, they can play back their video to reflect on their experience. They can also watch and compare their experience to that of an expert.

With clinical placements being increasingly difficult to obtain in this field, the use of simulation may create an alternative educational pathway in this speciality.

## SESSION 13

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.21

14:55-16:10hrs

**13.003**

### **Clinical reasoning in physiotherapy education**

**D. Gerards**

Zuyd University of applied sciences, Heerlen, Netherlands

**Purpose:** This study investigated students' perceptions of learning about clinical reasoning in order to answer the question whether competence-based education (CBE) based on the four component instructional design (4 C/ID) model was superior to traditional problem-based learning (PBL) in enhancing flexibility of thinking and structuring of knowledge.

**Relevance:** The mental process for making the right decisions during the clinical practice of Physiotherapists is called clinical reasoning. It is assumed that this process requires flexibility in thinking and structure of knowledge.

**Participants:** Students of the fourth year physiotherapy of the entering cohorts year 2004 (N=58) and 2006 (N=34) at Zuyd University, Heerlen, the Netherlands. The cohort of 2004 attended a traditional PBL curriculum and the 2006 cohort attended a competence-based curriculum based on the 4C/ID model.

**Methods:** We administered a questionnaire about clinical reasoning with subscales on flexibility of thinking and knowledge structure. This questionnaire was a valid and reliable translation of »Diagnostic thinking inventory« from Bordage et al.

**Analysis:** We used an unpaired student t-test to compare the responses to the questionnaire of the two cohorts, with SPSS program nr 15.

**Results:** There was a statistically significant improvement in clinical reasoning among the students attending the competence-based curriculum compared to the students of the PBL curriculum (clinical reasoning:  $p=0.01$ ), specifically in flexibility of thinking ( $p=0.01$ ) and structure of knowledge ( $p=0.03$ ).

**Conclusions:** Further studies should investigate how competence-based learning promotes students' clinical reasoning skills, factors influencing this process and objective instruments for evaluating clinical reasoning.

**Implications:** Physiotherapy education should be challenged to implement a competence-based curriculum, based on the four component instructional design (4 C/ID) model, to promote clinical reasoning.

## SESSION 13

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.21

14:55-16:10hrs

**13.004**

### **Reducing the risk – the development and implementation of standards for the physiotherapy management of patients with dementia who are at risk of falling**

**A. Adamson<sup>1</sup>, D. H. Davis<sup>2</sup>, S. A. Wyer<sup>2</sup>**

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**Purpose:** In recent years there has been much publicity promoting physiotherapy in the prevention of falls in older people as part of the multi-disciplinary team approach (Chartered Society of Physiotherapy, 2011; Department of Health, 2009). However, few research based studies have been carried out to establish the effectiveness of physiotherapy intervention for patients with dementia who have cognitive impairment or that recommend appropriate physiotherapy standards of care.

As part of a professional independent study module within a Masters programme, a critical review of the literature was undertaken. The available evidence and compilation of standards of practice for the effective and efficient physiotherapy management for patients with dementia was identified. The focus of the standards was those patients who have fallen or are at risk of falling whilst in the acute care setting.

**Relevance:** Currently, up to one in four acute hospital beds are occupied by patients with dementia. In addition to admission for a range of acute illnesses, 14% of admissions will be due to falls with 85% of those patients remaining in hospital for at least 14 days (Alzheimer's Society, 2009). It is of note that people with dementia have a two to threefold increase in incidence of falls than cognitively healthy older people (Harlein, Dasssen, Halfens & Heinze, 2009). The provision of evidence based care standards will enhance the quality of physiotherapy provision to this client group and improve the outcome of care.

**Description:** A search of the literature relating to dementia, cognitive impairment, falls, gait and balance was conducted using a criteria based check-list. The studies were critically analysed for risk of bias and methodological quality and the findings were evaluated for suitability for inclusion within the standards of practice for the physiotherapy management of patients with dementia, at risk of falling in an acute care setting. The standards devised related to the subjective and objective assessment of this client group, relevant management strategies and the recommended outcome measures to evaluate the effectiveness of the physiotherapeutic interventions. Acknowledging the limited evidence of effectiveness of the interventions in the acute setting where length of patient stay is limited, it was deemed of value to develop standards which could be implemented as a pilot study to determine the impact on patient outcome.

**Evaluation:** A systematic review of the literature was undertaken to identify the features of the standards developed. The standards developed will be presented and the outcome of the pilot implementation currently being undertaken within an acute hospital setting, will be discussed. The evaluation of the standards included the impact upon individual patient outcomes and consistency of implementation.

**Conclusions:** The prevalence of patients with dementia admitted to acute hospital settings at risk of falling is increasing. Physiotherapy management is acknowledged to effectively reduce falls in the cognitively health elderly population however, there is limited evidence of effectiveness within the client group with cognitive impairment. A review of the literature was therefore undertaken to inform the development of standards of physiotherapy management for patients with dementia at risk of falling.

Further, the standards devised formed a basis for ensuring consistent and effective physiotherapy provision with an acute hospital setting. On-going work evaluating the impact of these standards will add to the evidence base for future care of patients with dementia and a reduction in the risk of falling.

**Implications:** The impact of the presenter's individual continuing professional development, as part of a formal academic programme of study, upon professional practice is highlighted. However, of more significance, is the impact of the dissemination of physiotherapy standards, developed as a result of an identified local need, on the advancement of patient care and a reduction in the risk of falling.

## SESSION 13

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 2**

Thursday, November 8, 2012

ROOM C.E.21

14:55-16:10hrs

13.005

### **From the US to Tanzania: The personal and professional impact of a 3-week international service trip on DPT students before and after graduation**

**S. Fruth<sup>1</sup>, S. Kelly<sup>2</sup>, R. Van Veld<sup>1</sup>, D. Eschenbach<sup>1</sup>, C. B. Keifer<sup>1</sup>, M. Knight<sup>1</sup>**

<sup>1</sup>University of Indianapolis, Indianapolis, IN, USA, <sup>2</sup>University of Indianapolis, Indianapolis, IN, USA

**Purpose:** This study examined short- and long-term impacts of a 3-week international service trip on the personal and professional development of Doctor of Physical Therapy (DPT) students as they transitioned to entry-level practitioners.

**Relevance:** Developing global-minded clinicians is a valuable component in DPT education. International service provides students with opportunities to encounter cultural practices different from their own, and to consider how these experiences may impact their transition into professional practice. Exposure to new cultures can also prepare students for diverse clinical populations, challenging them to think of clinical practice and professional roles within a global context. Previous studies have not considered the long-term impact of such service on student development and few have addressed trips of greater than one week.

**Description:** Ten DPT students from the University of Indianapolis traveling to Tanzania for a 3-week service trip volunteered to participate in this qualitative study. Data were collected from individual journals completed throughout the trip, as well as from three interviews. Each participant was interviewed two weeks prior to leaving for Tanzania, and four months and one year following the trip. Interviews were conducted and audio-recorded by a primary investigator (PI) who did not travel to Tanzania, and interviews were transcribed by three other researchers. A preliminary coding framework based on a literature review and insights from the interviews and journals was used to initiate coding. The researchers reviewed and revised the coding framework to identify major themes. Trustworthiness was established via multiple data sources, multiple investigators, and member checks.

**Evaluation:** The trip impacted the participants on 3 levels: clarification of personal values, establishment of meaningful relationships, and development of a broader worldview. Upon return home, participants reported incorporating attributes of the Tanzanian culture into their personal lives to reflect their greater sense of purpose and community. Participants reported an increased ability to identify with the perspectives of others, in both personal and professional interactions, through development of deeper relationships. They also broadened their understanding and appreciation of culture and their place in a global society. The most notable long-term impact was demonstrated in the realm of clarification of personal values as participants reported applying lessons from the trip into their personal and professional lives in a variety of ways.

**Conclusions:** The differences between the culture and value systems of the US and Tanzania created opportunities for personal growth and reflective engagement with others that continued to be evident one year after returning from the trip. Individual growth and deepening of values contributed to professional development as participants transitioned from students to practicing clinicians. Participants matured in essential values of the physical therapy profession including altruism, compassion, and caring.

**Implications:** International service can provide DPT students with opportunities to practice innovation with limited resources, expand acceptance of individual differences, and recognize social responsibility. All of these factors may result in more comprehensive, compassionate, and personalized patient care.

## SESSION 14

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.20

14:55-16:10hrs

**14.001**

### Physical fitness in special education

**A.-M. Wium**

Municipal Center for Children's Education and Special Education, Roedovre, Denmark

**Purpose:** Purpose was to investigate effectiveness of physiotherapy intervention toward physical fitness of students in special education (SE). It was important that intervention was designed for easy application in daily school setting. Secondary objective was promoting student and teacher motivation to ensure that students are active every day in school, and encourage healthy habits and physically active lifestyle. PT bachelor students were involved in process of data analysis.

**Relevance:** Educational physiotherapists have an important role promoting physical fitness. Health policies emphasize exercise and physical activity. Children in SE have increased risk because motor difficulties limit physical activities. Inactive lifestyle habits lead to poor physical fitness and health risk factors. Physical fitness also seems to influence learning abilities, ie concentration, memory, stamina. In relation to students in SE our study sought to implement evidence from studies showing that physical activity improves physical fitness in other populations.

**Description:** Each year intervention is offered to different class groups. Since 2007, 100 students age 7-14 have participated in 14 week program. PTs offer fitness training program once a week supplemented with 2-4 times jogging. PTs carry out before and after measurements of 6-MWT, PR, WC, BMI, percentage of fat. A detailed test protocol has been developed. Finally PTs encourage teachers and parents to continue supporting active lifestyles.

**Evaluation:** Data was analyzed 2011 in collaboration with undergraduate PT students doing bachelor thesis. Statistical analysis showed significant improvement of performance on 6-MWT = 7,1%. For ethical and practical reasons there were no control groups. Pre-test measurements were used for data control. Considering moderate intensity of intervention results were considered good. Therefore physical fitness continues to have high priority on PT list of interventions in SE. Intervention has been very popular among students, teachers and parents alike, inspiring us to continue developing quality of the program.

**Conclusions:** Walking distance was generally ca. 150 m. less than age norms, supporting assumptions that students in SE have greater risk of poor health related physical fitness than mainstream students. Results achieved from intervention support assumptions that it is possible to improve physical fitness of students in SE through PT physical activity programs. Increased performance 7,1%. on 6-MWT was concluded as due to physiological changes and increased capacity for performing at higher intensities. Much more research is needed to document and develop this area. Collaboration between clinical settings and undergraduate programs for PT students is one feasible way of investigating validity of interventions at clinical level.

**Implications:** It is possible to influence students' walking distance, even with moderate intensity. Implications are interesting in terms of health risk. Results on walking distance seen as cardiorespiratory measure support the argument that educational physiotherapists should have important role promoting physical fitness. PTs should also make visible to managers and policy makers the need for physiotherapy in SE to improve physical fitness and promote active lifestyle habits, thus reducing health risk factors.

## SESSION 14

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.20

14:55-16:10hrs

14.002

### **A qualitative study of physiotherapy final year undergraduate students' perceptions of a narrative reasoning course**

**E. B. Cruz, C. S. Caeiro, C. M. Pereira**

School of Health Care - Setúbal Polytechnic Institute, Setúbal, Portugal

**Purpose:** The purpose of this study was to explore the final year physiotherapy students' perspective about the contribution of a course in narrative reasoning as a means to promote patient-centred care.

**Relevance:** Narrative reasoning has been presented as a core component of the health professionals' competences that should be promoted in the undergraduate curricula. It has been introduced in curricula across the western world, particularly in medicine courses, and is now considered as a useful resource for understanding the individual as well as for facilitating the adoption of patient-centred care. Despite the recognition of the relevance of narrative reasoning in the education of health professionals, research examining the contribution of narrative competence as a means of promoting patient-centred care in physiotherapy is limited, particularly from the student perspective.

**Participants:** Ethical approval for this study was obtained from the Ethics Committee of the host Polytechnic. After receiving a detailed information sheet and signing voluntarily the informed consent, eighteen final year physiotherapy students, who had successfully completed the course in narrative reasoning, were randomly assigned to one of three focus groups.

**Methods:** Focus group were used as method of data collection. Three focus group meetings were carried out at the school location in a quiet, private room, using a semi-structured interview schedule.

**Analysis:** The sessions were audiotaped and transcribed verbatim. The focus group transcripts were analysed using interpretative phenomenological analysis.

**Results:** Three superordinate themes emerged from data **Analysis:** »developing distinctive competences«, »shifting students' focus« and »dealing with contextual challenges«. In the first superordinate theme students distinguished their capability to better understand patients' experiences and needs and to be aware of the importance of the therapeutic relationship. Furthermore they highlighted their capability to reflect about patients and about themselves after the course. These competences were perceived as distinctive of the students who enrolled in this course. In the second theme a shift from clinician-centred care to patient-centred care was emphasised. According to students, patient management became much more than »just applying techniques«. They were more conscious of the patients' individuality, which facilitated the inclusion of patients' needs and expectations in the decision-making process. The third theme focused on the contextual challenges students found in clinical practice. At clinical placements students found resistance in changing from the traditional model of practice towards patient-centred care. Despite that resistance, students were committed to patient-centred care, with some of them emphasising their role as agents of change and other showing resignation to these contextual barriers.

**Conclusions:** Final year physiotherapy students support the inclusion of this module within the physiotherapy undergraduate curricula, recognizing its contribution in developing competences to facilitate patient-centred care.

**Implications:** This study's findings provide the first insight into the inclusion of a module in narrative reasoning within the physiotherapy undergraduate curriculum in Portugal. Future research is needed to inform curriculum developers on how best to integrate narrative reasoning within the physiotherapy undergraduate curricula.

## SESSION 14

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.20

14:55-16:10hrs

14.003

### Is a multimodal pathway to educate physiotherapy undergraduate students to evidence based practice effective in changing attitudes, knowledge, skills and behaviours? A mixed method study

**M. Bozzolan<sup>1</sup>, M. Da Roit<sup>2</sup>, N. Bertin<sup>3</sup>, M. Balboni<sup>4</sup>, G. Simoni<sup>5</sup>**

1Az.Osp.Univ.S.Anna Ferrara, Ferrara, IT, Italy, 2private practitioner, Agordo (BL), Italy, 3private practitioner, Pernumia (PD), Italy, 4private practitioner, Cento (FE), Italy, 5private practitioner, Ferrara, Italy

**Purpose:** Evidence Based Practice (EBP) constitutes core competencies to be acquired by physiotherapy undergraduates. Objectives: 1) to assess changes in students' attitudes, knowledge, skills and clinical behaviours related to EBP, before-after each year's multimodal educational pathway, 2) to explore students' perception of their experience in learning and applying EBP in clinical settings.

**Relevance:** Evidence regarding effectiveness of the different educational approaches in EBP is scarce. Outcomes assessment, referring to different levels of the Kirkpatrick scale, could help improve educational pathways.

**Participants:** Physiotherapy undergraduates of the 1st, 2nd and 3rd year (University of Ferrara), who voluntarily agreed to participate (academic year 2010-11)

**Methods:** The students attended educational activities (interactive lessons in the 1st and 2nd year; journal clubs, specific learning goals and assignments in their clinical internship in the 2nd and 3rd year). Their EBP knowledge and skills were assessed before (T0) and after (T1) the activities, using the Italian validated version of the Adapted Fresno test.

Students' behaviour in EBP in clinical context was evaluated by examining, through a piloted form, the internship documentation (EBP 5-step sheet, patient's chart). Students' perceptions were explored through 4 focus groups, to obtain people triangulation, at the end of the academic year.

**Analysis:** Within-group and between-group (1st, 2nd and 3rd year) comparisons of the Fresno test scores were conducted (t-test for paired and unpaired data, Wilcoxon test).

The internship documentation was examined to identify proper implementation of 5-step EBP.

Focus group transcriptions were encoded by 4 independent researchers, validated by an EBP-expert (researchers triangulation and data confirmation) and interpreted according to the Grounded Theory.

**Results:** 62 students (85% of the total) participated in the study. The within group (T0 vs T1) mean difference in the Fresno test was 34.2 (95%CI 24.4 to 43.9) in the 1st year and 35.1 (95%CI 23.2 to 47.1) in the 2nd year, whereas no statistically significant change was observed in the 3rd year. Gains regarded the items related to specific learning goals of each year. 76% of the 2nd year and 88% of the 3rd year students reached the cut-off of 50% of the maximum obtainable score. The between group comparison (1st year T1 vs 2nd year T0; 2nd year T1 vs 3rd year T0) was not statistically significant.

Internship documentation gave evidence of PICO's and database searches (95-100%), critical appraisal of internal validity (25-75%) but not of external validity (5-15%). The correct application generally ranged from 30% to 100%. Students appreciated interactive and peer educational activities, but perceived many barriers (lack of time, skills, formative feedback; English language) that made the transition from theory to complex clinical practice difficult, with clinicians not being a model to EBP. Nevertheless EBP was of value to the students, especially for their future.

**Conclusions:** Education progressively changes EBP knowledge and skills, but its use in the clinical context is limited, clinical educators being, for the students, key elements who inhibit or facilitate the process.

**Implications:** Clinical educators' involvement and formative feedback is essential to help students improve their skills and apply evidence in their reasoning in a clinical setting.



## SESSION 14

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.20

14:55-16:10hrs

14.004

### **Negotiated Work Based Learning (NWBL): bespoke training for Extended Scope Physiotherapy Practitioners (ESPP) in the interpretation of plain film radiographs (PFR) of the foot and ankle following low energy trauma to guide patient management**

**J. M. Walton<sup>1</sup>, M. Troedel<sup>2</sup>, F. Cowell<sup>2</sup>, L. Jaffey<sup>2</sup>, B. Narayan<sup>2</sup>**

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**Purpose:** Limited government funding for health services in the UK, together with the impact of the European working time directive has resulted in a reduction in doctors working hours. This has required role boundary changes for ESPPs to extend their practice into new areas to maintain adequate patient services and to undertake activities which were previously the domain of doctors. A robust, work/competence based training framework is essential to ensure that ESPPs undertaking such roles have appropriate education and can demonstrate their fitness to practise through documentary evidence whilst promoting professional development. A NWBL education programme is described for the development of specific, advanced clinical skills which are the focus of bespoke work-based learning and robust/valid and reliable assessment via a hospital-university partnership. Specific Aim: To develop and assess competence in the interpretation of PFR of the foot/ankle in the ED and to assess through advanced clinical reasoning whether any fractures present were stable or unstable in cases of low energy trauma (LET). Secondary Objective: To develop the advanced knowledge, skills and behaviours for an ESPP to undertake PFR image interpretation in the Emergency Department (ED) in place of imaging doctors/practitioners.

**Relevance:** UK practice: Conventional job roles for ESPPs to date have limited their professional development. However, limited resources in the UK health system have resulted in opportunities for ESPPs to develop into advanced practice roles through the development of new/advanced clinical skills.

**Pedagogy:** Training for such highly specialised roles cannot be delivered by traditional/didactic/classroom based educational methods. NWBL pedagogy has allowed the development of a 20 credit bespoke module specification (BMS) at Masters level, matched to the unique professional development requirements of the ESPP. A partnership arrangement between the hospital and university was utilised. It provides an effective environment in which assessed work based learning can occur with an emphasis on the development and assessment of competence to practise in a new clinical skill. This pedagogy merges educational theory with practice and successfully translates theory into practice.

**Description:** Setting: Large, inner city, teaching hospital. Referrals for physiotherapy are received in the ED to facilitate the discharge of patients with stable/un-displaced fractures of the foot/ankle, managed by medics in non-weight bearing casts. Inappropriate primary management can have an adverse patient outcome and is an inefficient use of resources. ESPPs are best placed to make a clinical diagnosis at presentation, request/interpret PFR and to manage the patient holistically (type of cast/rehabilitation requirements) in these clinical cases. A tripartite arrangement between the ESPP, work based convenor and university tutor was established. With support, the ESPP produced a BMS which set out educational aims, learning outcomes, syllabus, resources, learning/teaching and assessment strategies. Active 1-1 teaching was executed in the work place. 40 patients who attended the ED and who underwent PFR of the foot/ankle following LET were assessed as part of the NWBL programme. Subsequent competence based assessment occurred by the convenor. Competence based assessment similar to that used in UK medical schools was employed for parity.

**Evaluation:** A blinded, image comparison study was performed. 40 PFRs of the foot/ankle post LET were shown to 2 observers in an OSCE format on an X-ray work-station, after disclosing the patient history. Each observer was asked to give a descriptive/diagnostic report for each case, recorded on a proforma. The 'gold standard' was the consultant radiologist (CR) report and the comparator was the ESPP report.

**Conclusions:** The ESPP achieved 88% accuracy in correct diagnosis compared 100% for a CR. This result was adequate for the hospital governance procedures and the ESPP now requests and interprets such PFRs.

Annual audit of practice is essential to ensure ongoing fitness to practise and reassessment of the competence via repeat, annual audit using a similar OSCE is recommended.

**Implications:** ESPPs can be trained to interpret PFRs of the foot/ankle post LET. This is beneficial for the development of advanced practice roles for ESPPs and is important for their ongoing professional development, as they evolve into roles previously undertaken by doctors. The success of NWBL pedagogy is its unique opportunity, but is hugely dependent on a successful tripartite relationship between the ESPP, convenor and academic tutor.

## SESSION 14

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 3**

Thursday, November 8, 2012

ROOM C.E.20

14:55-16:10hrs

**14.005**

### **Patients in class? – No Illusion with an interdisciplinary teaching and research practice!**

**K. Schrader<sup>1</sup>, J. Semper-Jost<sup>1</sup>, V. V. Semper<sup>2</sup>, B. Pohl<sup>1</sup>, S. Urtel<sup>1</sup>**

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**Purpose:** A special challenge in physiotherapy education consists in transferring theoretical knowledge and practical skills into real patient's situation and their examination and treatment. This transfer is usually done by the apprentice during their practical courses in medical facilities under the supervision of their mentors. Due to the facts that there is no required pedagogical qualification in therapeutic professions and the heavy workload of mentors in the German health care system that transfer often cannot be fully guaranteed by the practice. To compensate for this deficiency, the interdisciplinary Spektrum Praxis for teaching and research in Berlin was founded. The final goal of this work is to show routes of cooperation to improve the transfer between theory and practice in education.

**Description:** The Spektrum Praxis for teaching and research was founded in 2010. In addition to the regular therapeutic work, the practice is also focusing on acquiring patients who are willing to be involved into lessons. Next to the treatment of motor-functional impairments this interdisciplinary teaching and research practice especially treats neurophysiological and neuropsychological impairments. Due to the interdisciplinary approach that includes physiotherapy, occupational therapy and speech therapy, it is possible to give students a holistic view of the situation of the patient.

There are many different ways of giving students work experience. Currently, the following scenarios can be realized thanks to the close cooperation between the Spektrum Praxis and the Spektrum academy for physiotherapy and occupational therapy.

1. Practice setting: all these institutions are in the same building, so during small groups students are able to get familiar with the practice setting. In this framework, tasks and areas of professional practice for practical courses can be used.

2. Integrating patients into the classroom: For example, a medical history and examination or treatment can be performed by students under supervision. This process is structured and guided by experienced teachers. By the use of an intensive pedagogical follow-up of the situation and the analysis of the recorded audio and video files, the development of personal, social and professional skills of apprentice is supported.

3. Examination and treatment demonstration: Experienced therapists will demonstrate sequences of assessing and treating patients in front of class. By the use of specific work assignments students are focused on certain aspects in connection to their certain point of education. Then the results of their reworking are deposited by the students at the institute's own learning management system.

4. Video Analysis: Video recordings of everyday movements or treatment sequences are integrated in teaching. Due to this work for example it's possible to develop and train Clinical Reasoning skills.

5. Scientific work: As part of the module "Scientific work" and as part of an ongoing study interventions of electrotherapy of strength training will take place at the teaching and research practice.

Momentarily different scenarios of how to integrate practice into classes are prepared educationally. That includes the discussion of interdisciplinary cases and the example of instructing groups of Parkinson patients or back therapy training courses.

**Evaluation:** The above-described cooperation is experienced by both teachers and learners to be very rewarding. For instance the direct practical relevance and interdisciplinary approach to the holistic coverage of the patient's situation is described as a very enriching experience.

## SESSION 15

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.18

14:55-16:10hrs

15.001

### **Professional doctorate in physiotherapy: Merging science, practice and education**

**N. J. Petty**

University of Brighton, Eastbourne, United Kingdom

**Purpose:** Since the 1990s there has been a rapid growth in professional doctorate programme in the United Kingdom. The Professional Doctorate enables practitioners to make an original contribution to knowledge and to continue with practice based research. Intended learning outcomes may not translate into the learning experience of students and for this reason, this study explored the experience of practitioners completing the first year of a professional doctorate programme.

**Relevance:** There is little known of the learning experience and impact of practitioners undertaking a professional doctorate.

**Participants:** All first year students from two cohorts of a Professional Doctorate programme in the United Kingdom were invited to participate. They were experienced health and social care practitioners, managers and academics. Nine students took part in this study. In the first year students critically explored their professional practice, considered appropriate methodologies alongside their ontological and epistemological position to answer a research question.

**Methods:** A naturalistic inquiry was conducted using illuminative case study design. Through description of an individual's learning experience, shared understanding and meaning were co-constructed by the participants and researcher.

Data was collected from two focus group interviews with first year student cohorts and from end of year evaluation questionnaires. Participants were physiotherapists (2), occupational therapists (2), nurses (3), a podiatrist and a midwife. An academic colleague not directly involved in the delivery of the programme conducted the focus groups.

**Analysis:** The transcriptions and evaluation questionnaires were read and re-read to allow familiarisation of the data. Thematic analysis was used to analyse the data from the focus group interviews and the questionnaires. Career transition theory was used as a conceptual framework for data analysis. Findings are presented according to its five stages: preparation, encounter, adjustment, stabilisation and preparation for the next transition.

**Results:** Preparation: Practitioners enrolled onto the programme wanting to change practice and gain the doctorate qualification. Having previously completed an MSc, they were confident of completing the doctorate, which seemed like a 'logical step up'. Encounter: The early honeymoon experience of the programme during the first few months was very positive, 'I feel something's awoken inside me'. They had 'the luxury of thinking again', allowing them to 'ponder for hours' on work related issues.

**Adjustment:** Practitioner's current knowledge and expertise was challenged; 'finding out that things I thought I knew, I really don't seem to know'. As they were often in positions of leadership this was 'disturbing' and 'challenging'. They persevered 'trusting you will come through it' and bolstered by high levels of support from supervisors and peers.

**Stabilisation:** They changed the way they evaluated problems in practice to explore the issues in more depth, now 'unravelling and unpicking problems to find out where it's come from and why we've ended up with it'. A greater appreciation of the complexity of practice enabled participants to appreciate the limitations of research to provide robust evidence. They became 'more open', with 'less assumptions' and 'more questioning of things'. They were 'much more confident in practice in what I do and say'. Their dialogue in practice altered, 'I'm talking to patients about studies all the time, in the team... I feel myself changing and I'm really excited by it'. Their realisation of the lack of evidence underpinning their practice led them to seek 'solutions that can be demonstrated scientifically'. As one participant remarked 'I'm studying at what I'm working'. Enrolment gave 'more credibility with a wider group of staff' and one participant began to 'visualise myself as a change-agent... helping people, inspiring people, to be more research minded'. Their drive to change and improve practice was not always shared by work colleagues who 'aren't ready to come along with you'. Preparation for the next transition: Greater understanding of issues related to their practice and research topics caused participants to consider their future careers beyond the programme; 'I think I could move out of my field into something broader, what it is I don't know ... I am a player in a broader field'.

**Conclusions:** The evidence base for their practice was questioned, their worldviews was deconstructed, and previously unacknowledged assumptions were exposed. Overcoming these challenges led to changes suggestive of a more critically reflective, autonomous and researched-minded practitioner.

**Implications:** Understanding the experience of practitioners undertaking their first year on a Professional Doctorate programme may help inform recruitment, curriculum design and supervisory practice so that all stakeholders, including applicants, students, supervisors, educationalists and employers, are better informed of the educational process.

## SESSION 15

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.18

14:55-16:10hrs

15.002

### Shared Expertise in Health Care Teacher Education

**A. Piirainen 1, T. Sjögren 2**

1 University of Jyväskylä, Helsinki, Finland, 2 University of Jyväskylä, Jyväskylä, Finland

**Purpose:** Usually the development of individual expertise from novice to expertise has been seen as four-step model (Dreyfus & Dreyfus 1986, 16-51). In this research we see the development of expertise as human's lifelong learning. Learning can be viewed as individual, group-based, inter-organizational or regional (Piirainen and Viitanen 2010). Learning through work and learning at school are very similar (Tynjälä 2008). Learning through work needs to be examined as a relationship between individuals and their environments (Billett 2006). It has been shown that diverse types of informal learning also take place in communities along with new discourses (Eraut 2004). Especially recently attention has been paid to learning in networks and regions, for examples, shared expertise and »innovative knowledge communities« (Tynjälä 2008). Shared expertise can be regarded as a pedagogical practice, in which responsibility and knowledge are shared between the workers. The members motivate each other, provide feedback and jointly steer the common functions (Nonaka & Konno 1998).

The aim of this study is to find out how students' in Physiotherapy teacher education create shared expertise. Our interest is to evaluate what kind of change was going on during the teacher education which had peer groups. The research questions are 1. How does the discourse of the participants change during one year educational intervention? 2. What is the meaning of peer group in Physiotherapy teacher education? The target of this project is to design a conceptual product, invisible and immaterial, yet real and useful. Expertise as a community process develops expert communities rather than individual experts in specific fields. (Bereiter and Scardamalia, 1993, Bereiter 2002.) Community process can take place also in Physiotherapy teacher education. Individual and expanding evidence based physiotherapy expertise combined with collective community expertise form a community expertise in which these two forms of expertise will evolve along a continuum (Engeström 2001). In order to achieve this, a partnership is required. The partnership is characterised by the win-win principle. (Shelley and Seung 2008.) Partners will gain strategic advantage for themselves (Bauer and Gruber 2007). The education process creates more value so that teachers' trust more to each other's and they have more knowledge to develop their teaching together and an increase is seen in the amount of methods available.

**Participants:** The participants in this study are Physiotherapy teacher students, who have been chosen to be educated for Health science expertises in professional teaching. All those 46 teacher students' who had started their studies in University of Jyväskylä 2009-2011 took part in this study.

**Methods:** The data were gathered by using essay writing (Richardson and St.Pierre 2008) pre-assignment and portfolios' from the same 46 teacher students' who had started their studies in University of Jyväskylä 2009-2011. The pre-assignment essays were written from the subject »What you think is professional teaching and what kind of teacher you are going to be during education. In teacher portfolios' students wrote how they became a teacher.

**Analysis:** The data were analysed by contents' analysis (Silvermann 2007).

**Results:** The data analysis is still going on. According pre-analysis the students of teaching change the ideas of teaching and learning. But it needs more analysis to say how it happens. The answer to the second research question seems to be, that peer groups are important environment for students to share their ideas and practices.

**Conclusions:** Groups allow students' to share their knowledge of learning and teaching. Groups seem to be important place for informal and formal learning also in Physiotherapy teacher education.

**Implications:** The research's results develop physiotherapy teacher education.

## SESSION 15

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.18

14:55-16:10hrs

15.003

### **Using an assessment rubric to enhance student learning through peer feedback and self appraisal**

**S. Shanmugam**

Glasgow Caledonian University, Glasgow, United Kingdom

**Purpose:** First year undergraduate students are faced with a number of challenges when transitioning to university, particular issues include engaging with assessments and understanding task requirements and marking criteria. Nicol and Macfarlane-Dick (2006) argue that to improve student performance feedback that facilitates the development of self-assessment is needed. To successfully self-assess students need to understand expected standards and criteria, which must be explicit, and incorporated into any new learning activity. The aim of this study was to design, apply and evaluate an assessment rubric that would enhance student learning through self appraisal and provide peer feedback for formative assessment (group presentation).

**Relevance:** Physiotherapy education in UK follows a social constructivist approach: learning by the construction of knowledge in a group or social settings, and students are expected to work in groups from the outset of their course. With feedback identified as an important method for learning students are often required to comment and provide feedback on each other's work. However, often the combination of grasping the complex subject matter and understanding of what actually is expected of them results in students having difficulty in providing successful/useful feedback successfully.

**Participants:** 72 first year undergraduate physiotherapy students from one Scottish university were introduced to a new/ bespoke assessment rubric in the first year. All students were invited to participate in a focus group and eight students (four female: four male; age range: 18-20 years) volunteered and gave written consent.

**Methods:** Action research was the methodological approach used for the study, and it included diagnosing, planning action, taking action and evaluation. Reflection was continual throughout the study. Focus group was conducted to evaluate the efficacy and usability of assessment rubric.

**Analysis:** The focus group findings were recorded transcribed and anonymised. Themes were drawn from the transcribed script and the researcher held discussions with 'one critical' friend to confirm the themes. Findings were analyzed using a thematic approach as recommended by Robson (1993).

**Results:** Five themes were identified from the transcribed focus group data: usability; applicability – formative assessment; applicability – summative assessment; self appraisal and peer feedback. Rubric enhanced students' self appraisal and also ability to provide peer feedback on both the content and performance of the group presentation (formative assessment).

**Conclusions:** Assessment rubrics can be used to facilitate students' ability to provide peer feedback for formative assessment and peer feed-forward towards their summative assessment. They also can enhance student learning through self appraisal and align students' expectations to module learning outcomes. Future work could include student involvement in the development of the rubric and guidance for providing peer feedback.

**Implications:** Assessment rubrics can be used to develop knowledge and skills in self-appraisal and peer feedback. They are a valuable tool for teaching, learning and assessment and can be used for both heavily practical modules that include a large proportion of group work and skills-based learning. This process can help build confidence in self-appraisal; improve communication with peers and teaching staff and developing interpersonal skills.

## SESSION 15

(Platform Presentations)

**Bringing the evidence into practice:**

**Linking science and practice in education 4**

Thursday, November 8, 2012

ROOM C.E.18

14:55-16:10hrs

15.004

### **Why is the implementation of new knowledge lacking in efficiency? Rethinking the knowledge-to-action gap**

**P. Beenen**

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**Purpose:** This research is based on the assumption that implementation strategies should become quickly more efficient in order to close the growing knowledge-to-action gap. This sets an agenda for education.

**Relevance:** The body of knowledge of physiotherapy has been growing exponentially in the last years. The incorporation of this knowledge in the daily practice of physiotherapists is cumbersome and seems often ineffective, this despite the development of second generation knowledge, like systematic reviews or third generation knowledge like guidelines. This knowledge-to-action gap has led to, essential, but confusing new fields of research studying often similar topics under different terms like, among others, knowledge translation, knowledge transfer, implementation and dissemination. It's a task for the profession to relate to results from this field and critically review the implementation of knowledge in the daily practice of the physiotherapists.

**Description:** not relevant for the study

**Evaluation:** This research systematically reviews strategies in implementation research and related terms and the role of 'understanding practice' and theory in becoming a health professional. The focused literature search was done following the approach of the Joanna Briggs Institute, which allows for a more profound theory analysis of particularly qualitative research, economic research and policy research.

**Conclusions:** Most of the research done around implementation strategies are using planned action theories to incorporate knowledge in practice. Planned action theories lack generally the compelling evidence, shown in disciplines like medicine and education, that a professional only learns and adapts evidence and innovations (change) when it »fits« in his understanding of practice. This has important implications for education.

The physiotherapist needs to continuously up-date the evidence used in decision making and critically reflects upon his performance. These demands should be explicitly incorporated in how the individual physiotherapist perceives his own profession. Urgent questions are; if and how the »average everydayness« of constant reflection and change is incorporated in the individual understanding of practice of the physiotherapist. Another question is the interpretation of what physiotherapists perceive as meaningful evidence based knowledge within their models of practice.

**Implications:** A more profound orientation on the relation between new knowledge/innovations and the understanding of practice of the individual could help to close the knowledge-to-action gap. Education of physiotherapists should focus on didactical strategies to prepare life long learning physiotherapists for whom changing knowledge is a visible part of their professional identity. In order to use 'understanding of practice' as a determinant for the implementation of new knowledge more research needs to be done within physiotherapy. Educational strategies and implementation strategies complementary to the used planned action theories should be developed and tested.

## SESSION 16

(Platform Presentations)

### Education and employment policies: Challenges in Europe 1

Thursday, November 8, 2012

ROOM A.-1.02

14:55-16:10hrs

16.001

### The Use of UNMDG Case studies to promote interprofessional learning and raise global health awareness in pre-registration students

G. Pope<sup>1</sup>, D. Chambers<sup>2</sup>, G. R. Webb<sup>3</sup>

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**Purpose:** The aims of the Interprofessional Conference day were to:

1. promote awareness of the UNMDG goals
2. facilitate interprofessional learning
3. to foster understanding of interprofessional working in global health issues
4. to test the usefulness of the case studies and program format in meeting the learning outcomes

**Relevance:** Background: Global Health, and Internationalisation of the curriculum are key issues in educational development and pedagogy. In order to achieve the United Nations Millennium Development Goals (UNMDG) and its targets for 2015, all communities need to work together. Academic institutions can be an effective partner by contributing through education of health professionals. The Universitas 21 (U21) UNMDG initiative is an interprofessional project involving faculty and students that aims to develop an educational strategy to raise awareness of UNMDG. A key element is to develop resources for adoption and flexible implementation into the curriculum of health professional training programs. Faculty from six U21 member universities has developed ten UNMDG case studies together with an educators' guide and a students' guide.

**Description:** Self selecting participants comprising pre-registration students from physiotherapy, medicine, dentistry, nursing, midwifery and occupational therapy. Participants were all in the last two years of their program of study, and came from the Universities of Nottingham (UK), Birmingham (UK) and Lund (Sweden).

Interprofessional study groups were facilitated by Faculty members from the Universities of Nottingham, Birmingham and Tec de Monterrey (Mexico), and comprised the following disciplines; physiotherapy, nursing, medicine and dentistry.

**Methods:** The conference day comprised a PBL approach to learning, with interprofessional student groups facilitated by pairs of faculty staff. Each group was provided with a case study, previously validated by an international group of healthcare academics. As part of the PBL approach students were able to access a range of resources including the www. Data was collected using 2 evaluation forms completed at the end of the day. The evaluation forms were developed to be used with international and interprofessional bodies of students.

**Evaluation:** A descriptive analysis approach was taken; data comprised completed questionnaires previously developed & validated. Discrete data allowed comparison of the development of understanding of the subject matter, and whether the learning outcomes were achieved. Content analysis of the textual responses gave depth to the analysis, and presented the investigators with detail of elements of success and further areas for development.

Key findings: 96% improved knowledge of UNMDGs  
64% intended to broaden their global health exposure following the conference - including volunteering, electives and education of others

Textual data: strength of working inter-professionally

strength of PBL approach complementing the complexity of the case studies

lessons learnt from considering complex global health issues can be applied to domestic health systems

development of understanding of other professions, and team working

**Conclusions:** The analysis supports the use of the case studies currently developed in raising awareness of the UNMDGs, and global health issues. The case studies provide complex learning opportunities which promote interprofessional learning. All healthcare professions are »global« in nature

Future Work: Further development of IPL global health cases to promote UNMDGs and IPL

Development of case studies covering domestic health issues but promoting the UNMDGs

Development of a second UNMDG IPL conference to be held in Lund 2012

**Implications:** Physiotherapy is a global health profession: Awareness of global health issues should be central to future physiotherapy curriculum. The case studies should be integrated into main curriculum to enhance global health understanding, and further promote interprofessional learning and working.

Further UNMDG conferences should be developed.

## SESSION 16

(Platform Presentations)

### Education and employment policies: Challenges in Europe 1

Thursday, November 8, 2012

ROOM A.-1.02

14:55-16:10hrs

#### 16.002

### Formal, nonformal and informal learning recognition – sharing a system

**P. M. D. de Almeida, A. M. F. Lopes, A. I. M. Vieira**

Escola Superior de Saúde do Alcoitão, Alcabideche, Portugal

**Purpose:** Adopting the Bologna Process, educational institutes also face the ECTS organization and recognition. Despite the ECTS recognition is well described and explained, it relates mainly with formal learning. Although, considering the life long learning it's necessary to recognize both informal and nonformal learning. With this goal, Escola Superior de Saúde do Alcoitão implemented a recognition system that we would like to share, discuss and get external feedback.

**Relevance:** The lifelong learning project urges institutes which are involved in the professional development to recognize what is learned and how it can be credited. The historically separated formal and non-formal learning now faces the challenge to be complementary in both content and process. In this perspective it is important for informal learning to define learning outcomes and tune with education. This will lead to a situation in which (early acquired) competences are valued and people are able to be credited for all their learning efforts. Health and educational institutes all over Europe are struggling with this issue.

**Description:** For the recognition process of formal learning and informal and non formal learning, pre and post Bologna, was created a Recognition Committée (Comissão de Creditação) and defined public rules for it. This recognition system is applicable to any student who applies to a formal registration at our institute.

For nonformal learning, the system includes after course workshops, community courses, interest based courses, short courses, or conference style seminars, with or without assessment or number of ECTS. Its recognition is made on the basis of content analysis, thematic relevance, workload, scientific validation and existence of assessment. For ECTS quantification (when necessary) and for qualitative and quantitative classification (when necessary) these criteria are clustered in a 0-20 scale.

For informal learning, the system includes professional experience. Its recognition is made on the basis of curriculum vitae analysis, years of experience and lifelong learning activities developed. For ECTS quantification and for qualitative and quantitative classification these criteria are clustered in a 0-20 scale.

Recognition of nonformal and informal learning, was already recommended by the national law in 2006, to promote the conclusion of academic degrees by professionals. At ESSA, this recognition permits the maximum of 30 ECTS.

For complex cases it is possible to nominate a jury of specialists to advise the committee.

**Evaluation:** From 2008/9 until now, the Physiotherapy Department recognized prior education to 106 students (1st and 2nd cycle levels), 87 from formal education, 16 from nonformal and informal education.

**Conclusions:** This system has made possible for senior professionals to obtain academic degrees in a fair way, valuing their prior knowledge.

On this system, the recognition is made for full curricular units of 1st or 2nd cycle courses, according to the request of the student. This aspect we consider as a limitation as it doesn't allow the recognition of some relevant prior knowledge.

**Implications:** Sharing this experience can help other institutions who are struggling with this process and at the same time get external feedback to improve our own system.



## SESSION 16

(Platform Presentations)

### Education and employment policies: Challenges in Europe 1

Thursday, November 8, 2012

ROOM A.-1.02

14:55-16:10hrs

16.003

### Challenges for the effective integration of physiotherapy in primary health care: the role of interprofessional education

**B. Paz-Lourido<sup>1</sup>, V. M. Da Rocha<sup>2</sup>**

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**Purpose:** Physiotherapy services in Primary Health Care in Spain were officially introduced in 1991. This research explores the perspectives of different health professionals regarding the current integration of physiotherapy in Primary Health Care in Majorca (Balearic Islands, Spain).

**Relevance:** Primary Health Care requires the interprofessional collaboration among the diverse health and social professionals involved in practice. Interprofessional education during undergraduate and specialisation programmes is one of the factors facilitating this approach to occur in practice. It was envisaged that the knowledge gained from this study would give a better understanding of the current collaboration between Primary Health Care professionals, highlighting some challenges for education.

**Participants:** A number of 30 health professionals participated in this study, including nurses, GPs, paediatricians, social workers and physiotherapists. The recruitment strategy required experts from the University of the Balearic Islands and key informants from Primary Health Care as gatekeepers to suggest participants. A socio-demographic questionnaire was delivered to the suggested participants in order to select professionals with different profiles regarding professional experience, level of expertise, age and location of the health centre (Rural/Urban).

**Methods:** A qualitative study was developed using the social-critical paradigm as theoretical perspective and one to one in-depth interviews as strategy for data collection.

**Analysis:** Discourse analysis was employed to analyze and interpret the data.

**Results:** Among the findings, it was highlighted in this study the lack of knowledge and stereotyped perspective about physiotherapy among the non-physiotherapists participants. Although physiotherapy was considered crucial in the treatment of some type of patients, most non-physiotherapists participants were hesitant when talking about physiotherapy and the role of physiotherapists in Primary Health Care. These findings were consistent with the perspectives of the interviewed physiotherapists. For them, this lack of knowledge and understanding about physiotherapy is one of the main reasons for the lack of communication and collaboration among the physiotherapists and other professionals in Primary Health Care. Although interprofessional collaboration was seen as crucial for increasing this knowledge, several barriers were identified for its development in practice.

**Conclusions:** Findings in this study show the poor integration of physiotherapy in Primary Health Care in Majorca. Based on these findings interprofessional education could facilitate effective interprofessional collaboration. Institutional efforts and further research is needed to facilitate its development in practice.

**Implications:** This study highlighted the need to develop interprofessional education in the context, but also the need to further explore how best to facilitate this collaboration for seamless patient and family centred approach in Primary Health Care. The university facilities could be used to assist in a smooth transformation of new practices.

## SESSION 16

(Platform Presentations)

### Education and employment policies: Challenges in Europe 1

Thursday, November 8, 2012

ROOM A.-1.02

14:55-16:10hrs

16.004

### Changing imperatives in healthcare workforce planning: Their implications for physiotherapy education

S. C. Gosling

Chartered Society of Physiotherapy, London, United Kingdom

**Purpose:** The Chartered Society of Physiotherapy (CSP) has increased its activity on workforce planning over the last two years. The impetus has been external policy developments in the UK, making the case for robust workforce planning models and decision-making, and working with education providers to respond to concurrent health care and higher education reform. The CSP's objectives have been to make the case for physiotherapy, to promote the profession's involvement in national policy and local decision-making, and to seek to ensure that physiotherapy education both influences and responds to changing workforce needs.

**Relevance:** There is increasing pressure for physiotherapy to demonstrate its clinical and cost effectiveness, articulate the quality of what it does, and assert its provision of productive, innovative solutions to service delivery within times of financial constraint. The focus is on making the case for physiotherapy's contribution to meeting changing patient needs and the sound investment that commissioning physiotherapy education forms for providing a skilled, committed workforce.

**Description:** Work has comprised influencing activity at a national level; support, information-sharing and promotion of cross-sector collaboration at a local level; and facilitating member discussion in ways that are sensitive to difference across the UK, while responding to shared needs and promoting common solutions.

The CSP has sought to influence the number of student places commissioned on qualifying physiotherapy programmes, while pressing for stronger investment in the education of qualified physiotherapists and physiotherapy support workers to create sustainable arrangements for career-long development.

**Evaluation:** Activity has involved working with representatives of the 35 higher education institutions that currently provide qualifying physiotherapy education across the UK; seeking to influence the thirteen bodies with current responsibility for commissioning physiotherapy education across the UK; making submissions to government departments and agencies on workforce planning approaches and their implications; and collaborative activity across the allied health professions (AHPs) to pursue shared concerns. Work has included engaging with the complex factors that need to inform workforce planning; nurturing links between educators and managers in influencing local decision-making; identifying strategies for physiotherapy education's development to optimise its position and stability; and data collection regarding workforce planning decisions.

**Conclusions:** Robust approaches to workforce planning need to be founded on analysis of current and projected patient need, delivering clinically- and cost-effective services, and matching the supply of education to workforce demand. In responding to these imperatives, a deftness is required in evidencing physiotherapy's distinctive contribution, while demonstrating the profession's engagement with patient-centred, integrated, inter-professional care and aptitude for emerging job roles at all practice levels. There is the need to support the continued development of physiotherapy education to ensure that it leads and supports practice, that it responds to changing workforce needs, and that its position is sufficiently robust to weather the volatility created by current health care and higher education reform. The CSP needs to do this across the UK, while being sensitive to opportunities and pressures manifesting differently in each of the four countries.

**Implications:** The precise nature of future models for workforce planning and decision-making, particularly in England, remain unclear. However, the CSP needs to continue to work with its members, and in collaboration with other AHPs and universities, to assert a positive influence over national and local developments and policy implementation. Of key importance is making the case for high-quality, evidence-informed workforce planning that matches supply with demand in sustainable ways, and ensuring that physiotherapy education continues to lead and support the profession's development to meet changing patient and service needs.

Fresh focuses will be on optimising strategic partnerships (within and beyond the profession), exploring the value of skill mix and job role review for strengthening the profession's position, and evaluating changing workforce models for future education provision.

## SESSION 16

(Platform Presentations)

### Education and employment policies: Challenges in Europe 1

Thursday, November 8, 2012

ROOM A.-1.02

14:55-16:10hrs

#### 16.005

### An interprofessional and international initiative on the role of health sciences faculties in achieving United Nations Millennium Development Goals

G. R. Webb<sup>1</sup>, G. Pope<sup>2</sup>, D. Chambers<sup>3</sup>

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**Purpose:** In order to achieve the United Nations Millennium Development Goals (UNMDG) and its targets for 2015, all communities need to work together. Academic institutions can be an effective partner by contributing through education of health professional trainees, research, and contribution to policy discussion and analysis with policy makers and other partners. This project has been undertaken in collaboration with the United Nations.

**Relevance:** The Universitas 21 (U21) UNMDG initiative is an interprofessional project involving faculty and students from across the globe, that aims to develop an educational strategy to raise awareness of UNMDG's, for adoption and flexible implementation into the curriculum of the health professional training programs. Faculty from six U21 member universities have developed ten UNMDG case studies together with an educators' guide and a students' guide.

Physiotherapists have a major role to play in the understanding of the UNMDG's and in implementing practices and projects both locally and globally that build on the foundations of the UNMDG's.

**Description:** The material is being adaptively implemented in the curriculum of a number of U21 universities, and an evaluation framework has been developed to demonstrate this strategy's output and contributions to achieving the UNMDG targets by 2015 and beyond. A reflection survey for students has been tested with students in Hong Kong, Nottingham, Melbourne and Seoul and has produced encouraging preliminary results. Over 800 students have participated in parts of the developed curriculum.

The cases have been based on student experiences in global health as well as that of academics.

The participants are students of the U21 network of universities.

**Evaluation:** The project came out of work undertaken by the Health Sciences Group of U21. Curriculum design was decided on by a consultative process. An evaluation tool has been developed and trialed by an international, interprofessional subcommittee. Further evaluation of the project is hoped to be undertaken by a PhD scholar.

**Conclusions:** Over time, this strategy is expected to lead to an increase in students' attitude, knowledge, and skills in UNMDG implementation both globally and locally. The work will be openly published and it is anticipated that the curriculum will be opened up for use by other institutions.

The student committee has called for expressions of interest for collaborative projects to be undertaken in three regions of the world. These would include students and staff from the host institutions and students and staff from the U21 network of universities.

**Implications:** The UNMDG's form the foundations for work in both local and global communities on issues that affect all Health Professionals. It is important that physiotherapy graduates have a clear understanding of the UNMDG's and how they can use this knowledge in their own practice in order for there to be gains in better health outcomes for all communities.

## SESSION 17

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

14:55-16:10hrs

#### 17.001

### Quality of student neurological placements can be measured by using a log

W. Chesworth

University of Canberra, Canberra, ACT, Australia

**Purpose:** To measure physiotherapy student experience during a neurological placement, one of five compulsory 5-week clinical placements in one of the graduate entry Master of Physiotherapy programs in Australia.

**Relevance:** Neurological physiotherapy is considered a core component of physiotherapy practice. Students typically undertake mandatory clinical practice in this area. Student experience however is rarely quantified, making assessments about student experience and competency across a variety of neurological conditions difficult. This abstract assesses student experience during a neurological placement by using a log.

**Participants:** 25 University of Canberra Graduate Entry Masters students.

**Methods:** Each student kept a 36-criteria log of clinical experience during their placement. Students recorded various parameters selected to measure the quality of the placement. These parameters included client characteristics, such as age, gender, client presentation and issues of diversity. Other parameters related to the student role with the client, occasions of service and the location of the service.

**Analysis:** Individual student logs were collated and the results analysed using descriptive statistics to provide a quantifiable description of their neurological placement.

**Results:** Students saw a mean of 29 (95% CI 23-35) clients over a five-week placement. Students averaged 156 ( $\pm 21$ ) occasions of service. This equates to 6.5 treatment sessions each day. 42% of clients seen were aged between 66 and 80 years, with a further 40% aged between 41 and 65 years. 67.6% of sessions were repeated. Repeat sessions averaged 8.4 sessions. The most common presentations were stroke (58.5%), neurosurgery (9.5%) and spinal cord injury (5.7%). Students tended to manage the majority of clients seen (53%), assisting with a further 39.6%. Students tended to move to a management role within 2 sessions. English as a second language was the most common client complexity reported (7.3%).

**Conclusions:** This study shows that the quality of a neurological placement can be quantified by using a log. Students managed the majority of clients. Almost 2/3 of clients were seen multiple times. This was particularly obvious in the in-patient rehabilitation facility compared with the acute neurological facility. Overall, students conducted a higher proportion of repeat sessions compared with other placement types. There were differences between placements in terms of variety of presentations and number of clients seen. Students had significant roles as assistants. This was due to the assistance required with transfers. The log proved to be a useful tool to assess the types and quality of student experiences.

**Implications:** These results offer a benchmark for other universities to compare neurological placements and student experiences. While the benefits of being able to compare placements between universities is yet to be realised, an opportunity exists to develop a standardised approach using a log to assess the quality of placements. Such an assessment may also facilitate dialogue on placement design, levels of student competency, management of expectations, and ensuring that the curriculum remains relevant and practical.

## SESSION 17

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

14:55-16:10hrs

17.002

### Living through some positive and negative experiences of work placement assessment

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**Purpose:** One of the intriguing questions, in higher education, in general, is if the assessment practices are in line with the applied pedagogical and curricular assumptions, particularly those related to learning and competence development of the student. However, in this study, with a phenomenological orientation to assessment as an educational subject, and a phenomenon of the subjective lifeworld, the most fundamental question was, how work-placement assessment is experienced by those, who are living through the actual assessment processes, while being at the heart of it. That is why, the aim of this study was to gain a better understanding of work-placement assessment as a lived through experience of the student.

**Relevance:** As an account for an essential structural description in generating scientific knowledge, this study increases understanding of work-placement assessment in the frame of physiotherapy (undergraduate) education - by giving insight into the direct assessment experience and its key constituents, using language as a medium for accessing the situation of the other, and describing it as it was lived and intended by the experienter.

**Participants:** The participants of this study were sixteen undergraduate physiotherapy students from different year courses, at two Finnish higher education organizations, with problem-based curricula that had been running for approximately ten years at the time of the study. Student volunteers from the two organizations were directly recruited as the informants of the study with email, by the author of this study.

**Methods:** In this study, a phenomenological method, developed by Amedeo Giorgi, was applied to descriptive data. The raw data consisted of in-depth interviews with students about aspects of their lived assessment experiences, related to their last work-placement period. All of the student informants were interviewed by the same research interviewer (the author of this study) soon after their last work-placement.

**Analysis:** The aim was to operate at the level of the phenomenological scientific analysis, and the analysis to be educationally sensitive. Thus, it is assumed that the student participants first describe their lived experiences of the phenomenon of interest, from the perspective of the natural attitude, and the researcher, while assuming the phenomenological attitude and applying the method of the free imaginative variation, then analyzes the descriptions from within the phenomenological scientific reduction, and specifically for its disciplinary meaning.

**Results:** The descriptive analysis of the research material shows that what constitutes the essential aspect of the lived through experience under investigation, is the desire for acquiring relevant information for self through assessment. Self-interest over the relevancy of the assessment information for self has a strong personal significance, and a motivational character, as a result of which work-placement assessment takes on either a more positive or negative meaning.

**Conclusions:** The results of this study not only emphasize the significance of acquired assessment information for self - for building up self-knowledge - but also the tension between the trust in self and the reliance on others in the work-placement assessment process; and the congruence between the desired and the perceived assessment practices; as the key constituents of the student's work-placement assessment experience.

It is suggested that the generality of the results to context-similar situations would be tested; if not in all kinds of higher educational work-placement settings, more preferably, then, in the context of other physiotherapy (or other health professions) and/or problem-based curricula.

**Implications:** Based on the findings of the descriptive phenomenological investigation, it is suggested that more attention in higher education, in general, and its work-related assessment practices, should be paid for the acknowledgement of assessment as a phenomenon of the subjective lifeworld, and a presence for the student.

## SESSION 17

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

14:55-16:10hrs

#### 17.003

### A novel approach to teaching physiotherapy students about health policy-making

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**Purpose:** The aim of the activity was to teach physiotherapy students about national health policy-making processes through active participation in preparing a submission on a relevant professional issue.

**Relevance:** Governments have a responsibility to set health goals to improve the health of their populations. As part of the health system, health professionals, including physiotherapists, can influence health care and population health outcomes by contributing to the body of evidence that informs health policy, identifying and actively engaging in discussions on topical issues and by participating in the policy-making process, for example, by making submissions during the period of public consultation.

**Description:** All Year 3 physiotherapy students (n=110) participated in a Health Policy module over a two-week period that was based on an approach used previously with senior classes in other health professional courses at the University.

**Evaluation:** Initially students received a lecture on health policy that described the term, and discussed the legislative and policy-making frameworks as well as ways to contribute to health policy-making in New Zealand. Students were then briefed on a current national health policy issue relevant to the profession, the proposal to enable prescribing by health professional groups in addition to medical practitioners (full prescribing rights) and dentists, nurses and midwives (limited prescribing rights). A list of references and resources was made available and students were then invited to undertake further research and prepare individual written submissions on »The proposal to enable suitably qualified physiotherapists to prescribe a limited range of medicines for people«. All written submissions received by the closing date were reviewed by the module co-ordinator. Fifteen class members representative of submitters »for« and »against« the proposal as well as cultural groupings, were subsequently invited to present oral submissions to and answer questions from a »Select Committee«. Remaining students observed proceedings from the »public gallery«. The Committee comprised two academic staff familiar with the health committee's processes, two class seniors and a student who identified as Maori.

**Conclusions:** Class feedback on the novel approach to learning in the module was positive. The level of interest in proceedings was high. Of the 110 written submissions received, 73 (66%) supported the reform. No submissions supported prescribing rights being granted at entry-level to the profession. The aim of the module was met by students actively engaging in the health policy-making process by preparing individual submissions on a relevant current issue. Submissions were well informed and represented a range of opinions for and against prescribing rights, with the majority in support. However opinion was clear that should legislation change to allow limited prescribing by physiotherapists, additional learning and experience in practice would first be required.

**Implications:** It was possible to teach the students about health policy-making by engaging them in active participation on a relevant topic. By providing students with guidelines on how to contribute effectively to policy-making processes, it is hoped that as physiotherapists they will use this knowledge of the processes surrounding health policy to actively engage in contributing to health reform and improved health outcomes for populations.

## SESSION 17

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

14:55-16:10hrs

#### 17.004

### eTraining on auscultation of lung sounds – design and evaluation of a web-based learning tool

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**Purpose:** The purpose of this special interest report is to present the design and evaluation of an interactive web-based learning tool for physiotherapy students learning how to auscultate lung sounds.

**Relevance:** Auscultation of lung sounds is a major assessment tool in respiratory physiotherapy in terms of assessing and interpreting breathing disorders and an efficient tool to (re-)evaluate the therapy's outcome.

Training of auscultation requires many repetitions, a quiet surrounding and a variety of lung sounds to listen to – conditions that are unlikely to be found in the setting of students in a classroom.

**Description:** An eTraining was developed to provide optimal learning conditions and to promote a self-organised learning process. The tool contains the following sections: purpose of the eTraining, manual, interactive modules on how to conduct the auscultation, classification and interpretation of lung sounds, videos of practical examples and a handout. Learning success can be stated with the help of selftesting questions. An interactive menu structures the content and offers the possibility to tag the items as done, to be repeated or to be discussed.

**Evaluation:** 92 of 102 students (90,2%) using the eTraining evaluated the programme by questionnaire. Evaluation was conducted in a classroom setting at an announced point of time. The questionnaire comprised the dimensions: training sessions, aims and content, design and usability and overall acceptance. Method of analysis used was descriptive statistics.

Main results: The aims of the training tool were found to be formulated entirely clear (61,5%), rather clear (29,7%), clear (5,5%), not quite clear (1,1%). The content was judged to be illustrated in an easy to follow way (entirely 57,1%, rather 26,4 %, easy 11%, quite uneasy 2,2%) and size of training sequences was designed very well (58,2%), well (24,2%) adequately (14,3%) or not quite well (1,1%).

Navigation through the tool was entirely easy (33%), rather easy (35,2%), easy (23,1%), quite uneasy (5,5%) or entirely uneasy (1,1%). Multimedia elements such as videos, animations or audio files were entirely helpful (68,1 %), rather helpful (17,6 %), helpful (11 %) or not quite helpful (2,2 %). Active participation was entirely supported (38%) rather supported (37,4 %), supported (16,5 %), not quite supported (4,4 %) and selftesting was entirely useful (48,4%), rather useful (28,6 %), useful (18,7 %), not quite useful (1,1 %) or not useful at all (1,1 %). The handout offered was very helpful (24,2 %), rather helpful (25,3 %), helpful (25,3 %) or not quite helpful (7,7 %) and not helpful at all (2,2%). 15,4% did not remember a handout at all. Overall acceptance of the programme was given entirely by 57,1%, rather by 28,6%, actually given by 9,9% and not quite given by 3,3% of the students.

**Conclusions:** The designed eTraining is an appropriate tool for the training of auscultation and widely accepted by the students. In accordance to the results, multimedia elements and selftesting questions were supportive, content segmentation and presentation were well-organized. Potential for optimization could be identified in terms of navigation and active participation The optional use of the handout should be pointed out.

**Implications:** The eTraining on auscultation seems to be a successful learning tool in respiratory physiotherapy. When further programmes are developed, special attention should be paid to the navigation and active participation and different multimedia elements should be offered.

## SESSION 17

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 1

Thursday, November 8, 2012

ROOM A.-1.03

14:55-16:10hrs

17.005

### Assessing the competence of advanced physiotherapy practitioners in musculoskeletal trauma management: a dynamic and complex process

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**Purpose:** The purpose of this research was to ascertain the appropriateness of a competence based model of assessment utilised for advanced physiotherapy practitioners (APP) in musculoskeletal trauma from the perspective of stakeholders. For these physiotherapists, their new roles entailed increased autonomy whilst emphasising the need to ensure accountability of professional practice within clinical governance and Knowledge and Skills Framework (DoH2004) boundaries.

This is a case study of a large university teaching hospital that modified an existing 'medical' model of competence assessment for physiotherapists working in musculoskeletal trauma. It incorporated a tripartite arrangement between the APP, the medical clinical lead and the University. As a result of this collaboration a framework of competence development and assessment was established. However, as time progressed practitioners questioned the suitability of this model as many felt that it failed to capture the holistic nature of their role.

**Relevance:** The United Kingdom (UK) National Health Service has experienced major changes particularly in the way that care is delivered (Department of Health, 2000). Key influences have been the introduction of the European Working Time Directive which restricted the number of hours that doctors could work, a rising population with complex clinical needs, issues of accountability and increasing service expectations. The shortfall in doctor hours and the changing socio-economic context led to wide scale innovation. Emphasis was placed upon the modernisation of healthcare with specific focus on developing workforce capacity and capability. This resulted in shifts in professional boundaries as APPs undertook roles formerly performed by doctors, including the assessment and management of musculoskeletal trauma patients (McPherson et al, 2006; Dawson et al 2004). As a result of these changes APP skill acquisition and development has been a priority for healthcare providers to ensure that care is delivered at an acceptable standard. Currently, a robust model for assessing APP competence in these new skills has yet to be validated.

**Participants:** For the purposes of this study the participants were key stakeholders. Described as individuals who have a legitimate interest in the assessment of APP competence in musculoskeletal trauma Gomm (2009). The participants were identified using a convenience and a combination sampling strategy this met multiple interests and allowed for triangulation of data. Sixteen participants were identified including the hospital Chief Executive Officer, senior clinical managers, senior medical colleagues and APPs.

**Methods:** This case study was qualitative in nature incorporating the use of semi structured interviews in order to provide detailed analysis of stakeholders views regarding APP competence assessment. Initial questions were guided by the literature and piloted in order to ensure suitability. Only one researcher undertook the interviews to ensure consistency of approach. An iterative process was utilised whereby emergent information from previous interviews informed subsequent interviews. All interviewees were provided with written information about the study and were formally consented. Data was captured on audiotape allowing for accurate transcription of information.

**Analysis:** The interviews were transcribed using a consistent format informed by the literature and analysed thematically (Ritchie and Lewis, 2003). As such emergent themes were analysed using an interpretivist approach which helped to develop theory, as data was collected.

**Results:** Thematic analysis of the data indicated that APP competence is perceived as the ability to autonomously and effectively perform all aspects of the role in a patient centred manner. The data indicated that competence assessment should be multifaceted with assessors selected for their specific skills and expertise. In addition, competence in these emergent roles is a dynamic and evolving process requiring an adaptable assessment framework. APPs competence includes aspects which are medical and physiotherapeutic in nature however there are aspects which are unique to the specific role of APPs working in musculoskeletal trauma and this adds to the complexity.

**Conclusions:** Development of competence in this context involves 'boundary crossing' as described by Saunders (2007) and this requires key personnel to facilitate and assess the process. Any assessment utilised needs to account for the dynamic and multifaceted characteristics of evolving competence development. This requires a more holistic assessment process particularly in light of the changing UK healthcare context.

**Implications:** Further research is required to develop tools to assess the 'softer skills' such as patient centred behaviours, communication and metacognition.



## SESSION 18

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 2

Thursday, November 8, 2012

ROOM A.-1.04

14:55-16:10hrs

18.001

### Measurement of learning outcomes: Cooperation between university and stakeholders conducing to the measurement of learning outcomes in an education project

U. Eckler

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**Purpose:** As a didactical approach cooperation between stakeholder companies and the university within a project work was implemented to support a result-oriented education. The goal was to design a new kind of performance assessment which fits to the learning process and guarantees measuring of learning outcomes within quality assurance. This leads to following questions:

1. Who defines target learning outcomes? Can stakeholders give answers to target competencies?
2. Do the students achieve the intended level of competencies in professional field by using project work?
3. Which factors provide effectiveness of the learning process in the project work and affect the improvement of skills?

**Relevance:** In higher education we see a transition from teaching to learning: teachers turned into education providers for student centered learning. As a result new didactical settings for courses in physiotherapy higher education are designed to follow this trend and to meet the changes of the requested competencies in the professional field.

**Description:** The course "Occupational Medicine and Prevention" was picked out of bachelor degree programme as this is a part of the professional field that is not intended as an obligation practical training. Four Companies that are potential employers to future graduates were invited as educational partners. In total 231 students as members of the 20 Occupational Medicine-classes and their teacher were involved.

**Evaluation/Methods:** 1st step: Learning outcomes on the level of sub-skills of the physiotherapeutic process were defined by data analysis of identified stakeholder's papers regarding their needs.

2nd step: After differentiating the expected learning outcomes in practical skills and knowledge two kinds of evaluation were used to find out which knowledge and skills the students have achieved and where they still lack:

- a. For analysing the learning outcomes of knowledge the written project reports by the students were compared with the intended level of the curricular objectives.
- b. For analysing the grade of goal achievement on companies side and for proving the level of practical skills a survey among the partner companies were done six months after the project phase.

3rd step: At the end of the project phase key informant interviews with the partner companies were done to find out which circumstances created positive impact.

**Results:** 1. Measurable indicators of expected learning outcomes were defined in regards of the goals of the stakeholders, especially taking into account legal specifications, professional policy and health care policy development.

2.a. Students reach the curricular objectives during the project work and strengthen the intended competencies of knowledge although they have less contact hours as the project work is done during the course.

2.b. In the main focus areas a positive outcome of the project work was appraised by the company. The level of goal achievement within the companies in most items was as or more than expected.

3. The project is most effective for partner companies if the project goals are well defined and if participants are informed about planned measures in advance.

**Conclusions:** Measurement of learning outcomes leads to more accurate results when it is done by stakeholders rather than grading the achievements is done by teachers only. Students feel more responsible for their learning outcomes than in courses with traditional learning settings. When they have applied their acquired skills in occupational areas they have proved their professional competencies for their potential employers as well. The analysis of the learning outcomes by the teacher lacks objectiveness. Teacher and author of the survey are identical which can be counted as weakness. On the other hand the strength of the survey is the long period of 6 years with in total more than 200 students being involved.

**Perspective:** The next coming step is the definition of learning outcome-deficiency including prospective relevant learning outcomes. It follows the distinction between deficiencies which have to be reduced by the university and deficiencies which have to be reduced before entering higher education system. This step should be followed by identifying of didactical and/or curricular measures for correction or extension of learning outcomes.

**Implications:** Measurement of learning outcomes by teachers and stakeholders can be improved when stakeholders are already involved in the development of the requested indicators. Measurement of Learning Outcomes includes correction and extension as a continuous process of goal and outcome evaluation.

## SESSION 18

(Platform Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 2**

Thursday, November 8, 2012

ROOM A.-1.04

14:55-16:10hrs

**18.002**

### **The use of the nominal group technique consensus development method for evaluation of learning, teaching and assessment**

**H. Gray, B. Bain, S. Shanmugam**

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**Purpose:** The aim of this special interest report was to appraise the use of the nominal group technique (NGT) as an adjunct method for the routine evaluation of the effectiveness of undergraduate and postgraduate teaching, learning and assessment in order to enhance student learning.

**Relevance:** Quality assurance mechanisms dictate that regular evaluation of academic programmes takes place. In the United Kingdom the Quality Assurance Agency's (QAA) Quality Code for Higher Education (QAA, 2011) emphasises the importance of routine monitoring in enabling education providers to consider the effectiveness of their programme in achieving its stated aims, and the success of students in attaining the intended learning outcomes. Some of the most common methods used to evaluate programmes include questionnaires and focus groups; however, these can suffer from poor response rates or lack of participant engagement. Therefore, it was considered important to appraise the effectiveness of an alternative method, the NGT.

**Description:** Three groups of second and third year undergraduate and one group of postgraduate physiotherapy students from one Scottish University were purposively sampled by the researchers. As recommended by NGT developers there were up to 6 students per group, with representation from male and female, standard and mature entrant students.

**Evaluation:** NGT for consensus development was used as a small group based exploratory research method (Delbecq & van de Ven, 1971). NGT has been shown to have advantages over other methodologies in generating more ideas, encouraging involvement of all participants, and preventing domination by individuals (Vella et al, 2000). During the nominal groups the students privately recorded their written responses to pre-determined questions on: self-directed learning; provision of feedback; teaching delivery; and suggestions for future module improvement. Once the lists of anonymised responses were generated and displayed to the participants for discussion, they then ranked their top five in each list. During the first half of each group students focussed on the difficulties or problems with the issue under discussion, and during the second half solutions to the problems were generated and ranked by the students.

**Conclusions:** NGT proved to be an informative and valuable method for the evaluation of learning, teaching and assessment. The students generated large numbers of ideas (ranging from 8-22) to the questions posed and suggested a wide range of potential solutions to problems. One advantage of NGT is the fact that the issues raised are ranked in terms of importance, thereby, providing teaching staff with a prioritised list of action points recommended by the students to enhance future programme developments. Future work following the results from NGT can include the design of bespoke, rather than generic, evaluation questionnaires using the ideas generated from the groups in order to evaluate the views of future students.

**Implications:** The use of NGT is recommended as a valuable method for the routine evaluation of learning, teaching and assessment in order to assist education providers in effective programme monitoring and strategic development for the purposes of enhancing student learning. NGT can also be used successfully for educational research purposes and physiotherapy service development.

## SESSION 18

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 2

Thursday, November 8, 2012

ROOM A.-1.04

14:55-16:10hrs

#### 18.003

### Facilitating change: the journey from QA to QE

**N. Paterson**

Chartered Society of Physiotherapy, London, United Kingdom

**Purpose:** This special report focuses on the implementation of these integrated principles coupled with the shift from assurance to enhancement. Contextual changes within the regulation of healthcare, education, legislation and policy, gave the profession the opportunity to examine its role within quality assurance & enhancement activity as part of its quinquennial review of its curriculum Framework and supporting QA guidance. This review coincided with a review the Profession's code of conduct and an 18 month project was undertaken to review & update this alongside the Curriculum Framework (2002), the Validation Procedures (2002) and the QA processes (2006).

**Relevance:** Changes to design & delivery of healthcare in the UK noted in 2002 continued apace & required the profession to leave behind a traditional model of employment culminating in the creation of 4 interconnected resources necessary to prepare entry level graduates for current and future professional practice. The resources give programmes the freedom to reflect the changing environment within which UK's Physiotherapists work, while enabling them to develop innovative educationally sound programmes.

**Description:** Participants were invited from within and without the profession's membership. Participant self selected. Representation came from clinical colleagues, managers, academics, practice educators, students, the professional body's staff, other Allied Health Professions, lay members, support workers. Participants came from all four countries.

**Evaluation:** A mixed approach was taken. This included - focus groups, literature reviews, desktop analysis of policy drivers & regulatory and professional requirements and expectations within the UK and comparable countries, online consultations, analysis of UK Physiotherapy provision, staff & member engagement through existing network structures e.g. committees, Boards, countries, regions, congress, & professional networks.

**Conclusions:** What has been achieved? The resources were released between 2010 & 2011. Because they were developed and shaped with and by the profession their introduction has been favourably received. (At the time of submission) Since their implementation 5 programmes have used the new documentation and a further 4 are in the process of using them.

These programmes are all demonstrating innovative learning, teaching & assessment approaches. This has been evidenced by the marked change within the submissions of examples of good practice presentations at the education forum. The programmes themselves are demonstrating a wide range of approaches to curriculum design and delivery but all are being commended by clinical colleagues and external bodies for their commitment to growing graduates who are fit for purpose. The number of education representatives has increased by 48% within a year without the need to advertise. The CSP's approach has been cited in all cases as the reason for applying for the role. 94.11% colleagues requested another term on the quality assurance and enhancement group, while those applying to take up vacant positions has increased by 80% Work is ongoing and still needs to be embedded further. As the approach becomes more transparent and integrated we'd hope to be able to evaluate student, new graduate, clinical colleagues & service users' perspectives.

**Implications:** The change has had implications for staff roles within the CSP. It has forced collaboration between CPD & QA activity, recognising that they are two sides of the learning & development coin. It has strengthened the strong connections between the professional body & UK Universities It has helped embed the CSP education representative role as a vital critical friend.

The accreditation events now take a more constructive, empowering approach. The discussions are peer to peer with the emphasis on encouraging & promoting innovation & sharing of good practice.

## SESSION 18

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 2

Thursday, November 8, 2012

ROOM A.-1.04

14:55-16:10hrs

18.004

### Assessing underperformance of physiotherapy students on clinical placement: The dilemmas of practice educators

F. E. Roberts<sup>1</sup>, J. Cleland<sup>2</sup>

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**Purpose:** Determining fitness for practice in the healthcare professions involves students fulfilling theoretical, clinical and professional criteria as laid down by the relevant professional body and interpreted by each individual educational institution providing pre-registration education. The objective of these criteria is to ensure safe practice: the progress of weak students to independent practice in any healthcare profession has clear implications for patient care and safety.

Difficulty in assessing students' clinical performance, however, is an issue in the training of all healthcare professionals who undergo a combined theoretical and practical professional training. The area of assessing physiotherapy students on clinical placements has received relatively little attention. Anecdotal data from physiotherapy suggests the issues in assessment on clinical placement are similar to those in medical education. To the best of our knowledge, there have been no explorations of placement supervisor attitudes, cognitions and beliefs about reporting physiotherapy student underperformance – in other words, failing students. While there may be similarities, findings from other healthcare professions cannot be directly transferred to physiotherapy. Therefore, this study aimed to answer the research question: are there barriers to clinical educators accurately reporting underperformance in Physiotherapy students?

**Relevance:** Supporting practice educators who provide student placements is a key role of Physiotherapy academics. It is essential to ensure the correct decisions are being made to protect the public but also the student. Information on practice educators decision making on student performance is important to ensure that the correct support and training is provided to ensure practice educators can undertake their role effectively.

**Participants:** Twenty five practice educators from each of four physiotherapy services across three major cities in Scotland were invited to participate. A total of 43 educators participate in 5 focus groups. All educators took BSc(Hons) and MSc Pre-registration students and educators on one site took students from 3 different physiotherapy programmes. Participants had all either supervised or co-supervised at least one student on placement.

**Methods:** To make sense of potentially many factors associated with reporting student underperformance, we selected the integrative model of behavioural prediction to underpin qualitative data collection and analysis. The topics covered (in reference to passing or failing students) included: individual student factors influencing decision making; perceived social pressures; norms; environmental forces; required skills and abilities deemed necessary; knowledge of outcomes and procedures to fail a low achieving student.

**Analysis:** The focus group discussions were taped, transcribed verbatim and anonymised. Two focus group transcripts were selected for initial analysis and each analysed independently by the authors. One used a completely inductive data-driven approach and the other used Fishbein's integrative model of behavioural prediction to guide their analyses.

The authors then met to discuss these initial independent analyses, to compare, contrast and negotiate themes and sub-themes. This process led to the development of a full coding framework, then used to code all of the transcripts.

**Results:** Using theory-driven analysis, we identified six main themes relevant to the integrative model of behavioural prediction which are involved in making decisions to fail underperforming students. These are: tutor attitudes towards an individual student, attitudes towards failing a student, normative beliefs and motivation to comply, efficacy beliefs (self-efficacy), skills and knowledge, and environmental support and constraints.

**Conclusions:** Many different factors act on physiotherapy educators' reporting of underperformance in students. However, an overarching focus on »the bigger picture« of patient safety, protecting the public and the reputation of their profession facilitates accurate reporting. These findings will be discussed in relation to previously published data from medical and other health and social care professions. They will also be discussed in how they can help support new practice educators.

**Implications:** The results from this study show the factors influencing the decision making of physiotherapy practice educators when dealing with a 'struggling student'. This can help inform ongoing training for practice educators and also inform University educators about aspects they need to consider when supporting practice educators in such situations.

## SESSION 18

(Platform Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 2

Thursday, November 8, 2012

ROOM A.-1.04

14:55-16:10hrs

#### 18.005

### Portfolio – a tool to support students' learning process

P. Baschung<sup>1</sup>, A. M. Hegewald<sup>2</sup>, K. Niedermann<sup>2</sup>

<sup>1</sup>Zurich University of Applied Sciences, Winterthur, Switzerland, <sup>2</sup>Zurich University of Applied Sciences, Winterthur, Switzerland

**Purpose:** The main purpose of this presentation is to demonstrate how portfolio work supports students in attaining the final competences of the Master of Science in Physiotherapy (MScPT) programme and in fostering the learning process.

**Relevance:** Bologna reforms have induced a shift from teaching to learning, thus requiring higher education not only to provide good teaching, but also to support students' learning processes. In such a concept, students are motivated to develop, reflect and evaluate their own learning strategies. Portfolio work is a tool to support the learning process and helps students to link knowledge and skills acquisition to the final competences of the programme.

**Description:** The MScPT programme at the Zurich University of Applied Sciences (UAS Zurich) is a part-time programme over 6 semesters and aims at qualifying physiotherapists for tasks in research and evidence-based physiotherapy development. The seven CanMEDS Roles for health professionals, defined as Expert, Communicator, Collaborator, Health Advocate, Manager, Scholar and Professional, are applied and linked both to the objectives of the modules and to the final competences of the MScPT programme. Two internships of 10 weeks each, during the 3rd and 4th semesters, one in a research setting, one in a physiotherapy development setting, form part of the MSc curriculum to ensure the transfer of study content into practical application. Students work under the supervision of the institution hosting the internship, following individual objectives. Additionally, in order to support the learning process throughout the internship, portfolio work is applied. During the 10-week internship, students have three meetings with a personal mentor. In the first meeting, students analyse the degree of their current fulfilment of the final competences on a 4-point scale (from 0 = not at all fulfilled, to 3 = completely fulfilled) and also define in which of the CanMED Roles they would like to enhance their competences. Depending on the outcome of this analysis and their individual internship objectives and guided by their mentor, they indicate their expectations of the internship, support needs and develop an action plan. Between the meetings (weeks 5 and 10), students implement their planned actions, collect documents to record their learning strategies and reflect on their new knowledge and skills. In the second and third meetings, student and mentor (re-)assess the progress in the attainment of the final competences and discuss possible barriers and facilitators, individual strengths and weaknesses and their learning and development process. If necessary, the action plan is adapted. The assessments of the progression in the attainment of the final competences are depicted graphically. This graphical representation further stimulates the students to reflect and discuss their deficits and to think about strategies for improvement. The conversations between student and mentor are confidential and the content of the portfolio work is not part of the student's performance record.

**Implications:** Portfolio is a powerful tool in helping students to reflect on their acquired knowledge and new skills, to externalize their expectations of the internship and their support needs and to recognise their strengths and weaknesses, thus supporting students in their learning and development process. On a structural level, it is also in the interests of the MSc programme and the internship institution to assess the attainment of the final competences and to monitor their progress throughout the internship. In future, portfolio work may also be applied during the whole MScPT programme and could help to relate the student's learning process explicitly to the final competences.

## SESSION 20

### WCPT Session

Thursday, November 8, 2012

ROOM Festsaal

16:40-17:45hrs

### 20.001

### WCPT: Why international policies on education are important - Making a difference globally

T. Bury<sup>1</sup>, J. D. Mothabeng<sup>2</sup>, M. Skinner<sup>3</sup>, E. Stokes<sup>4</sup>, M. Moffat<sup>5</sup>

1WCPT, London, United Kingdom, 2University of Pretoria, Pretoria, South Africa, 3, New Zealand, 4, Ireland, 5New York, USA

#### Learning objectives

At the end of the session participants will have:

1. An understanding of WCPT's education-related policies and guidelines.
2. An awareness of global initiatives to support the development of educational standards.
3. An understanding of how the profession can develop and be supported in emerging locations.
4. Knowledge of how WCPT's policies are being implemented to influence national policy.
5. Contributed ideas on future areas of activities and shared experiences.

#### Purpose

This session is designed to bring together representatives of the WCPT Executive Committee and secretariat to discuss with delegates the Confederation's policies and activities in the area of education. It will provide the opportunity to explore how policies are used internationally and the range of activities and resources WCPT has to support the development of education within the profession. It will also provide WCPT with the opportunity to hear from delegates of their experiences of using the materials and ideas for future activities.

#### Description

WCPT aims to encourage high standards of physical therapy education, practice and research; encourage the development and promote the strength of national organisations of physical therapists; encourage communication and exchange of information across the physical therapy profession and represent physical therapy internationally. These resonate with the overall congress theme of Advancing the Professional Profile, with WCPT policies and guidelines in all of the five programme strands.

A core function of WCPT is the development and dissemination of policies and supporting resources such as guidelines. WCPT's policies set out its agreed stance or opinion on a range of topics. They are important tools for informing health and social policy around the world, and furthering the development of the profession and service delivery. WCPT has a portfolio of policies relevant to education and practice that have been recognised and used internationally.

This session will introduce delegates to the work of WCPT, drawing on practical examples of how its policies and guidelines can make a difference at a national and local level.

## SESSION 21

(Symposium)

### **Symposium 2**

Friday, November 9, 2012

ROOM Festsaal

09:00-09:45hrs

#### **21.001**

### **Developing quality assurance in education**

**C. Wikström-Grotell, V. Webster**

#### **Learning Objective:**

1. To discuss how the integrated systems of Universities, Regulating Bodies and Professional Organisations can not only assure quality but enhance the provision of Physiotherapy Education in both academic and clinical settings.
2. To describe different ranking concepts regarding the improvement of quality and transparency of Physiotherapy education at European level.
3. To describe the Ö-Cert (AT Cert) as a transparent and cost effective quality assurance strategy for adult education in Austria.

#### **Description:**

Prof. Valerie Webster from Glasgow Caledonian University in Scotland will describe how University, Regulating Body and Professional Organisations have fundamental roles in not only assuring the quality of Physiotherapy Education but in enhancing the quality of provision in both academic and clinical settings. Examples from practice will illustrate how embedding quality assurance and enhancement systems can foster professional development, identify and manage Fitness to Practice, raise standards, assures fairness and allows others to have confidence in the capabilities of those students who successfully complete quality assured educational programmes.

Assistant Prof., Vice Rector Camilla Wikström-Grotell from Arcada University of Applied Sciences in Finland will discuss ranking concepts which have been included on the European higher education arena in recent years, informed by ENQA's (European Association for Quality Assurance in Higher Education) agenda on quality and transparency. The European modernization agenda focuses on U-mapping as a classification for mapping the European higher education landscape. The main points in different concepts for ranking as well as the importance of internationally based evaluation processes will be presented alongside some examples.

## SESSION 22

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 3**

Friday, November 9, 2012

ROOM C.E.02

09:55-10:40hrs

22.001

### The profile of lecturers at the physiotherapy studies at university of applied studies in Zagreb

**L. Jakus, G. Grozdek-Covcic, I. Klaić, M. Znika**

University of Applied Health Studies, Zagreb, Croatia

**Purpose:** The goal of this paper is to present professional profile of the lecturer's that are participating in the curriculum implementation at the University of applied studies in Zagreb.

**Relevance:** Specific lecturer's profile is required due to compliance with basic standards in physiotherapy education given by World confederation for physical therapy, and evaluation of physiotherapy education on international and on national level.

**Participants:** The data is gathered from undergraduate curriculum study of physiotherapy and form annual plan for engagement of the lecturers that are implementing content of the program. The subjects in the curriculum were grouped in 5 groups combining related content: 1- physiotherapy and science of movement, 2- basic sciences, 3- clinical medicine, 4- social – humanistic science, 5- the others scientific content. The total number of lecturers that participate in program implementation was determined, and the number of lectures divided in groups based on instructional content. The data were analyzed concerning the kind of lecturer's education and the level of their education.

**Methods:** Basic descriptive statistic method

**Analysis:** It was determined that the most of the classes at the undergraduate studies were performed by lecturers physiotherapist 61%, 20% by physicians, 9% by psychologists, 3% by kineziologist, 3% by natural science, 2% by nurses, 2% by different experts.

**Results:** In the field of physiotherapy and science of movement the classes are performed by 88 lecturers in total: 7% by physician specialists (pulsologist, physical medicine and rehabilitation), 2% by kineziologists and 92% by physiotherapists with appropriate educational level. Of all physiotherapists that participate in this part of program 63% of physiotherapists have three year physiotherapy university education, 20% physiotherapists have five year physiotherapy university education, and 9% have completed related university study (special education or kinesiology).

In this paper we are showing the detailed further staff analysis by the other specific content groups.

**Conclusions:** The physiotherapy profession is dominant in program realization; the physicians are participating in smaller quantity followed by psychological profession and in significantly smaller amount by other professions. The structure of lecturers is by it's representation in accordance with specific curriculum content, and we can say that it is in accordance with fundamental international standards in physiotherapists education. The analysis of lecturers in professionally narrow field of physiotherapy and science of movement is particularly important, where 92% of classes are being carried out by physiotherapists with appropriate level of education, 63% physiotherapist with three year physiotherapy university education, 20% physiotherapists with five year physiotherapy university education, and 9% with completed related university study (special education or kinesiology).

It is particularly important to take under consideration the growing number of lecturers physiotherapists with completed five year study that are gaining lectureship in formal high educational system in the Republic of Croatia and are becoming potential carriers for future development of physiotherapist's education from bachelor degree and master degree. This structure should be supported and allowed further development in physiotherapist's education in the direction of clinical progress, and though out appropriate legislation should proceeded in to the direction of participating in educational process and in scientific research

**Implications:** Necessiti to involve teaching staff in the shift from the diploma to the deegree level qualifications.



## SESSION 22

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 3**

Friday, November 9, 2012

ROOM C.E.02

09:55-10:40hrs

**22.002**

### **A compulsory web-based course in supervision for 13 specializations in physiotherapy, Norway**

**M. Aars**

University of Tromsøe, , Norway

**Purpose:** The Norwegian Association for Physiotherapists is in the process of planning a web-based course in supervision for future specialists. As we recognize competencies in this area as an important aspect of carrying out the role of a specialist when cooperating with patients, guiding colleagues, supervise students etc., we have made such a course compulsory in the education of specialists. It was decided that the new course should be web-based to be accessible for everybody.

**Relevance:** This particular web-based course and the choices involved in the design of the course, is relevant for others that are involved in education for specialization, because: 1) Web-based solutions in education are increasing, and challenges our conceptions of learning, education and professional development. 2) Specialization is about individual development, but also involves collaborative learning and co-construction of knowledge and 3) The web has possibilities for building a community of learners and reflective physiotherapists.

**Description:** The course is still in the process of planning, and will be launched late autumn 2012. Clinical specialists who are familiar with the tasks and responsibilities of future specialists as well as experienced supervisors within physiotherapy, are involved in the planning process. The design and content of the course build upon theories like social constructivist theory, gestalt therapy, apprentice-ship theory and reflective practice theory.

The course implies a workload of approximately 24 hours, and runs over a period of 10 weeks. Up to 20 participants could be taken in at the same time, divided into groups of 5-7, each group with a facilitator/tutor.

The course is planned to consist of 5 themes: 1. Socializing in a learning community online, 2. Learning as a personal road of discovery, 3. When apprenticeship -learning might be relevant, 4. Reflection-upon-action, 5. Flexible use of supervision strategies according to the needs of the learner. Each of the themes will start with a synchronous meeting of 1-2 hours, with an introduction and possibilities for questions, concerns and discussions of relevant topics on-the-spot. The video-based meeting also has the function of enhancing a feeling of belonging in the community.

The web-based learning environment to operate within between meetings, is based on Google Sites and the use of free Google technology. It consists of repositories for resources as videos and articles/texts, discussion board and wikis. To each theme there will be a »trigger« which is a video or a picture from supervision situations. The participants have to work on assignments individually and in collaboration with others, where they describe and discuss their own experiences in relation to the trigger and different theoretical perspectives. Feedback is given by tutor and/or peers. A leading idea throughout the course will be that learning is about discovery, and that the specialists-to-be already have experiences that can be transformed to learning if they are explored and challenged by course material and assignments, in an atmosphere of support and friendly/healthy skepticism.

Most of the participants work will be by the use of asynchronous tools. These have learning benefits by being medium for formulating and exchanging ideas, as well as negotiating and co-construction of knowledge. The written format implies transparency and sustainability, and enhances discoveries that could make a difference to the practice of supervision. It also account for the flexibility of the course, which in itself is found valuable to many.

**Evaluation:** When one course is finished, the participants will answer a questionnaire about their own learning outcomes and - learning experience, as well as evaluate the course content, course assignments and working methods. Did the course actually develop skills as a supervisor, and did we succeed in building a learning community? As two parallel systems for qualifying as a specialist will run until December 2015, we will also set up a comparative study between a group of specialists which have had the course and a group of specialists that have not, to investigate possible differences when it comes to how they conceive themselves in the role of supervisor.

**Conclusions:** The course is still under planning and therefore conclusions regarding the development could hardly be drawn at this time, but some preliminary results might be presented during the conference.

**Implications:** Too early

## SESSION 22

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 3

Friday, November 9, 2012

ROOM C.E.02

09:55-10:40hrs

22.003

### Sports physical therapists' profile and the need for specialization in Greece

E. Kapreli<sup>1</sup>, M. Kourti<sup>1</sup>, S. Athanasopoulos<sup>2</sup>, N. Strimpakos<sup>1</sup>

<sup>1</sup>TEI LAMIAS, Lamia, Greece, <sup>2</sup>National and Kapodistrian University of Athens, Athens, Greece

**Purpose:** The main purpose of the study was to determine the profile and role of sports Physical Therapists in Greece and to investigate their needs for the construction of a specialization program according to International Federation of Sports Physical Therapy (IFSPT) guidelines.

**Relevance:** Sports Physical Therapy is a specialized practice requiring both theoretical and practical evidence-based training. Up to date, there is not uniformity in sport physical therapy education and services around the world. Last decade, efforts have been made, through the IFSP, to promote and facilitate the development of internationally recognized educational programs for sports specialization. Aim of the current study was to explore the specific national requirements for the development of such a program in Greece.

**Participants:** 222 sports physical therapists were identified by the records of Panhellenic Physiotherapists Association all over Greece using a stratified sampling method, and questionnaires were posted or emailed. Thirty seven completed questionnaires were analyzed, representing 17% of the questionnaires sent. The majority were male (n = 29, 85.3%); mean age was 37.1 years old (SD= 9.6); mean experience was 9.35 years of practice (SD= 8.42).

**Methods:** A specific questionnaire was constructed by employing a focus group of specialists on sport physiotherapy concerning the demographic characteristics of the respondents, their professional role and experience, their level of expertise (academic degrees and seminars) and knowledge update through clinical scenarios as well as their specific needs and demands in order to attend successfully a proposed educational specialized program.

**Analysis:** Descriptive statistics and proportions were calculated using the SPSS 19.0 software.

**Results:** According to the results, most of the sports physical therapists had a good scientific level, proved by the clinical scenarios answered and their specialized qualifications. However, support, training and expertise were also found to be required, as most correspondents were not satisfied with their evidence-based practice, salary and professional status. Moreover, most physical therapists noted that all IFSPT competencies are essential and comprehensive for a sport specialization program. Lastly, more than 85% of the correspondents seem to prefer an e-learning program with flexible dates instead of a rigorous face to face learning method for this purpose.

**Conclusions:** Greek sports physical therapists acknowledge the need for specialization and Continuous Professional Development (CPD) on that area. The current exploratory study determined the specific needs have to be considered in order an educational evidence-based program to be applied successfully in the future.

**Implications:** Sports physical therapy specialization is very important for a valid therapeutic approach of the physically-active individual. Any educational specialized program have not only to meet international requirements but also to be feasible and accepted at national level.

## SESSION 22

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 3**

Friday, November 9, 2012

ROOM C.E.02

09:55-10:40hrs

**22.004**

### **The system of postgraduate studies for physiotherapists in Poland - specialization in the field of physiotherapy**

**J. Szczegielniak<sup>1</sup>, J. Luniewski<sup>1</sup>, J. Sobon<sup>1</sup>, Z. Sliwinski<sup>2</sup>**

<sup>1</sup>Opole University of Technology, Opole, Poland, <sup>2</sup>UJK University, Kielce, Poland

**Purpose:** The aim of this work is to present the system of postgraduate studies for physiotherapists in Poland.

**Relevance:** Specialization in the field of physiotherapy was introduced by the Minister of Health bill of 2007 and is meant to introduce physiotherapists to conducting and supervising complex physiotherapy. The main aim of such postgraduate courses is to expand knowledge and improve practical skills, develop adequate personality features necessary to order and carry out complex physiotherapy. Additionally, the aim of specialization courses is to teach skills necessary to hold managerial and supervisory positions in Health Services.

Achieved qualifications enable the holders to conduct therapeutic and profilactic activity including ordering, managing and supervising the process of physiotherapy as well as promoting healthy lifestyle.

**Description:** The specialization course lasts 4 years and involves theoretical education (570 teaching hours), development of practical skills - specialist internship (875 teaching hours) and specialist internship in chosen therapy methods (238 teaching hours). Throughout the course, the candidates serve general internship of 3200 hours of practical work in accordance with specialization curriculum. Specialization courses finish with a national exam and awarding the title of Physiotherapy Specialist.

**Evaluation:** The system of education for specialists is organised in 31 accredited institutions registered with the Ministry of Health. Currently, the total number of course participants is 305. Due to significant interest in the possibility of specialising in physiotherapy there is a need to further increase the number of institutions accredited to conduct the courses.

**Conclusions:** Since 2007 to date, 182 physiotherapists have passed the specialization exam and been awarded the title of Physiotherapy Specialists.

**Implications:** The presentation of the system of specialization courses for physiotherapists in Poland might give a significant impulse to a discussion on the form of physiotherapy for postgraduate studies across Europe.

## SESSION 22

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 3**

Friday, November 9, 2012

ROOM C.E.02

09:55-10:40hrs

**22.005**

### **Progress in collaboration - Early experiences of progress test development in collaboration with students, teachers, and clinical professionals**

**E. Horneij, J. Unge, E. Holmström, C. Gummesson**

Lund, Sweden

**Purpose:** The purpose of this presentation is to describe our experiences of the interactive process of progress test development in collaboration with students, teachers, and clinical professionals. The progress test development was urged from the need of a reliable way to ensure progress in education. We wanted to create a collaborative environment and encourage the students to reflect on what they perceived as being important in the courses and take active part in the creation of exam questions.

**Relevance:** Examinations and assessments are important parts of education. Within topics where a progression is intended, it is important for students and teachers to be able to follow the actual progress. A question bank leading to a progress test can also be useful for self-test assessment, in a course for introduction or repetition, to identify knowledge gaps. Within the area Work Environment and Health new courses for continuing education were developed as part of post graduate education. This raised the importance of identifying and bridging between the diversity in pre-knowledge and pre-understanding of the course content.

Exam questions are usually created by the teachers within a course. However, students often create questions by themselves informally as part of their learning and exam preparation. Potentially this work could be developed in a collaborative structured process.

**Description:** To meet the challenge of examining progress, questions from a bank of exam questions within a wide range of topics could be developed. This could be meaningful both for undergraduate and graduate students within the topic, here Work Environment and Health.

Questions and responses were developed in a step-wise procedure. Initially students at undergraduate- and graduate level within courses in Work Environment and Health were invited to participate. The instructions were A) 'create questions that you think your peers should be able to respond to after completing this course' B) 'respond to the questions written by your peers and comment on them'. During this step, questions were created by undergraduate students and by physiotherapists participating in continuing education. In the next step teachers and content experts (researchers) were invited to review and create new questions within areas that were not highlighted in the student-created questions. In the following step, students in an undergraduate course were invited to respond to the questions, as a progress test, the first and last week during a course.

**Evaluation:** Student experiences were followed up in the course evaluation.

**Conclusions:** Our experiences and early results of this working process will be presented. We believe our results and experiences may be useful also for other topics within physiotherapy education.

**Implications:** Progress test may be one way of highlighting and linking science and practice in a structured way during courses. This may support our professional development and enhance evidence informed practice.

## SESSION 23

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 4**

Friday, November 9, 2012

ROOM A.-1.02

09:55-10:40hrs

**23.001**

### **Physiotherapists knowledge about the ICF – Contribute to cross-cultural adaptation and validation of a Portuguese version of Knowledge about the ICF Questionnaire**

**R. Alves, L. Jacobsohn, I. Oliveira**

Atlantic University, Colares, Portugal

**Purpose:** To characterize the knowledge of Physiotherapists about the ICF through a Portuguese, valid and reliable version of the KIQ.

**Relevance:** The ICF has a clinical relevance for physiotherapists to optimize the communication in a multidisciplinary rehabilitation approach. The education and training are some of the major steps to develop the implementation of the ICF in the clinic setting. The WHO developed a web-based education tool for the ICF where is inserted the Knowledge about the ICF Questionnaire(KIQ).

**Participants:** The reliability and validity of the KIQ were assessed in a total of seventy-five Portuguese health professionals. The level of the knowledge about ICF was analyzed in a sample of twenty-eight Portuguese physiotherapists.

**Methods:** The cross-cultural adaptation was performed according to internationally recommended European Group on Health Outcomes guidelines, using the following steps: translation; back-translation; committee review, and pretesting.

**Analysis:** Descriptive and inferential statistics was performed (Cronbach's alpha and One-way ANOVA test) with SPSS Statistics 17.0.

**Results:** The KIQ was considered a valid and reliable instrument (Cronbach's alpha of 0.89). In the sample of physiotherapists, 89.3% knew about the ICF classification, in which 68% had a level of knowledge about ICF between medium and good (an average of 17.5 points to a maximum of 35 points). Through One-way ANOVA test it was verified that physiotherapists who use the ICF in clinical practice (62.5%) had a higher level of knowledge about this classification ( $p < 0.05$ ).

**Conclusions:** The reliability and validity of the Portuguese version of the KIQ were proved. The questionnaire can be recommended for use in future clinical settings. The results are an added value to implementation of the ICF in Physiotherapy.

**Implications:** Actual, valid and reliable tool to assess physiotherapists knowledge about the ICF. Facilitate the implementation of the ICF in clinical settings.

## SESSION 23

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 4

Friday, November 9, 2012

ROOM A.-1.02

09:55-10:40hrs

23.002

### The use of a conversational framework to teach and evaluate students' understanding of the International Classification of functioning, disability and health (ICF) in the classroom and in practice

C. Joseph

University of the Western Cape, Cape Town, South Africa, South Africa

**Purpose:** In physiotherapy, specifically clinical practice, students are often required to apply a conceptual model of disability (ICF) to externalise their understanding of the holistic human experiences faced by patients with physical- and mental health conditions. Students prefer to compartmentalise information on different subject matters, whereas the profession challenges them to identify the interrelationship between two domains of knowledge (for example, analyzing the consequences of a health condition within the ICF framework) in order to devise an appropriate management plan. Third and fourth year physiotherapy students have been found to poorly conceptualise the use of the ICF in clinical practice and failed to provide holistic management for their patients. Therefore, the aim/purpose of this study is to assess whether Laurillard's conversational framework can be used to facilitate students' ability to apply the ICF when analysing the unique context and consequences of any health condition.

**Relevance:** The International Classification of Functioning, Disability and Health has been accepted globally as the standard language for the description of health and disability. Most physiotherapy schools have adopted this conceptual model and embedded it into the curriculum. Even literature indicated that clinicians and researchers experience difficulties using this model to illuminate the total influence of a health condition on the functioning of patients. Therefore, it is important to equip students in order to develop a sound understanding of this framework.

**Participants:** The participants included all 54 second year physiotherapy students registered for 2011. All students were required to complete the assessment tasks for grading. Written informed consent was obtained from students with regard to the use of their information for research purposes. All students consented.

**Methods:** Both quantitative and qualitative research approaches were utilised. Laurillard's framework was used to guide teaching and measure learning, whereas the assessment tasks, which included concept mapping and document analysis was used to evaluate learning at each stage. The individual concept maps were analysed both quantitatively and qualitatively, using Kinchin's valid and reliable assessment rubric for concept maps. The document review (student assessment forms) made use of a thematic guide, using the domains of the ICF as the constructs of measurement and were analysed quantitatively.

**Analysis:** The concept maps were analysed qualitatively using the assessment rubric and quantitatively in order to determine the frequency of students demonstrating deep-, superficial and non-learning. Refer to the methodology section.

**Results:** Individual concept maps on the ICF and the consequences of health conditions as separate entities of knowledge demonstrated a higher percentage of deep and meaningful learning, with less concept maps demonstrating non- and superficial learning. Concept maps which required students to demonstrate the relationship between the two entities of knowledge and concepts, only one-third demonstrated sound identification of relationships between concepts from different knowledge entities. The remaining concept maps demonstrated misconceptions and gaps in students' knowledge, which could be the reason for superficial and non-learning. The document review highlighted students' ability to analyse patients' health condition using the ICF as the reference framework with few anomalies and misconceptions. However, the analysis of the unique context of the patient is poorly understood.

**Conclusions:** The use of a conversational framework can be utilised to teach complex concepts which will improve students' ability to holistically manage patients in the real-life situation. This study explored the consequences of neurological conditions, which is different in pathology and manifestations comparing to other health conditions. Therefore, other health conditions should also be explored in order to obtain a holistic picture of students' abilities in managing a diverse population.

**Implications:** The holistic management of patients is the core of the physiotherapy profession. This paper demonstrated the use of a conversational framework to achieve deep learning in students' understanding of the ICF, which could result in the improved holistic management of patients.

## SESSION 23

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 4

Friday, November 9, 2012

ROOM A.-1.02

09:55-10:40hrs

23.003

### The »Health Profile«: a didactic tool for clinical reasoning

D. Beckwée, M. Cnudde, T. Rotsaert, E. Kerckhofs, P. Vaes

Vrije Universiteit Brussel, Brussels, Belgium

**Purpose:** In this study, the usability and the clinical impact of the "Health Profile" (HP), a didactic tool, was tested in a group of physical therapists.

**Relevance:** Physiotherapy students of the Vrije Universiteit Brussel are trained to acquire the clinical reasoning competence by using the HP. This tool is introduced in their first year of their training and is used to diagnose virtual and real patients during their 5 year curriculum. HP is a 13-step didactic tool that helps to structure the clinical interview in order to obtain the necessary information concerning the patient's health status. It encompasses several conceptual models like the International Classification of Functioning, Disability and Health (ICF) and the importance of the patient's participation in establishing treatment goals. It is not known if HP has an added value for graduated physiotherapists (PT).

**Participants:** Members of two Belgian local therapist organizations were contacted by e-mail to participate in this study. Interested PTs were invited to a workshop.

**Methods:** First, therapists were asked to read a case study and consequently answer questions relating to the patient's examination, prognosis and treatment goals. Second, subjects were informed about the HP and its conceptual models (e.g., International Classification of Functioning, Disability and Health), followed by a workshop in which they were trained to use the HP in a case study. Third, subjects were asked to use the HP in five new patients. Fourth, the subjects were asked to read a second case study and answer the same questions as before. Fifth, subjects were questioned about their experience with the HP and their knowledge of ICF dimensions by using a semi-structured interview.

**Analysis:** The answers to the case study analyses were evaluated by two independent researchers. They used a checklist to assess how many items of the HP were used in the answers to the questions. The interviews were analyzed and keywords for positive and negative comments on the HP were listed. Every comment was then assigned to a keyword. The number of reports that were in accordance to a keyword were provided as percentages of the total number of subjects.

**Results:** Twenty-six physical therapists were included in this study. Six of them were graduated within the last 10 years. No significant difference was found between the scores of both case studies. The interview revealed that the majority of therapists have a limited knowledge of the Dutch ICF-dimensions for body functions and structure, activity, personal factors and environmental factors. However, all therapists that graduated within the last 10 years defined these dimensions correctly and 67% of them indicated that they apply ICF into their clinical reasoning (vs 37% of older therapists of whom 11% use ICF). Therapists found that the HP is user-friendly (68%), that it contributes to a more profound description of the health status (70%) and that it is an acceptable time investment (80%). However, most therapists are convinced that HP does not influence the physical examination (85%). A small fraction indicate that HP changes the way of clinical handling (27%) and that it influences treatment goals (19%).

**Conclusions:** In contrast to older therapist, younger therapist have a better knowledge of ICF dimensions and implement them more frequently into practice. Older therapists are convinced that HP may help them to describe the patient's health problem but one workshop is not enough to reach significant progress in case analysis quality and to implement the HP into practice.

**Implications:** Other or more frequent teaching methods should be investigated so that PT, that are graduated for more than ten years, acquire good knowledge of HP and its underlying concepts.

## SESSION 23

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 4**

Friday, November 9, 2012

ROOM A.-1.02

09:55-10:40hrs

23.004

### **How can we plan to design digital learning spaces?**

**C. Gummesson, A. Gahnberg, E. Nordmark**

Lund, Sweden

**Purpose:** The purpose of this poster is to present results and experiences from a teacher course, about higher education pedagogy and design of digital learning spaces.

**Relevance:** Digital resources may facilitate students centered learning by use of diverse learning spaces. Activities such as peer feedback, reciprocal and creative learning experiences may facilitate learning and may well be arranged by use of digital resources as a blended learning environment. Digital resources can enhance diversity, be sustainable and globally used for collaboration among teachers and students. However, to be effective and promote learning the resources need to be integrated with the pedagogy and learning goals.

**Description:** To support teachers we developed a course with the purpose of supporting development of digital resources. One important principle was to have the students intended learning outcomes as the foundation for the planning of the digital resource. Each teacher then elaborated from their needs. In the course, each participant (i.e. lecturers, clinical teachers) worked through a structured plan, where a step by step plan was used. In the plan opportunities to use digital resources for an educational need was highlighted, as well as the connection to current evidence, laws and regulations such as diversity and plagiarism/copyright. Each project was further elaborated on by peer review. The course finish by a webinar where the course participants share their projects and experiences.

**Evaluation:** Examples and experiences from courses about digital resources and learning spaces for teachers in higher education will be shared.

**Conclusions:** Experiences and conclusions will be shared. A careful planning of the design for digital learning spaces may support both students and teachers.

**Implications:** Using digital resources are important competences in our society today. However, it is important to be strategic in planning of the use in education to meet the different goals of learning.



## SESSION 23

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 4

Friday, November 9, 2012

ROOM A.-1.02

09:55-10:40hrs

23.005

### Performance exams in physiotherapy

R. Wilke<sup>1</sup>, K. Schrader<sup>2</sup>

<sup>1</sup>Charité Berlin, Hohen Neuendorf Berlin, Germany, <sup>2</sup>SAfP, Berlin, Germany

**Purpose:** Scientific Background: During the last years, a change in physical therapy education in Germany has been initiated shifting the focus from professional expertise to vocational competence in decision-making. The changing focus on vocational competence requires the implementation of new exam types, one of which is the performance exam. This exam type follows professional situations and can test both practical and oral skills. It is the aim of the presented study to investigate how the performance exam and its evaluation should be designed for use in a physical therapy education institute in order to allow for an objective and reliable evaluation of a trainee's vocational skills.

**Relevance:** This study and the results could give the physical therapy education a well evaluated examination, which could set in the educational practice.

**Description:** Material and **Methods:** Following a thorough literature review, a performance exam was designed based on a guideline for nursing training by Bonse-Rohmann (2008). The preparation of the performance exam encompasses the compilation of a differentiated catalogue of expectations, the comprehensive description of the role of the simulation patient, scoring rubrics for evaluation, and the work assignment for the trainee. The performance exam was carried out with a class of the SAfP-Spektrum Academy for Physical Therapy in Berlin, Germany. Exemplarily, 3 students were filmed and afterwards evaluated by 14 teachers using a standardized scoring rubric. During a subsequent group discussion with the teachers, statements concerning the manageability of the scoring rubric and the general potential of the performance exam were recorded. In addition, an open questionnaire enabled the involved students to describe the examination situation from their perspective.

**Evaluation:** The collected data was analysed using descriptive statistics (Benninghaus, 2007) and methods of qualitative content analysis (Lamneck, 2005). For example, the evaluation results of all teachers were compared to allow for conclusions concerning the reliability of the performance exam. Furthermore, the results of the group discussion on the manageability of the scoring rubric and the applicability of the performance exam are pooled and structured.

**Results:** The complete results of the study are available in June 2012 and will be presented at the conference.

References: Bonse-Rohmann, M.; Hüntelmann, I.; Nauerth, A. (2008): Kompetenzorientiert Prüfen: Lern- und Leistungsüberprüfungen in der Pflegeausbildung. München: Elsevier Verlag

**Implications:** If we find out, that the performance exam are an objective and reliable exam, it could use and establish in the final physiotherapy examination.

## SESSION 24

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 5

Friday, November 9, 2012

ROOM A.-1.03

09:55-10:40hrs

24.002

### Student's perception of physiotherapy profession at beginning and end of the undergraduate study

U. Puh<sup>1</sup>, D. Tominc<sup>2</sup>, S. Hlebs<sup>1</sup>

<sup>1</sup>University of Ljubljana, Faculty of Health Sciences, Ljubljana, Slovenia, <sup>2</sup>University of Ljubljana, Faculty of Health Sciences, Ljubljana, Slovenia

**Purpose:** Purpose of the study was to identify and compare students' reasons to join the physiotherapy study and other characteristics of perception of physiotherapy profession between first and third (last) year students.

**Relevance:** Understanding the factors which influence the career preferences is of importance to policy makers, health care educators and other stake holders. Perception of some characteristics of the profession may differ between students at different timeline of study.

**Participants:** In the study, 94 first year students (mean age: 20.9 ± 2.5 years; females: 84 %) and 80 third year student (mean age: 22.3 ± 2.4 years; females: 81.3 %) participated.

**Methods:** An anonymous, self-administered questionnaire with multiple choices was distributed among the first and third year physiotherapy students in the generations 2010/11 and 2011/12.

**Analysis:** Descriptive statistics was calculated.

**Results:** The most important factor which contributed to selection of physiotherapy study in both groups was pleasure to work with people (1st year: 65.8 %; 3rd year: 65 %), following with reputation of the profession (1st year: 20.5 %; 3rd year: 26.2 %), earnings (1st year: 11.1%; 3rd year: 6.8 %), and family tradition (1st year: 2.6 %; 3rd year: 1.9 %). Students perceived the work of physiotherapist according to the characteristics as necessary (1st year: 100 %; 3rd year: 98.8 %), attractive (1st year: 89.4 %; 3rd year: 87.5 %), appreciated in Slovenia (1st year: 53.2 %; 3rd year: 40 %), and well paid (1st year: 39.7 %; 3rd year: 10.1%). However, proportions of undefined students were high for appreciation in the country (1st year: 28.7 %; 3rd year: 31.3 %) and payment (1st year: 43.6 %; 3rd year: 44.3 %). The most important life benefit that can be achieved with physiotherapist work, in students opinion was extensive knowledge of the individual (1st year: 90.4 %; 3rd year: 87.5 %), following with certain work (1st year: 71.3 %; 3rd year: 63.8 %), and reputation in society (1st year: 69.1 %; 3rd year: 60.1 %). Proportions of undefined students were high for certainty of work (1st year: 25.5 %; 3rd year: 28.7 %), and reputation in society (1st year: 23.4 %; 3rd year: 30.3 %).

**Conclusions:** Sequence of factors which contributed to selection of the study was similar between the first and the last year students, with pleasure to work with people being the most important. In all the characteristics of the profession first year students were more optimistic than third year students. To understand influences on the results, factorial analysis including gender, pre-education etc. would be necessary, and to study changes in perception along the study course, longitudinal study design would be relevant.

**Implications:** Educators should consider guidance of development the relevant professional identities through process of socialization in students as one of their mission. But, appreciation of the profession in country or reputation in society, certainty of work and good payment are challenges of physiotherapy profession as whole.

## SESSION 24

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 5**

Friday, November 9, 2012

ROOM A.-1.03

09:55-10:40hrs

**24.003**

### **Implementing European programs – creating platforms for innovation of physiotherapy education in formal, non-formal and informal learning**

**P. Beenen<sup>1</sup>, A. A. Lopes<sup>2</sup>, L. Noronen<sup>3</sup>**

1Universidade Catolica Portuguesa, Lisbon, Portugal, Portugal, 2ESSA, Alcabideche, Portugal, 3Helsinki Metropolia University of Applied Sciences, Helsinki, Finland

**Purpose:** In order to develop, physiotherapy should learn from the diverse quality in Europe and create platforms to share best practices and work in joint effort to innovate and increase the quality. The funding opportunities of the European commission are an underestimate mean to this goal.

**Relevance:** The European commission offers excellent opportunities to develop internationalization and facilitate innovation in education and physiotherapy through, for example, Intensive Programs of Erasmus or the Grundtvig program. The programs can bridge both nationalities and levels of education. The aim is to create lasting platforms for exchange between individual life long learners and between institutions and give an opportunity to use the international context to reflect critically on the own professional being. However the application and organization for a program can be haphazard and time consuming. In this presentation we cumulate 8 years of experiences to give an impression of the process, the pitfalls and success factors.

**Description:** The process starts with finding partners, set a topic for the course and the writing of the application. This process can be significantly more efficient using an online document management system, since the project stretch over a long period of time. Over the years applications got more complex and several international priorities and European policies need to be taken into account. The subject needs to be innovative, creating the opportunity to take time to step out the daily hassle of education and create a platform to think creatively and critically towards the future.

**Evaluation:** Because of the clear allocation of the work involved to the people with experience partners feel that they are not overwhelmed with procedural matters but can truly focus on the content of the project. This creates networks with continuous spin-offs in the form of lasting contact between partners. The success rate in application increased drastically, making these funding opportunities a good option.

**Conclusions:** The program and allocation of work need to be considered in order to develop a consistent and attainable program. We developed a guideline with success factors and barriers for the following steps; the application, the preparation, the event(s) and after the program, the dissemination, the implementation of improvements, the maintenance of the communication structures and the spin-offs in professional collaboration and products ensure a lasting benefit of the program. The guideline shows the necessity and examples for digital infrastructure and social networks to support the program.

**Implications:** Taking the offered reflections and ‘guideline’ by heart could help to create a successful and in our opinion highly valuable experience with a significant impact on the professional development of the participants and the curricula involved. We hope that this presentation will encourage colleagues to engage in programs and work more collectively towards high quality physiotherapy education.

## SESSION 24

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 5**

Friday, November 9, 2012

ROOM A.-1.03

09:55-10:40hrs

**24.004**

### **Building community through interprofessional practice during relief work in Haiti: an ethnographic study**

**S. G. Klappa<sup>1</sup>, R. Crocker<sup>2</sup>**

1St. Catherine University, Minneapolis, MN, USA, 2Ozarks Technical Community College, Springfield, MO, USA

**Purpose:** The purpose of this study was to explore the culture of short-term disaster relief work (RW) and ideas regarding social responsibility among health care professionals who volunteered in Haiti. Central research questions were: 1) Why volunteer in Haiti? 2) What was the most rewarding experience? 3) How do you define social responsibility?

**Relevance:** Physical therapists are a valuable member of disaster relief teams. Continuing professional development challenges physical therapists who are members of interprofessional DRW teams to work for a common purpose despite being from different nations during the crisis period of disasters.

**Participants:** Participants (n=45) represented a variety of health professions who had volunteered in Haiti after the earthquake of 2010. Health professionals included physicians, nurses, physical therapists, occupational therapists, physician assistants, physical therapist assistants, logistics workers, peacekeeping forces, and translators. A sample of convenience of health care providers who had served with the authors in Haiti was used.

**Methods:** Ethnographic methods used included data from interviews, focus groups, and journal reflections during five disaster relief work (DRW) experiences from three hospital sites in Haiti during 2010. A questionnaire was circulated to health care providers as further questions emerged.

**Analysis:** Interviews were digitally recorded and transcribed. Notes from focus groups were also recorded. Member checking was used to determine that the researchers had correctly transcribed interviews before data were analyzed. Stories and comments were collected and coded independently by the researchers for dominant themes across all written responses. Common themes were then grouped by profession and then analyzed across all professions.

**Results:** Participants were greatly affected by their DRW experiences. Some participants knew members of their cohort in Haiti; others knew no one until they arrived. In a period of 8 to 21 days, these professionals collaborated their expertise and community developed. Reasons volunteering in Haiti were well articulated by the participants. Participants recalled several experiences they classified as most rewarding. All participants were able to articulate a definition of social responsibility and how they live this core value on a personal, organizational, or societal level.

**Conclusions:** A sense of community developed with other healthcare providers from across the world. A desire to maintain personal, professional, or social connections with those whom the participants served in Haiti was also discussed.

Future studies might examine the effect of the DRW experience on Haitian health care provider nationals as they dealt with so many foreign health care providers during the relief efforts.

**Implications:** Disaster relief teams should consider including physical therapists. Strengths of this study included the fact that rapport and trust were built between the researchers and the study participants since the researchers were also disaster relief workers. Findings from this study were shared with the participants to determine if the authors had accurately interpreted their responses. Resonance rounds with other disaster relief workers who also participated in relief work in Haiti, but who were not interviewed in the study helped build trustworthiness and credibility in the data. Limitations include the fact that a sample of convenience was used so the responses may not be representative of all health care providers who have participated in DRW in Haiti and may not represent disaster situations in other parts of the world.

## SESSION 24

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 5**

Friday, November 9, 2012

ROOM A.-1.03

09:55-10:40hrs

**24.005**

### **Clinical placements for Spanish physiotherapy students in the new education framework**

**E. Segura-Ortí, J. Martez-Gramage, J. J. Amer-Cuenca**

Universidad CEU Cardenal Herrera, Moncada, Spain

**Purpose:** The purpose of this project is to present the differences between the old clinical placement organization and the new one developed once the Physiotherapy Degree in Spain has been adapted to the European Education Framework. We present how the changes have been undertaken at the Universidad CEU Cardenal Herrera, Valencia, Spain (UCH CEU). Changes on number of hours, clinical areas covered, evaluation procedures and teaching schedule are described, so as Knowledge, Skills and Competences covered by this subject.

**Relevance:** For the last two decades the Spanish Degree in Physiotherapy included 3 years of education at the University, but since 2008 a new definition of the Degree based on the European Education Framework increased the hours of teaching. The degree is nowadays a 4 years degree at the University. Most of the teaching hours added to the new degree are invested in clinical placements. It is then relevant to describe how this topic has changed from the old to the new Physiotherapy Degree in Spain.

**Description:** The old 3-year Physiotherapy Degree included two subjects (24 credits) of clinical placement, one at the second semester of the second year and another one at the first semester of the third year. The areas covered were random, so that not all students covered every area, and could include orthopedics in and out patients, neurology for adults and children and gerontology. The UCH CEU has followed this program for the last 10 years. The current 4-year Physiotherapy Degree includes two subjects (48 European Credit Transfer System) of clinical placement, at the first and second semester of the fourth year once the student has covered the theory and practice of all relevant clinical areas of Physiotherapy. Six relevant clinical areas are covered in this extended clinical placement: inpatients orthopedics, outpatients orthopedics, childhood neurology, adult neurology, cardio-respiratory care and other relevant visceral areas (urogynecology, renal care) and geriatric physiotherapy. Students will cover all areas during the whole fourth year. Evaluation will be based on knowledge, skills and competences that will be developed in each of the six areas by a group of physiotherapists clinically specialized in each of the areas and coordinated by a professor from the UCH CEU, so that the evaluation tool will be standardized for all students covering the same clinical area, and a strong collaboration between physiotherapists will be created.

**Evaluation:** The evaluation of the program at this stage has been undertaken by the physiotherapy unit of three different public and private hospitals at the region of Valencia. The satisfaction of professionals with the new program has been evaluated and is higher compared to the old program.

**Conclusions:** An increase in hours of teaching in clinical placement, in the variety of clinical areas covered, and the concentration of all them at the last year of the Physiotherapy Degree, added to the evaluation based in knowledge, skills and competences, results in increased satisfaction of Physiotherapists at the clinical centers.

**Implications:** The new clinical placement subject covers satisfactorily the clinical training of Spanish Physiotherapy students and improves the clinical profile of our students at the UCH CEU.

## SESSION 24

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 5

Friday, November 9, 2012

ROOM A.-1.03

09:55-10:40hrs

24.006

### Perceived learning styles and problem solving abilities amongst undergraduate physiotherapy students at a local university in South Africa

D. A. Hess<sup>1</sup>, J. Frantz<sup>1</sup>, C. Hendricks<sup>2</sup>

<sup>1</sup>University of the Western Cape, Cape Town, WC, South Africa, <sup>2</sup>University of Cape Town, Cape Town, South Africa

**Purpose:** The aim of the study is to identify the various learning styles and problem solving abilities of the physiotherapy students at a university in South Africa.

**Relevance:** Higher education institutions that offer physiotherapy undergraduate programmes aims to provide the best evidence-based knowledge and skills to students to produce efficient and competent health care practitioners in the future. Many students from diverse cultural backgrounds enroll into the physiotherapy programmes in South Africa which could become a challenge to educators as the students' learning styles differ. To be able to provide the best learning opportunities to these students, it would help to if educators had an understanding of the preferred learning styles and problem solving abilities of the students need to be identified

**Participants:** All physiotherapy undergraduate students registered at a university in South Africa for the 2012 academic year were invited to participate in the study. A total of 222 registered students -first year (n= 89); second year (n=47); third year (n=47) and fourth year (n=39)- were invited to participate in the study.

**Methods:** This study employed a quantitative, cross sectional research design. Three questionnaires were used to collect the data which included the Index of Learning Styles, the problem solving style questionnaire and the Learning Style Questionnaire. All of the questionnaires were valid and reliable. The problem solving skills questionnaire divides the student into one of four categories namely sensing, intuitive, feeling or thinking. In addition the learning styles questionnaire classifies the students into three possible groups namely visual learning style, auditory learning style and kinesthetic learning style.

**Analysis:** The data collected was captured and analyzed using The Statistical Package for Social Science (SPSS) version 19.0. Descriptive statistics was employed to summarize the frequencies of students in each learning style category and to determine whether the distribution of learning styles was different across the four years of the programme. The alpha level for these test will be at  $P < 0.05$ . Furthermore, inferential statistics was employed to compare learning styles scores across the four years of the programme and to analyze the association between learning styles and problem solving ability.

**Results:** A response rate of 60% was reported (n=133). Of the participants the majority were female (70%). Based on the results of the learning styles questionnaire the students were found to have visual and kinesthetic learning styles. Of the participants, 13% were auditory learners, 40% were visual learners and 47% were kinesthetic learners. In addition the problem solving skills questionnaire also indicated that the majority of the participants were categorised in the area of feeling and sensing. The feeling group constituted 47% of the sample, followed by the sensing group (23%), intuition group (20%) and finally the thinking group (10%). Linked to the index of learning styles most of the participants were either sensing (42%) or sequential learners (46%). There was not significant difference across year level ( $p > 0.05$ ) but there was a significant association between gender and learning styles ( $p < 0.05$ ).

**Conclusions:** Based on the three questionnaires used it was evident that the majority of the students learn by doing although facts are important to them. It thus becomes important for the students to make the connection to the real world from first year. Thus physiotherapy students will have difficulty with abstract and theoretical information and would learn better if the concepts are applied in practice.

**Implications:** Most undergraduate programmes introduce students to the clinical setting in their third and fourth year. Based on this results physiotherapy programmes would do well to consider introducing clinical practice from first year as students relate better to real world situations.

## SESSION 25

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 6**

Friday, November 9, 2012

ROOM C.E.18

09:55-10:40hrs

**25.001**

### **Adaptation and psychometric properties of the Oregon Vocational Interest Scales in a health science Spanish sample**

**M. C. Rodríguez Martínez<sup>1</sup>, A. I. Cuesta-Vargas<sup>2</sup>, N. Moreno Morales<sup>3</sup>, M. Gonzalez-Sanchez<sup>4</sup>, M. T. Labajos Manzanares<sup>1</sup>**

<sup>1</sup>Málaga, Spain, <sup>2</sup>University of Malaga, Málaga, Spain, <sup>3</sup>UNIVERSIDAD DE MALAGA (ESPAÑA), Málaga, Spain, <sup>4</sup>Malaga, Spain

**Purpose:** This study aimed to develop a Spanish version of Oregon Vocational Interest Scales (ORVIS)

**Relevance:** To provide a tool for assess vocational interest of health science students will allow researchers to gain more knowledge on educational physiotherapy issues

**Participants:** A cross sectional study was carried out in a sample of 162 health sciences students.

**Methods:** The Spanish version of ORVIS scales, were cross-cultural adapted and their psychometric properties analysed. Socio-demographics characteristic and IPIP-16PF personality factors questionnaire were collected.

**Analysis:** The Cronbach's  $\alpha$  coefficient was used to examine the internal consistency of the scales. Construct validity was analyzed by Pearson's correlation of items-scales. Although the IPIP-16PF personality factors questionnaire is not a gold standard for criterion validity of Criterion-related validity was conducted. To examine the stability reliability of the response to the scale, all participants completed the second response of the scale one week after the first data collection. Also, correlation coefficients (Rxx) were calculated to examine the relative stability reliability (test-retest).

**Results:** Cronbach's  $\alpha$  was calculated for the Leadership (0.89), Organization (0.90), Altruism (0.78), Creativity (0.90), Analysis (0.85), Production (0.88), Adventure (0.87), Erudition (0.78). Test-retest reliability in a subsample of 30 students showed acceptable with an ICC from 0.686 to 0.906. No significance difference was found in the analysis of variance of the scales in gender, degree and way of access to university.

**Conclusions:** the scales shows acceptable validity and reliability evidence.

**Implications:** Use of this instrument will allow researchers to gain more knowledge on vocational interests in Spanish-speakers.

## SESSION 25

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 6**

Friday, November 9, 2012

ROOM C.E.18

09:55-10:40hrs

25.002

### **Differences in access to University, and gender in vocational factors in the study physiotherapy at two Universities in Southern Spain**

**M. C. Rodríguez Martínez<sup>1</sup>, A. I. Cuesta-Vargas<sup>2</sup>, N. Moreno-Morales<sup>2</sup>,**

**M. J. Casuso Holgado<sup>1</sup>, C. Osuna Pérez<sup>3</sup>, M. T. Labajos-Manzanares<sup>2</sup>**

<sup>1</sup>University of Malaga-Spain, Malaga, Spain, <sup>2</sup>Málaga, Spain, <sup>3</sup>University of Jaén, Jaén, Spain

**Purpose:** This study aimed to determine certain characteristics about the profile of vocational students studying at the university, especially if we consider the situation of transition that is taking place currently in college with the implementation of the European Higher Education Area (EHEA) in which both are changing curricula, such as how access to the University.

**Relevance:** The university student profile has changed in recent years, following the change of the curriculum and it is important to know to see if our system is effective access to college and to adapt the teaching to the extent possible, ensuring the quality of university education.

**Participants:** students enrolled in first grade of Health Sciences, University of Malaga and University of Jaén. Inclusion criteria were: belonging to the University of Malaga and University of Jaén, attend first grade in Physiotherapy. Exclusion criteria: students who are enrolled in courses other than first. The population comprised a 71 physiotherapy students (43,82%), of a 162 total sample of health sciences students. In terms of percentage by gender, 67.6% are women and 32.4% are male.

**Methods:** A Descriptive and a cross sectional study. Students were asked to fill out an on-line questionnaire in May 2011. It was a vocational interests scale adapted into Spanish by a crosscultural study: Spanish-ORVIS. The dimensions are: Leadership, Organization, Altruism, Creativity, Analysis, Production, Adventure, Erudition.

**Analysis:** The differences between the two groups of physiotherapy students in Jaen and Malaga have been checked by the T-Student test.

**Results:** In general the path that dominates high school students is bachelor´s degree with 42 students (56.8%), the second path of the superior technical quota 25 (33.8%). The over 25 group consists of 5 subjects (6.8%) and the quota of foreigners the least of all, consists of 2 subjects (2.7%). As for the two groups of students, students from the University of Malaga are a higher score in all dimensions of against those of Jaén, except in the scale production. However these differences are not significant.

**Conclusions:** The vocational profile among physiotherapy students from Malaga and Jaen is very similar and currently implementing the EHEA can be seen that the path where the predominant physiotherapy students is bachelor´s degree. For access, the rate of women exceeds that of men by about 50%. In future research is to extend this study to other Spanish universities

**Implications:** The implications of this study is to open new lines of research on education in health sciences, where it is important to look into the curriculum, the student characteristics and the influence of the European Higher Education in Science degrees Health of Spanish universities.



## SESSION 25

(Poster Presentations)

### Research on physiotherapy education:

#### Ensuring quality through assessment and evaluation 6

Friday, November 9, 2012

ROOM C.E.18

09:55-10:40hrs

25.003

### Trends in physiotherapy education – retrospective analysis of ECPE presentations

A. A. Lopes<sup>1</sup>, P. M. D. de Almeida<sup>1</sup>, P. Beenen<sup>2</sup>

<sup>1</sup>Escola Superior de Saúde do Alcoitão, Alcabideche, Portugal, <sup>2</sup>Universidade Catolica Portuguesa, Estoril, Portugal, Portugal

**Purpose:** The purpose is to give perception of the trends in physiotherapy education of the last decennium as it appeared in the conferences of the European Region of the World Physiotherapy Confederation (ECPE).

**Relevance:** The last decade both physiotherapy and education has seen many demands. Educators are challenged to find evidence and report their best practices. An overview of what has been the focus in this conference gives the opportunity to benchmark towards the policy statement of education of the world confederation and the main topics of the policy development in the European Higher Education Area. This will increase the consistency between conferences and will set a relevant research agenda for the future.

**Participants:** All abstracts presented at each of the two previous ECPE conferences of 2004 (Estoril - Portugal) and 2008 (Stockholm -Sweden).

**Methods:** Descriptive and retrospective study. Categories for content analyses were developed based on the main themes used in the conference.

**Analysis:** The qualitative and quantitative analysis was made on the basis of content and study design/ methodology, by 3 independent reviewers.

**Results:** A total of n=197 abstracts were classified. The main topics are related to Continuous Professional Development (n= 45); Teaching and Learning (n=42); Curriculum Development (n=35); Development of clinical competences (n=18); Bridging Theory and Practice (n=17) and PT across Europe and Bologna Process (n=7). Half of all original studies are classified as research and mainly qualitative studies. The other half are special interest reports, describing institutional experiences.

**Conclusions:** Our perception is that from the 1st to the 2nd congress exists a relevant increase of presentations, with proportional increase of research type of studies. the topics addressed are mainly related to institutions development and theirs results relate to implementation of new curriculum and learning strategies. Often resulting from research for PhD or masters degrees thesis. From the symposiums, we can verify that the scientific committees were concerned with issues related with: bologna implementation, specialization in PT, EBP, benchmarking and quality, CPD and developing 2nd cycle degrees.

**Implications:** The next step could be a comparison with WCPT and educational networks like COHEHRE and ENPHE. It helps researchers and educators to get a better inside of the research agenda and build upon earlier work. It gives an incentive to the development of high quality methodologies. An overview of reports in conferences gives the opportunity to compare with published results and could challenge publishing criteria.

## SESSION 25

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 6**

Friday, November 9, 2012

ROOM C.E.18

09:55-10:40hrs

25.004

### **Areas of conflict in the assessment of academic courses – the relevance of subjective factors in the process of evaluation when using a feedback form**

**G. Hochrathner**

University of Applied Science for Health Professions Upper Austria, Steyr, Austria

**Purpose:** The assessment of academic courses by students forms a cornerstone in the quality assurance of training institutions. While using the feedback form for appraising the quality of academic courses students and staff experience a lot of discontentment. The areas of conflict that arise in the evaluation of feedback forms cannot be ignored. To ensure quality through assessment and evaluation it is essential to determine subjective parameters and to integrate them in the process of quality assurance.

**Relevance:** The aim of this project is to assign due importance to the influencing factors in the assessment process of academic courses. Areas of conflicts could be prevented and the acceptance of the feedback form may increase. In addition, focus is also put on discussing the issue of whether the feedback form is the right instrument for the assessment of academic courses.

**Participants:** A survey was conducted among students and educators of the degree program for physiotherapy, biomedical science and radiological technology in Steyr, Upper Austria, 2010, using methods of empirical social research.

**Methods:** The first step was to identify subjective parameters influencing the evaluation process. In addition, areas of conflict when filling out a feedback form, were determined.

In total, eight categories with 62 items were created to get a sample of potential subjective parameters and a sample of areas of conflicts. The categories are:

General information about the participants, Influencing factors in the assessment process of academic courses, Impact of feedback forms, Use of the feedback results, Quality of academic courses, Areas of conflict in the assessment process of academic courses, The method - feedback form, Suggestions to evaluate academic courses

A pre-test was conducted.

**Analysis:** The data collection was based on two groups of **Participants:** lecturers and students. The group of students included the students who were currently taking part in the academic courses but also the alumni of the last three years. 428 e-mail questionnaires were sent to students and 50 to the academic staff. In total the response rate was 40,89% of students (n = 175) and 58% of lecturers (n = 29).

The results of both groups were compared.

**Results:** The analysis of the questionnaires confirmed the hypothesis that students are influenced by subjective parameters while filling out a feedback form.

The most meaningful subjective parameters are:

Teaching competence, professional competence as well as social skills of the educators, anonymity, motivation to fill up a feedback form, basic conditions, the expectations of the students on dealing with the results, frustration with having to give feedback on all academic courses, lack of voluntariness, as well as the relationship of authority to the educators. In a similar manner, areas of conflict also arise in this process. These are: Feedback only at the end of a course, misunderstandings about the items, educators' willingness to accept feedback results, educators' acceptance of the feedback form, results of feedback forms as an only means of evaluation, doubtfulness about objective results, the fact of voluntariness.

**Conclusions:** An integration of subjective parameters in the evaluation process of training institutions can make contributions to sustainable quality optimisation and prevention of areas of conflict.

The feedback form finds acceptance as a practicable form of assessment under the premise that additional instruments are used to improve the assessment of academic courses.

**Implications:** The acceptance and the fear of the feedback form could be improved if the needs of the participants are clearly determined. A follow up survey to explore a range of items for the evaluation process may improve the success of quality development in education.

## SESSION 25

(Poster Presentations)

**Research on physiotherapy education:**

**Ensuring quality through assessment and evaluation 6**

Friday, November 9, 2012

ROOM C.E.18

09:55-10:40hrs

25.005

### **Engagement at university in Physiotherapy students of Málaga (Spain): is there any association with academic achievement?**

**M. C. Rodríguez Martínez, M. J. Casuso Holgado, N. Moreno Morales, M. T. Labajos Manzanares, A. I. Cuesta-Vargas, M. Vega Cuesta, M. R. Iglesias Parra**

University of Malaga-Spain, Malaga, Spain

**Purpose:** To know the levels of engagement at university in Physiotherapy students along the first and second year of the degree. To explore whether there is association between engagement and academic achievements.

**Relevance:** It is necessary to know how engaged are students with their studies at university. Very few researchers have explored the association between academic achievement and engagement at university.

**Participants:** The sample consisted of 35 freshman students of Physiotherapy (53.85% of the total population) at the University of Málaga (Spain) with a mean age 21.4 ( $\pm$  4.65).

**Methods:** Descriptive and inferential longitudinal study. Students were asked to fill out an on-line questionnaire (UWES-S) in May 2010 and again in May 2011. Academic achievements were calculated using three types of measurement (SR, PR and GPA).

**Analysis:** Mean and standard deviation were calculated for each engagement dimension (vigor, dedication and absorption). We used Pearson's linear correlation with CI 95% and a multivariate correlation. This procedure was approved by the Institutional Review Board of the University of Málaga (Spain). We used statistical programme SPSS v. 18

**Results:** Although it has been observed a slight decrease in the levels of engagement from the first to the second year of degree, differences were no statistically significant. In general, it can be say that these students feel quite engaged at university. Mean scores for engagement dimensions range from 5.05 to 2.9 into a Likert scale of 6 points. No significant correlations were observed between engagement at university and academic achievements.

**Conclusions:** Physiotherapy students are quite engaged at university. There has been no association between student engagement and academic achievement.

**Implications:** Educational institutions play an important role in encouraging student engagement.

## SESSION 26

(Poster Presentations)

### **Education, transition, and specialization 1**

Friday, November 9, 2012

ROOM A.-1.04

09:55-10:40hrs

#### **26.001**

### **Competency-based evaluation – competent health professionals for clinical practice**

**J. V. Tobler-Harzenmoser, B. Laube, A. Schämam**

Zurich University of Applied Sciences (ZHAW), Winterthur, Switzerland

**Purpose:** The academic education of health professionals calls for the implementation of competency-based curricula. Literature discusses the limited uptake of competency-based evaluation within current curricula even though the Bologna reform required including this approach. (Sippel, 2009). In particular for health care professionals, at all levels of education, it is important for quality assurance to achieve competence in different professional roles (KFH, 2009) in order to act effectively and goal-orientated in a complex health care system

**Relevance:** How should a competency-based evaluation be designed in order to ensure the required qualification of students in practice? A concrete example will be used to demonstrate how this challenge is managed successfully in the BSc Physiotherapy programme at the University of applied sciences of Zurich .

**Description:** Competency-based evaluation is especially demonstrated by practical relevant, authentic tasks, which require systematic and independent problem-solving and transfer skills, self-directed and reflective actions as well as the ability to link knowledge and situation-dependent skills (Erpenbeck and Rosensteel, 2007).

#### **Evaluation:**

Students in the BSc Physiotherapy programme at the University of Applied Sciences of Zurich complete a three-part evaluation just before entering the first clinical placement module, this comprises: (1) analysis, (2) management performance and (3) reflection/evaluation. The first part includes the analysis of a written patient case (in any clinical field) which has to be structured and hypotheses orientated; the preparation for professional performance in the required dimensions and respective professional roles (CanMeds 2005, expert, scholar, communicator and manager). In the second part of the assessment the student performs the professional treatment with surveillance by an expert. Finally, in the third part the student reflects and evaluates his/her performance within a given structure. The final expert feedback serves as a stimulus for the continuous learning process.

#### **Conclusions:** Discussion and Conclusion

Students as well as experts and lecturers perceive the discussed form of a competency-based evaluation as highly useful and beneficial for the subsequent performance on clinical placements. The students' performance demonstrated in the evaluation tends to correlate with their performance in real clinical situations.

**Implications:** This innovative evaluation type could easily be transferred to other health professional courses at bachelor's level.

## SESSION 26

(Poster Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.04

09:55-10:40hrs

26.002

### Learning café as a feedback method that enhance students engagement

A. I. Kokko, J. Ring

Arcada, University of Applied Sciences, Helsinki, Finland

**Purpose:** In the physiotherapy program at Arcada we collect feedback from all students at the end of every term as part of quality assurance. The students are often focusing on single courses and how the practical arrangement worked on a general level. Instead of that the lecturers expect the students to reflect on their learning process in relation to defined learning outcomes on EQF level 6.

There was a need to find a new method to guide the student's reflections and gather the feedback.

The aims were to make the students active in their own learning process, to support reflection and make their thoughts and competence explicit. Furthermore the aim was to strengthening the students engagement to take an active role and responsibility for their self-directed learning and to gain collective understanding of issues that are important to the professional identity.

The purpose was also to promote the feeling of togetherness and to create a collaborative learning culture among students, which is proved to increase study motivation (Haagensen, B. 2007). To gather students from different stages of the studies in order to share experiences of learning processes, benefits both younger and elderly students.

**Relevance:** According to our experiences giving and receiving feedback is crucial for the whole learning process. Exchanging thoughts and experiences gives a deeper understanding of how a student's path from novice to expert in the field of physiotherapy can be supported in the PT education.

The method offers a practical and creative way to facilitate critical as well as innovative thinking among PT students. The method also offers students a possibility to share knowledge, listen to each other and reflect over experiences and learning processes.

For the lecturers this method makes it possible to get valuable information about what students know, how they are thinking and the given response is more analysed. The feedback from the students are documented and used to develop the education with focus on involvement from the PT students.

**Description:** The World Café Design principles (Brown, J. & Isaacs, D. 2005) were modified to suit our purpose and the model is called Learning Café in order to emphasize an open and stimulating atmosphere and learning culture.

All students are divided in to groups of max. 8 physiotherapy students from different years. Each group is sitting around a table with an own specific topic to be discussed. The tables are covered with a large piece of paper on which the students can write down thoughts, ideas and questions during the discussion. After a certain time the groups rotate, change tables except one student who is the host of the table. After the groups have discussed all topics, each host summarize the main points and make conclusions. After the conclusions we are all together (students and lectures) discussing and deciding what should be developed and how.

**Evaluation:** The Learning Café method has also been evaluated by making a require among the students. The students considered the Learning café concept to be a successful way of summarize the term and to share the experiences. The concept is also a successful tool for quality assurance.

**Conclusions:** According to teachers as well as students the learning café concept meets the objectives and will be used, systematically followed up and further developed.

**Implications:** The Learning café model strengthen students engagement and self-directed learning as well as they contribute in developing the education and quality assurance system. It can encourage people to explicit their thoughts, share knowledge and experiences in different situations.

## SESSION 26

(Poster Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.04

09:55-10:40hrs

26.004

### Tracing critical incidents in developing problem-based learning (PBL) pedagogy

M.-L. Lähteenmäki<sup>1</sup>, M. Alanko-Turunen<sup>2</sup>

<sup>1</sup>Tampere University of Applied Sciences, Tampere, Finland, <sup>2</sup>HAAGA-HELIA University of Applied Sciences, Helsinki, Finland

**Purpose:** Educators in different countries and in different educational fields have struggled a great deal in changing subject-based education into problem-based. In some cases, after some years the strategy and pedagogical philosophy has started to slide back to the previous, traditional practices. The reasons vary: there may have been lack of pedagogical, administrative or financial support or individual teacher's interests have changed. Hofgaard Lycke (2006) stressed in her influential key note (PBL Conference in Lima, Peru) the actions needed to be taken in order to avoid the deterioration of a PBL curriculum. She invited educators to think whether a decay is avoidable.

This is why we invited physiotherapy teachers from one Finnish University of Applied Sciences into a focus group discussion.

**Relevance:** It is important to develop education that is well structured, assures the quality of new professionals and gives piece for teachers' when developing and carrying out the chosen pedagogy. This is why we aimed to describe from the teachers' perspective the key elements of their pedagogical developmental process. Our aim was to find out what had led to the reform, how the programme has been rejuvenated, how these adjustments have been accepted, whether there had been any risk factors and what the group of teachers think might lead to the success in the future.

**Participants:** All physiotherapy teachers from the University of Applied Sciences were invited to the group discussion. They had had their educational reform going on from the year 1995 from subject-based education to PBL pedagogy.

Nine teachers from altogether 13 participated. Four of them had been with in the process since 1995. Rest of them had started as a teacher later - some of them even in the last few years. One of the newest teachers had also been a physiotherapy student in the beginning of the PBL development process. Those who didn't participate had personal excuses or education at the same time.

**Methods:** Qualitative methodology was used. The data was collected in about two hours lasting group discussion led by a moderator. The discussion was led by themes that arose from the participants in the beginning of the situation. The participants were free to tell the stories, experiences and perceptions they felt adequate. The discussion was both audio and videotaped and later transcribed.

**Analysis:** The qualitative analysis was inspired by critical incident narrative theory. The aim was to find critical key element affecting the curriculum reform.

**Results:** As a result we identified several critical incidents: the factors that drove into the change, students' fear in the beginning, the lack of involvement of general subject teachers, the opposition met by students during clinical placements, the establishment of PBL, the rewarding encounters with PBL, and prerequisites for success in the future. The critical incidents met by the teachers have had profound effects on the teachers involved. The incidents have been critical in their professional development and have maintained a particular definition of reality and identity against the pressures of contrary forces.

**Conclusions:** As a conclusion we underline how important it is to have and recognize the common goals in the beginning and during the long lasting and demanding reform. There is a constant need to take care of the PBL process and especially when novice-teachers are introduced to the PBL approach.

**Implications:** Pedagogical reform needs target-oriented leadership as well as recourses for educating actors before, during and in continuing the process.

## SESSION 26

(Poster Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.04

09:55-10:40hrs

26.005

### Physiotherapy students' experiences about the significance of PBL tutors role

H. Anttila

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**Purpose:** The aim of this study was to describe factors and practices in tutor teachers' role, that the students think have influence to their own acting in tutorials.

**Relevance:** Problem Based Learning (PBL) as an ideology of learning has been applied in many countries all over the world. It's most fundamental way of acting is the tutorial, where the group of students is working under the guidance of a tutor teacher. The tutors function is to facilitate the learning process and structure and to deepen the knowledge during the tutorial. It is important to understand the experiences and opinions of the students about the tutor's way of guiding and get information about what could improve their learning.

**Description:** A qualitative research approach was used. The data was collected from students' journals. They were asked to write about their own experiences on their PBL tutor's way of guiding the tutorial and how it influenced to their own inputs. At the first phase eighteen and at the second phase twenty-one physiotherapy students in their third year of three and a half year degree took part in the study. Every participant had already two years experience of different kind of tutorials and tutors. At the first phase the students' journals were classified by analyzing the content. At the second phase the classifications were using as a bases for the second round of journal by the other students. In the final analyses there were altogether 39 writings. The analysis was done inductively. While reading the data the researcher marked with color-code the items that belonged to the same category. Next the items were written to the lists and titled. These were then categorized further to a smaller and more simplified expressions. From these were made the main groups of the items.

**Results:** Students' writings consisted three main themes which described the actions of a tutor: 1) The intervention of a tutor; 2) The expertise of a tutor and 3) The atmosphere which the tutor creates. From the descriptions of the interventions of a tutor can be find four different kind of styles which according to students influence to their working at the tutorials: Tutor's too active or too passive involvement were seeing to disturb working. Tutor's help to improve the working and to structure and to deepen the knowledge helped the work of the students. Also the way the tutor involved the intervention was meaningful for the students. The expertise of a tutor in the content of processed subject matter was according to the writings more significant than for example the expertise in guiding the group process. According to the students the atmosphere that the tutor creates has a remarkable meaning for the learning because the way the tutor works affects the work of the whole group. Also trust in tutorials improves learning.

**Evaluation:** This study has been authors final thesis for master degree studies at Tampere university.

**Conclusions:** The experiences of the students about different kinds of tutorials and procedures of the tutors were both positive and negative. According to the data the role and procedure of the tutor has a significant meaning to the student's own way of working. A tutor with his or her procedure can either improve or diminish the learning process of a student.

**Implications:** This study affirms earlier studies where the role of the tutor has discovered to be significant aid for students learning. The results of this study give information of the students' experiences and expectations on the tutors acting and helps the teachers who work as a tutors role to improve their acting in tutorials. To get deeper and detailed information with further studies it would be interesting to interview students who are studying at the different levels of physiotherapy education. It could bring out possible differences between their experiences and expectations for the tutor.

## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.001

### Academic stress and achievement in physiotherapy students of the University of Málaga (Spain)

**M. J. Casuso Holgado**<sup>1</sup>, **M. T. Labajos Manzanares**<sup>2</sup>, **A. I. Cuesta-Vargas**<sup>3</sup>,  
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**Purpose:** To know and compare the perceptions of academic stressors in Physiotherapy students along the 1st and 2nd year of the degree. To analyze whether there is association between the perception of academic stressors and academic achievement in those students.

**Relevance:** Academic life can cause stress, such stress could adversely affect student achievements. It is necessary to know which situations of the academic environment are stressful to students and try to modify them where possible.

**Participants:** The sample consisted of 35 freshman students of Physiotherapy (53.85% of the total population) at the University of Málaga (Spain) with a mean age 21.4 ( $\pm$  4.65).

**Methods:** Descriptive and inferential longitudinal study. Students were asked to fill out an on-line questionnaire (E-CEA) in May 2010 and again in May 2011. Academic achievements were calculated using three types of measurement (SR, PR and GPA).

**Analysis:** Mean and standard deviation were calculated for nine academic stressors. We used Pearson's linear correlation with CI 95% and a multivariate correlation. Used statistical programme SPSS v. 18

**Results:** The major stressors observed along the two years of degree has been the perception of a poor methodology, students overload and the situations in which students have to participate in class (oral activities, share an opinion...). In the second year, scores are slightly lower in six of the nine stressful situations analyzed, but differences were not statistically significant. Mean scores for academic stressors range from 3.1 to 1.96 into a Likert scale of 5 points. No significant correlations were observed between academic stressors and academic achievements.

**Conclusions:** Physiotherapy students refer a medium-low academic stress. There has been no association between academic stress and academic achievement.

**Implications:** Educational institutions must play an important role to enhance stress coping strategies in students.



## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.002

### Association between learning strategies and gender with academic achievement in students of physiotherapy

**N. Moreno Morales<sup>1</sup>, M. J. Casuso Holgado<sup>2</sup>, F. J. Barón López<sup>3</sup>, M. T. Labajos Manzanares<sup>3</sup>, A. I. Cuesta-Vargas<sup>4</sup>, M. C. Rodríguez Martínez<sup>3</sup>**

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**Purpose:** To determine the factors associated with academic performance of students of Physiotherapy, University of Malaga, such as learning strategies and gender.

**Relevance:** The interest in studying the determinants of learning and academic performance in college students is increasing significantly in recent years (Garavalia y Gredler, 2002; Pintrich, 2004; Valle, Cabanach, Rodríguez, Núñez y González-Pienda, 2006; Zimmerman, 2000).

Most of the studies surveyed found positive correlation between academic achievement and cognitive strategies (Pintrich, Smith, García y Mackeachie, 1991; Camarero, Martín y Herrero, 2000; Valle y Rodríguez, 1998; Pintrich y Zusho, 2002).

**Participants:** Was studied in May 2010 to 224 students of Physiotherapy with a mean age 22.2 ( $\pm$  5.13).

**Methods:** Descriptive and inferential method observational and transversal. Was studied in May 2010 to 224 students of Physiotherapy with a mean age 22.2 ( $\pm$  5.13). They spent two questionnaires to assess learning strategies, in total 6 dimensions, such as: selection, organization, processing, storage, monitoring, planning and review. For the operationalization of the variable academic performance was done by calculating the rate of return and the success rate individually for each individual and calculating the average mark.

**Analysis:** For statistical analysis of the data, we used SPSS v15. Analysis using Pearson's linear correlation to study the degree of linear association between the variables of learning strategies and academic performance. To study the predictive ability of learning strategies in academic performance indicators using the multiple linear regression analysis.

**Results:** Regarding gender, male students obtained higher academic achievement than women, resulting in statistically significant data success rate ( $p = 0.013$ ) and the rate of return ( $p = 0.001$ ). And about learning strategies, we use the linear correlation coefficient of Pearson to study possible correlations between variables, and only the dimension Development presents significant associations with indicators of academic performance (Average rating:  $r = 0.180$ ; success rate :  $r = 0.166$ ; Rate of return:  $r = 0.144$ ). We did multiple linear regression analysis to study the predictive ability of cognitive and metacognitive strategies in academic performance indicators. In none of the models studied, were obtained percentage of variability explained above  $R^2 = 5\%$ .

**Conclusions:** Male students get better scores on indicators of academic performance than women. No significant associations were found between learning strategies and academic performance indicators, except in the dimension of development. It also can not be considered learning strategies predict academic performance.

**Implications:** This will help teachers and administrators to plan teaching and learning methods according to the strategies employed to study the philosophy of the European Higher Education Area, in order to achieve success in this way in the training of students in Science health.

## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.003

### Academic stress and its association with physical and mental well-being in Physiotherapy students of Málaga (Spain)

M. J. Casuso Holgado, N. Moreno Morales, M. T. Labajos Manzanares,  
F. J. Barón López, M. Vega Cuesta

University of Malaga-Spain, Malaga, Spain

**Purpose:** Academic stress and its association with physical and mental well-being in Physiotherapy students of Málaga (Spain).

**Relevance:** Academic life can cause stress; such stress could adversely affect student physical and mental well-being. It is necessary to know if the perception of situations of the academic environment as stressful is associated to students quality of life.

**Participants:** The sample consisted of 35 freshman students of Physiotherapy (53.85% of the total population) at the University of Málaga (Spain) with a mean age 21.4 ( $\pm$  4.65).

**Methods:** Descriptive and inferential longitudinal study. Students were asked to fill out two on-line questionnaires (E-CEA and R-CEA) in May 2010 and again in May 2011.

**Analysis:** We used Pearson's linear correlation with CI 95% and a multivariate correlation. We also looked for simple and multiple regression models. Statistical programme SPSS v. 18

**Results:** Correlation analyses shows some statistically significant associations between sleep problems, student overload ( $r= 0.457$ ) and exams ( $r=0.423$ ); between feeling exhausted and exams ( $r= 0.469$ ) and between feeling nervous and feeling that it is impossible to participate in academic decisions ( $r= 0.611$ ). We did regression analysis to study the predictive value of academic stressors in student well-being. Linear model showed that exams explain 22% of variability of sleep problems ( $R^2= 0.22$ ); student overload also explains 21% of variability of sleep problems ( $R^2= 0.21$ ); 18.6% of feeling nervous ( $R^2= 0.18$ ) can be also explained by student overload.

**Conclusions:** It has been observed that the perception of the academic life as stressful has a negative impact on student well-being, especially on sleep problems, feeling nervous and exhausted.

**Implications:** Academic life can cause stress; such stress can adversely affect student physical and mental well-being. Educational institutions must be an active member to cope with academic stress.

## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.004

### Self-assessed competency among bachelor and masters prepared physiotherapists

S. R. Brown

Touro University Nevada, Henderson, NV, USA

**Purpose:** This study evaluated the self-assessed competence differences between bachelor- and master's- prepared physical therapists against the competencies of a Doctor of Physical Therapy (DPT).

**Relevance:** Efforts to provide a pathway for practitioners to transition to a higher educational level often include a component of self-assessment by the learner. This study used the self-assessment part of the Physical Therapist Evaluation Tool (PTET) to determine the individual's perception of their current equivalency to the Doctor of Physical Therapy competencies. A second part of this study looked at the contribution of time in practice, degree level, location of education, and specialty certifications to self-assessed competency. This study contributes to the evidence supporting different methods of determining equivalency during a profession's transition to a higher educational level.

**Participants:** Participants included 1284 physical therapists, stratified into Bachelor (n = 999) or Masters (n = 285) entry-level education groups. All subjects had completed the Physical Therapist Evaluation Tool (PTET) prior to enrollment in a Transitional Doctor of Physical Therapy (TDPT) degree program in the United States. Participants included individuals educated in the United States (76%) and non-US educated physical therapists (24%).

**Methods:** This correlational study design attempted to identify if differences exist and if specific professional characteristics contribute to self-assessed competence. The Task Analysis score from the PTET was used as the dependent variable representing self-assessed competence. Independent variables included length of time in practice, pre-service educational level, specialty certifications, and geographic location of education (US-based, or non-US based).

**Analysis:** Independent samples t-test was used to analyze the differences between physical therapists' self-assessed competence prior to entering a TDPT program. Multiple Regression was used to analyze the contribution of each independent variable in establishing self-assessed competence. Descriptive statistics were used to describe the participants.

**Results:** Results showed no difference in the self-assessed competence of either Bachelor or Masters Entry-level therapists when comparing themselves to outcome competencies of the Doctor of Physical Therapy degree. In the Bachelor Entry-level group, only 2% of the Competence could be attributed to certifications, time in practice, and location of education.

**Conclusions:** Based on these results, self-assessment tools and professional characteristics cannot be used individually to determine competence in physical therapists. Length of time in practice, certifications, location of education, or entry-level education did not contribute significantly to the self-assessed competence of physical therapists.

**Implications:** The role of self-assessment in the development of expertise needs to be further studied. Reliance on self-assessment in transition efforts for health professionals is not recommended.

## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.005

### Transition of international physiotherapy students to post-graduate study: evaluation of support strategies

J. Shanley, K. Harrison

Coventry University, Coventry, United Kingdom

**Purpose:** A large proportion of the students enrolling on post-graduate Physiotherapy programmes at Coventry University are international students. A number of support strategies have been implemented, which aim to facilitate their transition to Masters level study in the UK. The aim of this study was to evaluate the effectiveness of the current support strategies and identify the most effective methods to support international students through their masters programme.

**Relevance:** The support strategies that were implemented were based on previous findings from the literature. An extended induction programme aimed to introduce students to new concepts and essential information for masters level study, for example, time management, academic writing skills, referencing and critical thinking. The importance of pastoral support has been highlighted (Cameron and Meade, 2004) and methods of accessing tutor support were indicated during general induction and as part of individual module induction. In addition, academic writing groups and regular meetings with the individual course leader were arranged. The important role of discussion in the development of masters level academic skills has been widely recognised (eg. Shanley and Dalley-Hewer, 2009) and students were coached in developing the communication skills required for academic discussion.

**Description:** A focus group was carried out with a group of international students who were enrolled on a Physiotherapy Master's programme. Students were asked questions relating to their previous learning and current learning, which methods of support they found helpful and at which point during their time at university they found the support most helpful.

**Evaluation:** The focus group was used to explore the students' experiences. A purposive sample of 6 students was recruited, who had all completed at least 4 master's level modules. Five students participated and the discussion was recorded and transcribed. The transcripts were returned to the students for checking. Confidentiality was assured. The transcripts were analysed to identify themes. The findings highlighted the difference between the students' current and previous experience of teaching and learning. They found the slow, steady extended induction programme to be very useful, particularly the way new material was repeated in different ways by different tutors. The things that helped with learning included, online resources, the many methods of application of theory to practice, the learning support groups, feedback from tutors, assessment guidance (particularly the early launch of assessment), and the specific help provided by the Centre for Academic Writing. The key factor that helped with learning was the support by the tutors: in class and out of class. Few problems were highlighted, but students were clear that they did not find the the academic writing groups particularly helpful.

**Conclusions:** From these findings, a number of conclusions could be made. The current induction programme, which started the week before the start of the course and continued with weekly seminars for the first six weeks of the course was found to be very useful, particularly the way information was repeated in different ways by different tutors. Therefore, the induction programme, along with the course-specific support groups were planned to continue. Early launch of assessment and emphasis on class discussion would also continue. The reasons for students finding the academic writing groups unhelpful were explored and subsequently it was decided to discontinue this type of support. The flexibility of pastoral support was one of the key factors in helping students' transition to master's level study. It was therefore decided to explore a more flexible way of providing the module- specific support, possible with the introduction of a personal tutor system.

**Implications:** The key implications for education, in relation to supporting transition of international physiotherapy students to postgraduate study are as follows:

An induction programme, which extends into the first term is recommended. Revisiting new ideas and concepts from different perspectives reinforces and clarifies important issues. Group work is recommended for discussing general issues but students found it intimidating and sometimes embarrassing to work on academic writing in a group situation. Individual tutorials are recommended as being much more effective in supporting academic writing. Pastoral support should be provided in a flexible way so that students can access support as they need it, in a way that suits their learning style.

## SESSION 27

(Poster Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM C.E.21

09:55-10:40hrs

27.006

### Distress factors in physiotherapy students: relevance, changes and correlation to academic success

**M. Mueller-Gartner<sup>1</sup>, S. Eichler-Schöllnast<sup>2</sup>, B. Swonar<sup>3</sup>**

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**Purpose:** - To investigate potential distress factors of physiotherapy students at the beginning of their education and over time.

- To survey whether distress factors, self-efficacy or concentration-achievement are related to academic success.

**Relevance:** The survey should provide an insight into factors considered to cause students' distress and give implications on further development of the degree program.

**Participants:** Participants are students of the Physiotherapy degree programme and have been tested at two times:

t1: beginning of education (first week; N = 72),

t2: re-test, end of third semester (last week; N = 53).

Participants at t2 had also taken part in t1. The number decreased in t2 (drop-out due to insufficient grades, voluntary drop-outs, furlough, and in one case absence due to illness on the day of the survey).

**Methods:** Participants filled in different questionnaires. Participation was voluntarily, nevertheless all students attended the study.

**Analysis:** If data were normally distributed (Kolmogorov-Smirnov-test), Pearson method was used to test correlations and t-test was used to test mean differences. Otherwise, Spearman's rho and Mann-Whitney-U-test were applied.

**Results:** Overall students described themselves as being rather little distressed concerning the topics in the survey - at the beginning of the education t1 as well as at t2. The students' main concern at both times tested was the lack of time for pursuing own interests. Their confidence to graduate and their perceived own health status were very high at both times tested.

Students who were not present at t2 any more showed a significantly higher concern about their financial security at the beginning of their education than students who attended both times. However, the first-mentioned group showed a significantly lower concern about their physical health. Yet, factors like confidence about graduating, self-efficacy, different possible distress factors, as well as concentration-achievement did not distinguish between these two groups.

At t2 students were significantly less concerned about their education and their partnerships (N = 33), but more significantly confident to graduate in due course than at the beginning of their education. On the other hand, concerns about their families, their own mental health as well as self-confidence have increased. Success was operationalized by calculating a grade point average over all three semesters. This score correlated only with data collected at t1 (each N=52): high concentration-achievement ( $\rho = -.355, p < .01$ ), low concern about financial security ( $\rho = .313, p < .05$ ), about their physical health ( $\rho = .319, p < .05$ ) and about their mental health ( $\rho = .311, p < .05$ ).

**Conclusions:** Students are especially concerned about having too little time for private interests.

Additionally some distress factors increase significantly during study period. Good marks are particularly associated with concentration-achievement and financial security. However, correlation coefficients are not very high.

**Implications:** Already in the application process mental capacity should be considered and financial security should be addressed. During the education a functioning psychosocial supportive net can help when there is a lot of distress (mentors, psychologists).

## SESSION 28

(Poster Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM C.E.20

09:55-10:40hrs

28.001

### An educative programme organized to implement FIM®-instrument in rehabilitation hospital settings for team-based usage and PT role in the process

K. Englas, P. Eelmae

Haapsalu Neurological Rehabilitation Centre, Haapsalu, Estonia

**Purpose:** To describe how to successfully implement a rehabilitation outcome measure in hospital settings, including all team-members.

**Relevance:** FIM®-instrument is one of the most used rehabilitation outcome measures, its sole ownership and distribution rights belong to UDSMR (UDSMR, 2009). FIM®-instrument is often very much used without correct implementation process, and therefore the reliability of results is often questionable. Haapsalu Neurological Rehabilitation Centre (HNRC) is dealing with different kind of patients with neurological problems, most of all people with brain and/or spinal cord injuries. HNRC has around 130 staff-members, out of which around 80 are rehabilitation team-members (RTM), including 20 physiotherapists (PT). In April 2010 HNRC signed a contract with UDSMR in order to start RTM-based using of FIM®-instrument in reliable way. The aim was to create an effective education-programme to support learning within clinical settings for a large number of staff-members to create good knowledge on the outcome measure and common basis for team-discussions. PTs played a key-role in the process.

**Participants:** RTMs in HNRC.

**Methods:** Descriptive case-study on good practice from clinical work and continuous education.

**Analysis:** Descriptive analysis of the process, and simple statistical analysis were used.

**Results:** In order to guarantee highest possible success-rate in implementing FIM®-instrument a well-prepared and easy-to-follow education-programme was needed. The main built-up for the programme was two hourly meetings in week at the end of work-days. The first part was theoretical considering the rules and tips for assessment, the second part for open discussion about theme-related case-studies and explicit reasoning about decisions on scoring. Before exam two meetings to discuss case-studies in groups were held. Themes for the meetings were planned on thematical basis, e.g. bladder and bowel management together etc. Study-materials were specially prepared: original materials (FIM®-instrument manual, useful tips for assessment, and a portion of case-studies) were firstly translated into Estonian, secondly course-materials were prepared, including summary of assessment rules, case-studies, and reference list to useful reading materials at the end of every thematic part, also description of on-line exam was added. To support individual learning course-materials were provided to participants at the beginning of course, in addition Estonian and English materials are available on-line, and as print-outs. On-line exam was discussed specially to avoid failures due to technical reasons. Two different education periods were carried out during 2011. The first for the majority of RTMs, including all PTs working at HNRC at that time, took place from January to March, and the other for the rest of the team, including new PTs, from August to September. The second course was shorter because the themes were organized in more concentrated way. The education was planned and taught by pre-educated HNRC staff-members: 2 PTs and 1 OT. All in all 78 people, including 20 PTs, have passed education programme. Exams were successful: only 5 failed due to technical difficulties. The exam-results (max result 100) were very high: for all RTMs  $96.56 \pm 4.01$  (mean $\pm$ SD), for PTs  $96.94 \pm 2.69$  (mean $\pm$ SD). Between April and December 2011 585 (297 admission and 288 discharge) team discussions have taken place in HNRC where FIM® was used.

**Conclusions:** The implementation of FIM®-instrument has been highly successful; it is daily used in clinical decision-making. The course was a good basis to support and develop inter-professional discussions. PTs have had and have a key role in the process.

**Implications:** A well-prepared and organized education programme is beneficial to be undergone in busy clinical settings, and is good basis for successful results and for creating common background for reasoning in team-discussions and clinical decision-making.

## SESSION 28

(Poster Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM C.E.20

09:55-10:40hrs

#### 28.002

### Reliability of the functional reach test and the influence of anthropometric characteristics on test results in subjects with hemiparesis

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**Purpose:** The aim of this study was to investigate the repeatability of the Functional Reach (FR) test in subjects with or without hemiparesis, to describe the intra- and inter-rater and test/re-test reliability of the FR and to verify the associations between the FR and specific anthropometric characteristics. Secondary objective was to show the importance of the psychometric evaluation on physical therapy practice.

**Relevance:** First designed as an alternative method of assessing balance and susceptibility to falls among elderly, the FR test has also been used among patients with hemiparesis. However, to be considered useful, assessment tools must be tested for a specific population to verify the basic psychometric properties of the tool.

**Participants:** Twenty volunteers ages 28 – 80 years old with chronic hemiparesis were recruited from a database of patients who were registered at Ceilandia Regional Hospital, Federal District, Brazil. A convenience sample was taken from the registered volunteers who signed the informed consent, which was approved by the Research Ethics Committee and issued by the health science faculty at the University of Brasilia, (protocol number 034/2009). Each patient with hemiparesis was matched by gender and age to a healthy control subject. The final size of the sample (n=40) was determined by the minimal number of subjects that were required for each group (n=20) to provide a sampling error that was less than 25% of the average FR value that was obtained for each group.

**Methods:** This was a longitudinal prospective study that utilized correlation testing. Anthropometric measures including weight, height, foot length on the non-affected side (from the heel to the end of the great toe) and the distance between the feet when the subjects were in the testing position on the platform (distance between midpoints in the right and left heel) were taken. The product of the foot length and the distance between the feet was used to determine the support area. A 120 cm yardstick was leveled and attached securely to the wall at the height of the subject's acromion on the non-affected side for hemiparesis group and on the dominant side for the control group; the yardstick was used to measure displacement during the FR. Subjects performed two sets of three trials; the first set was recorded by rater 1, and the second set was recorded by rater 2. The subjects were given a rest period of approximately 1 minute between sets. After one week, the subjects were re-tested, and all of the procedures that were previously described were repeated during the re-test.

**Analysis:** The Kolmogorov-Smirnov test was used to verify whether the variables demonstrated the Gaussian distribution, which determined the need for parametric tests for the analysis. The significance level for all analyses was established at  $\alpha=0.05$ . A two-way analysis of variance was used to verify the intra-rater reliability. It was calculated using the differences between the averages of the measures obtained during single, double or triple trials. The intra-class correlation coefficient (ICC) was utilized and data plotted using the Bland-Altman method. Associations were analyzed using Pearson's correlation coefficient.

**Results:** In general, the intra-rater analysis did not show significant differences between the measures for the single, double or triple trials. Excellent ICC values were observed, and there were no significant associations with anthropometric parameters for the hemiparesis and control subjects.

**Conclusions:** FR showed good reliability for patients with and without hemiparesis and the test measurements were not significantly associated with the anthropometric characteristics of the subjects.

**Implications:** The present study showed a good reliability of the measurements obtained by FR test in subjects hemiparesis, dispensing records of anthropometric measurements.

## SESSION 28

(Poster Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM C.E.20

09:55-10:40hrs

#### 28.003

### The implementation of a new technology within the curriculum of BSc physiotherapy

**B. Goedl-Purrer**

FH Joanneum, Graz, Styria, Austria

**Purpose:** The aim of the project was to develop and evaluate a model for a guided implementation process of a new technology (Real Time Ultrasound Imaging) within the curriculum of the BSc Physiotherapy.

**Relevance:** The demand and interest in applying evidence and in developing new technics to physiotherapist practice is constantly growing (Ashe & Mathur 2004). Lecturers at BSc Physiotherapy degree have to observe those acquirements and constantly review and adapt their teaching contents to them. This is challenging. There is evidence about the possible barriers and facilitators to the process of change (Beurskens & Stevens 2010, Jette et al. 2003). Literature indicates that it is reasonable to develop models of how to guide members of staff of BSC Physiotherapy degree department through the above described processes. Since the 1960s the potential use of Real Time Ultrasound Imaging (RUSI) in rehabilitation has been indicated. In 2006 RUSI has been recognised part of physical therapy practice (Teyhen 2006,Whittaker 2007). Ultrasound Imaging (USI) opens a variety of possible application in physiotherapy. As a new technology used in physiotherapy it has the potential to further development in the field of treatment, documentation and research. Thus it is reasonable to implement the use of RUSI in different modules within the BSC Physiotherapy Degree.

**Description: Participants:** Members of staff BSc Physiotherapy at FH JOANNEUM, University of Applied Sciences , Graz ( n=14)

**Methods:** A 5 step model ,based on the model of Grol et al (2005) is used aiming to develop Implementation strategies according to the demands of the targeted group.

**Analysis:** Descriptive statistical analysis is used to evaluate the questionnaires. Interviews and focused group discussions are summarized and evaluated.

**Evaluation:** End of project: 7th May 2012

Barriers and facilitators in different domains: Physiotherapists' competence and knowledge: There is lacking knowledge about RUSI but high interest in it. There is limited time to learn and exercise with the Ultrasound equipment. Time limit seems to be one of the most important inhibitors to change.

Organization: There is high acceptance and support to introduce RUSI from the head of Department. There is limited offer of time resources for the tutors and reviewing person in the process as well as for intern education and training for the staff members.

Measurement instrument: Equipment is accessible and there is good support from the sonographer company To date it seems that the implementation process is successful and RUSI will be used in varying options of application within the study degree. Besides the established forms of use of RUSI in physiotherapy new ideas have been developed.

**Conclusions:** Applying a systematic, structured and reflected model to the implementation process of a new technology in teaching at BSc Physiotherapy degree seems to be successful. Besides the targeted effect of implementation of the new equipment, it also might have positive effects on team building and development of professional innovations. It is also a time-consuming process for the leading person or team. Thus the organization has to plan in advance. Sustainability and feasibility of the process has to be discussed.

**Implications:** Teaching staff should be guided in the process of discussion, decision making and implementation of new technics.The above described model is likely to be successful also under comparable conditions.



## SESSION 28

(Poster Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM C.E.20

09:55-10:40hrs

28.004

### Combining ICF and Clinical Reasoning in a single case documentation

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**Purpose:** Clinical Reasoning (CR) is a popular concept in physiotherapy world-wide and comprises the mental processes of collecting, interpreting and structuring information. The International Classification of Functioning, Disability and Health (ICF) is a bio-psycho-social model from the World Health Organization (WHO) for measuring health and disability at both individual and population levels, and is becoming increasingly common in physiotherapy. Josephson's findings in her 2011 published study support clinical and educational use of the ICF, since it may facilitate professionals' consciousness and support of patients' needs from a broader perspective. Both the CR and ICF concepts facilitate the decision-making process of physiotherapists and this presentation describes how the two concepts can be combined and used in daily work, using a web-based tool provided by the company RehabNET in Switzerland.

**Relevance:** Our »combined» approach offers physiotherapists a tool to structure patients' problems and needs in a broad way and to analyse, plan and evaluate the chosen interventions systematically.

**Description:** The web-based tool links the following 3 dimensions on the basis of a single case documentation:

1) Modified Rehabilitation Problem-Solving Form (RPS-Form):

In 2002, Steiner et al developed the ICF-based RPS-Form, which allows health professionals to analyse patient problems, to focus on specific targets, and to relate the salient disabilities to relevant and modifiable variables. With permission of the author, the RPS-Form was modified. The form is designed to distinguish between the perspectives held by the patient and those of the health care professional (provider). The patient's view is recorded in the upper part and the provider's view in the lower part of the form. Target and mediator categories are highlighted, with arrows linking them to show the providers' reasoning on how they might interact.

2) Clinical Reasoning: Currently our students fill out the CR forms, which are an integral part of the single case documentation. To avoid duplication, which would be unacceptable to practitioners, the CR was directly integrated into the modified RPS-Form by describing the providers' reflections of the arrows.

3) Assessments and Evaluation: After having determined the target and mediator categories, the physiotherapist chooses adequate assessment tools (tests and/or questionnaires) to evaluate the patient's status at the beginning and at the end of the treatment.

The web-based tool allows access anytime and anywhere. Students create the RPS-Form, write in their CR, choose their assessment tools and fill in the measurement data. They can generate evaluations easily and, from all this information, can compile a valid single case documentation which, after the go-ahead from the student, can be judged by the teacher.

**Evaluation:** Students and teachers are motivated to use this tool because they can see its benefit, although in clinical practice much discipline and good organization is required to record the on-going patient's treatment.

**Conclusions:** A web-based tool can greatly facilitate successful implementation of ICF (with the RPS-Form) in combination with CR. The resulting single case documentation is comprehensive and valid.

**Implications:** The presented tool can be used beneficially in CPD as well as in clinical practice.

## SESSION 28

(Poster Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM C.E.20

09:55-10:40hrs

28.006

### Improving therapeutic skills in authentic learning Environment in child physiotherapy studies in Savonia University of Applied Sciences

A. Kinnunen, M. Huovinen

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**Purpose:** The major reason to this developmental work was to create a new innovative way to study child physiotherapy.

This developmental work helps the physiotherapy students to enhance an evidence based practical skills and to get a family-orientated frame to their professional work. Important objective was to develop an authentic learning environment for students in higher education and to ensure that the therapeutic know-how and skills will deepen during the 3,5 years education period. Physiotherapy students offer to children and their families guidance and exercise groups in Empowerment market (Viretori).

**Relevance:** The new curriculum in physiotherapy studies was introduced in autumn 2010. In curriculum the main pedagogic approaches were evidence based practice, authentic learning, learning by doing and mixed learning. The development of work curriculum was also guided by European Quality Framework (EQF) and by the strategies of Savonia University Applied Sciences. In children's physiotherapy studies the frame of reference are the Ecocultural approach and International Classification of Functioning, Disability and Health (ICF). These both approaches point out the importance of understanding the meaning of family and the rehabilitation in their daily life and to support the children's participation with other children.

**Description:** 18 physiotherapy students, started physiotherapy education in 2010 and two teachers.

**Evaluation:** The curriculum includes a step-by-step -progress developing therapeutic skill in child rehabilitation area.

The first year: Understanding a motor development. One week training in kinder garden analyzing the motor development. Learning to guide children's basic movements. These are implemented in groups so students can support, estimate and learn from each other. Learn assessment in physiotherapy with standardized tests. Analyze motor development level using Bruininks -Oseretsky 2 -test (BOT2). This students test children in pairs.

The second and third year: Learn to understand and use physiotherapy methods and deepen their assessment skills in children's physiotherapy course focusing in developmental coordination disorders (ADHD, ADD, Autism, Asperger). Learn to understand and use physiotherapy methods and deepen their assessment skills in children's physiotherapy course focusing in children's neurological area (including Cerebral palsy, MMC, Premie). Learn to apply their therapeutic skills in clinical practice in Empowerment Market (Viretori). The Viretori stimulates students in an inter-professional manner developing and implementing local and regional wellness services for children with special needs and their families. The clinical practice in health center's gives them an opportunity to practice their skills.

The third and fourth year: For those physiotherapy students who want to deepen their knowledge and skills forward can choose their last clinical practice placement in children's rehabilitation area.

**Conclusions:** At the moment we know the results of the curriculum evaluation after the first year. The students have now proceed to the sixth step. The students have experienced the first year to be quite challenging and motivating. Their professional skills have had a good start in children's area. It has specially developed basic analyzing and guidance skills.

**Implications:** It seems that this kind of developmental work has a relevant meaning in student's professional growth. It is necessary to learn in the first year to exploit the evidence based practice knowledge so they can development their professional skills exploiting that. It also helps to student to learn to have a family-orientated approach to work. Learning by doing in authentic environment the students have also a possibility to learn from children and their family and learn to understand and respect their unique goals, resources and ways to live.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

29.001

### Curriculum adjustment to bachelor level of diploma graduated physiotherapists in Spain: a descriptive study

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**Purpose:** Our aim was to collect and describe the characteristics of the adaptation courses offered by universities in Spain in the present academic year, to study what previous graduated physiotherapists are required to adjust to the Bachelor level.

**Relevance:** After integrating in the European Higher Education Area, Physiotherapy education in Spain has shifted from a diploma level into a Bachelor degree. The conversion has new advantages for future physiotherapists in terms of mobility, access to postdegree level studies (master and doctorate) and research. These benefits are highly desired by those graduated from the previous study program. Therefore, to fill the gap between the two educational levels, universities are offering the diploma graduated physiotherapists, different complementary curriculum courses in order to give them the chance to get balanced.

**Participants:** To look for a current list of universities with Physiotherapy education, the Spanish National Conference of Physiotherapy School Directors and the Ministry of Culture and Education web sites were consulted.

**Methods:** Each university web page was looked through aiming to gain access information about degree adaptation course offer. If no information was found or there was any doubt about its possible existence, a direct phone call was done to make sure about it.

**Analysis:** The following variables were collected and analyzed: type of university, geographic allocation, amount of ECTS course, course length, number of offered places, teaching method, selection criteria, and subjects with their ECTS and their relative percentage in each university study program.

**Results:** A total of 50 universities have Physiotherapy education in Spain. Only 23 (13 public and 10 private) are actually offering a degree adaptation course for graduated physiotherapists, being mostly geographically distributed in Madrid (30,4%), Barcelona (17,4%) and Valencia (13%). Except for one institution that didn't specify the number of ECTS, the total amount average was  $51,05 \pm 11,37$ , and an average course length of 7 months (mean  $7,75 \pm 1,86$ ). The great majority of centers offered 40 places (mean  $54,29 \pm 2,36$ ), and total attendance was the most prevalent teaching method (16 universities, 10 public -all of them- and 6 private). Selection criteria were recorded on 12 universities, and based on the appearance rate, the following were the most frequent: student record (9 centers), to be graduated by the same University (8 centers) and professional experience (5 centers). From a sum of 14 subjects, Practicum and Basic Science covered the greatest number of ECTS ( $26,22 \pm 9,25$  and  $12,67 \pm 11,83$ , respectively) and showed the highest relative percentage of total ECTS offered (50,30% and 22,49%, respectively).

**Conclusions:** Our results showed that the curriculum of the adapted physiotherapists opens them the gate towards improvement of professional competence, making possible easier labour mobility and access to higher education levels. However, though science research should be one of the mainstays, is partially addressed through the adjustment program.

**Implications:** The curriculum adjustment to Bachelor level course in Spain is at the beginning and allows the physiotherapists to update their professional competence. The more universities implement the Bachelor degree, the more offer there will be.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

#### 29.002

### Does the higher education open new opportunities for physiotherapists in Croatia?

D. Milascevic, O. Petrak, S. Schuster

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**Purpose:** In the process of adjusting and equalization to European and global standards of higher education for physiotherapists, education oriented towards practice is significant. Such orientation implemented in curricula has an direct influence on improving quality standard of clinical practice and further development of clinical guidelines. At the end of 20th century University of Applied Studies Zagreb started with 3 year bachelor degree program (BA 180 ECTS), and in 2007. with 5 year master degree program in physiotherapy (MA 120 ECTS). It is expected that Master degree program could be a direct possibility for physiotherapists to continue their education toward doctoral study in physiotherapy or other similar multidisciplinary studies with emphasis on practical skills acquisition and the goal of improving clinical practice of physiotherapists.

**Relevance:** This study determines and analyzes perception of graduated master physiotherapists of their position and status within the working environment after finishing the program. In this way we gain insight into implications that master degree program has in their further clinical work.

**Description:** University of Applied Health Studies Zagreb has a practice of evaluating programs and teaching staff trough student satisfaction using questionnaire provided by Ministry of science, education and sports with 25 items grades 1 to 5. For assessing quality of education shorter questionnaire was used (6 items graded 1 to 5). 99 students, from two generation of master degree program graduates, were tested. Average age of students was 30 years (24-54) of which 70% were women and 30% man.

**Evaluation:** Results indicate that majority of examinees (54%) considers that their new degree noticeably helps them in their further clinical practice, while 50% of them thinks that the degree helps their advancement within the profession. Majority of them responded that the program contributed to their personal development (39%), three quarters experiences respect from their colleagues of the same rank or professional level, while slightly lower percentage (64,8%) experiences respect from their superiors. 41% states that master program made them more competent on European job market, while majority considers (82%) that the compatibility with world trends is low or very low.

**Conclusions:** Five year study in physiotherapy opens new opportunities for education of physiotherapists oriented to clinical practice, for which the high level of knowledge and skills are needed, and whose qualifications correspond to the needs of European and global standards. Although some of observed aspects are satisfactory, constant improvement and adjustment according to professions relevant changes is necessary.

**Implications:** This results can be used for improving curriculum and application of knowledge and skills in clinical practice of PT's. Also will contribute to creating further education policy in Croatia.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

#### 29.003

### Instructional design best practices to enhance higher education in physiotherapy

M. Testa, S. Alvino

University of Genova, Savona, Italia, Italy

**Purpose:** Today, in Italy, people with a first degree in physiotherapy can attend only one Master of Science, which is a trans-professional biannual course targeting all rehabilitation professions, mainly focused on organisational topics. A practice-oriented valuable alternative to this, is the post-graduate »Master in Musculoskeletal Disorders Rehabilitation« (MRDM), organized by the University of Genova at the Academic Campus of Savona since 2003, specifically addressing physiotherapists.

The MRDM teaching staff includes more than 10 nationally and internationally renowned experts, assisted by about 30 collaborators. Its schedule envisages 10 five-days thematic seminars distributed along 12 months and a semester devoted to clinical stages and the final thesis. Thanks to this schedule, since its first edition the MRDM has targeted professionals coming from all over the country, gathering an high number of registrations and increasing its popularity and influence.

**Relevance:** In 2008, at the end of the fifth edition, a systematic evaluation of the educational process pointed out the specific need of making the didactics more homogeneous through the different seminars, thus allowing the students to perceive the course as a unique path instead of a collection of seminars.

**Description:** This contribution reports how the quality level of didactics of a well-established physiotherapy high education (HE) course can be improved by: (a) providing the teaching staff with fundamental notions concerning Instructional Design (ID) [Reigeluth C.M., 2003], (b) redesigning the course on the base of the appropriate ID practices and heuristics [Silber, K.H., 2007], and (c) providing teachers with »design patterns« [McAndrew, P., 2006] to be contextualized in specific lessons or seminars. This objectives have been pursued through a specific course, theID Course, carried during 2009, targeting 25 members of the MRDM teaching staff. TheID Course was a project-based educational process, which envisaged few presence lessons and a number of distance activities, aimed to put into practice ID theories by redesigning the MRDM from its foundations. Starting from a clear definition of the educational objectives, the teaching staff has been guided step by step to render explicit and formalize through schemata and patterns MRDM contents, educational strategies, evaluation criteria, activities and materials.

**Evaluation:** The first results of the redesigning process has been implemented in the last seminars of the sixth edition (2008-09). At the end of 2009, about 80% of MRDM teachers answering to a specific questionnaire stated that the ID Course reached its objectives, providing an actual added value for the teaching practice. From the students point of view, both the eighth and ninth edition of MRDM showed an increase in recruitments, respectively of about 25% and 33%. In addition, final course evaluation pointed out an increase in students' perceived quality.

**Conclusions:** At present, all the practices and methodologies adopted to redesign the MRDM and the design documents produced during this process can be considered an important background of the MRDM.

**Implications:** The specific background created in the RDM master staff could support and facilitate, as a possible future work, the master course replication in other contexts and favours its internationalization.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

29.004

### Internationalisation of the curriculum (IoC) in post-graduate physiotherapy – perceptions and experiences of university lecturers

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**Purpose:** The interest and motivation to explore this area developed as a result of the increase in the number of international students studying Post Graduate (PG) and Masters programmes in Physiotherapy at Coventry University since 2007. Internationalisation of Higher Education (HE), as a policy, has emerged and implemented to counteract the effects of HE marketisation as a result of globalisation, the shift towards neoliberal philosophy and radical changes in HE funding. In recent years there has been a wealth of research discussing internationalisation of HE as a policy mainly at an institutional level but as Sanderson (2008) argues, this policy needs to be translated into classroom practices and cannot be achieved without the involvement of the major stakeholders, lecturers in particular, as they are the ones who deliver these programmes. IoC aims to ensure that students have a transformative educational experience preparing them to become global citizens and global employees by providing effective cross cultural, interdisciplinary education. Being a complex multifaceted concept, IoC causes confusion amongst its stakeholders and problematises its application to specific professional programmes like Physiotherapy. Little research has been conducted on what lecturers' perceive as IoC generally and particularly in PG physiotherapy. Therefore, the purpose of this research was to explore the perceptions and experiences of PG physiotherapy lecturers about IoC.

**Relevance:** Evidence clearly indicate that IoC is rooted within a profession and a discipline. Clifford (2009) demonstrated that there are differences in lecturers' perceptions about IoC depending on their background and professional roots. In order to effectively internationalise the curriculum it is important to understand lecturers' perceptions and experiences. To date the perceptions and experiences of physiotherapy lecturers have not been explored

**Participants:** A purposive sampling method was employed and 8 lecturers (7 females & 1 male) from the physiotherapy department with experience of teaching on the postgraduate programmes were included in the study. In addition they had to have experience of teaching international students and experience in curriculum design at PG level.

**Methods:** A qualitative approach to social science research was adopted that fits the ontological and epistemological assumptions of the interpretivist philosophical framework. A hermeneutic phenomenological approach was chosen as the theoretical framework for data collection as it promotes the qualitative exploration of people's perceptions, experiences and understandings of the IoC. In-depth interviews were conducted with each of the participants to explore their perceptions and experiences. Interviews were recorded, transcribed verbatim and analysed

**Analysis:** Thematic analysis was conducted using Nvivo. A list of codes was generated respectively to each research question. Following, themes were developed to answer the research focus.

**Results:** Physiotherapy lecturers, although trying to contextualise IoC to their practice struggled to articulate their understandings resulting in a perceptual fuzziness. IoC was perceived as an enhancer to the existing programmes mainly as a recruitment tool to support the University business plan and was perceived in economic terms. It was unclear why there was a need to internationalise the curriculum if the programmes are delivered and based in the UK where physiotherapy practice is perceived to be advanced. All participants bar one did not have experience of IoC even though all of them were engaged in teaching international students for the past 5 years. Concerns were raised as to what exactly IoC will look like when it actually translates to pedagogy. Frustrations and scepticism were voiced regarding the process and that IoC will be reduced to a tick box exercise missing out the opportunity to truly change the PG programmes.

**Conclusions:** Evidently there was a lack of appreciation of the radical and transformative qualities of IoC by the physiotherapy lecturers. On the whole IoC was perceived in its simplistic way and as an added facet to the curriculum to enhance its quality as a medium for monetary gains.

Future research may explore the pedagogical changes required to effectively internationalise the PG curriculum

**Implications:** It is not always clear to physiotherapy lecturers what internationalisation actually means and how it impacts on the curriculum. If IoC is implemented and incorporated into PG physiotherapy curriculum there is a need to increase lecturers awareness about the transformative qualities of IoC and appreciation that it can benefit both international and home students.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

29.005

### Bioethical analysis of the Brazilian Code of Ethics for the physical therapist and the occupational therapist

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**Purpose:** To determine in what proportions ethical and bioethical approaches are present in the Code of Professional Ethics of Physiotherapy and Occupational Therapy drawing epistemological profile that could support interpretations of the vision of professional conduct and adaptations of form and language of the code.

**Relevance:** The study addresses the training of professional ethics and bioethics in Fisioterapia and Occupational Therapy in clinical practice and reflect on the reflections multidisciplinary, comprehensive and inclusive.

**Participants:** Study literature review.

**Methods:** Method of analysis and comparative interpretation of the Code of Professional Ethics with texts of theoretical ethics or bioethics, which identifies and classifies textual units (paragraphs, sentences and / or words) in categories related to bioethical principlism (autonomy, beneficence, nonmaleficence and justice) and / or duties of the profession (technical and virtue). Uses calculations of the ratio of proportionality between textual units for comparing the Code with other texts dealing with professional ethics both through theoretical ethics as a theoretical framework for bioethics.

**Analysis:** We chose to design a qualitative study based on literature review as described by Pyrrho and employees. We conducted reading and interpreting texts of seven pre-selected, three of them with theoretical ethics, with three theoretical bioethical text itself and seventh Code of Professional Ethics of Physiotherapy and Occupational Therapy.

For analysis and interpretation of data, the method of qualitative analysis proposed by Bardin, which directs that a content analysis is defined as a set of techniques for analysis of communication (quantitative or not) with a view on the rigor of the method as a way of not get lost in the heterogeneity of its goal, seeks, by systematic and objective procedures to describe the content of messages, bookmarks and knowledge on the conditions of inferred variables in the message.

**Results:** In the Code of Ethics analyzed were identified 54.4% of the units of text as deontological approach, compared to an incidence of 55.7% in the texts of reference of Ethics and 57.7% in bioethical texts. Within the bioethical focus of textual units, the units related to the principle of autonomy, when divided by the autonomy of the client or the professional, showed a ratio of proportionality with predominance observed in both the professional Code of Ethics (2.15: 1) the reference texts in ethics (5.07: 1) that were significantly different from each other and especially the ratio observed in different texts bioethical, whose dominance was reversed, being observed more than a textual unit considering the customer for each unit considering the professional (1.32: 1).

**Conclusions:** The frequency of ethical or bioethical approaches in the Code of Ethics were very similar to the frequency of references in the texts of ethics and bioethics. However, for textual units of bioethical approach, those classified as autonomy, both in the Code of Ethics and ethics in the texts are observed and legalistic conceptions corporatist, a prevailing view of professional autonomy. This feature has diverged significantly from theoretical bioethical texts in which they found a predominance of value to client-centered autonomy.

**Implications:** The bioethics analyze the content of the Code of Ethics expresses the gaps that arise in moral and professional ethics of Physical and Occupational Therapy. So has the need for further discussion on the matter and unification of language at the time of education for these professionals.

## SESSION 29

(Poster Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.19

09:55-10:40hrs

29.006

### The perceptions of nursing, occupational therapy and physiotherapy students of each other's role. A pilot study

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**Purpose:** This pilot study aimed to explore role perceptions of 13 undergraduate nursing (n=7), physiotherapy (n=3) and occupational therapy (n=3) students before and after implementation of inter-professional workshops during practice education placement.

**Relevance:** Inter-professional education (IPE) is described as learning occurring »when students from two or more professions learn about, from and with each other to enable effective collaboration and improve health outcomes« (W.H.O. 2010, p.10). Poor understanding of other professionals' roles, negative stereotyping and inter-professional conflict have been identified as barriers to effective teamwork. (Davidson et al, 2008).

**Description:**

IPE opportunities were facilitated across two workshops with students working in interprofessional groups to produce and present case study presentations. Purposive sampling of students currently completing undergraduate placements was used, informed consent obtained and ethical requirements satisfied. Data was collected before and after IPE workshops using the General and Nursing Role Perception Questionnaires (Mackay, 2004) and analysed using SPSS(v.17).

**Evaluation:** Results indicated that nursing role was best understood across the disciplines, with OT most poorly understood. OT and physiotherapy students valued their roles and that of other professions more highly than nursing students did. All 3 disciplines considered that they worked well within a team however physiotherapy and nursing students perceived OT to work better in a team post-intervention.

**Conclusions: Implications:** This study highlights discrepancies in role-understanding between student groups. Opportunities for students from different disciplines to learn with and from each other should be fostered to promote IPE and achieve better patient outcomes in practice. Application of IPE workshops in the practice education setting is recommended.

**Implications:** IPE should be an integral part of clinical education.



## SESSION 30

(Platform Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.02

11:10-12:25hrs

#### 30.001

### User perspectives of reference management software in a context based learning situation

F. Offerlind

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**Purpose:** The purpose of this study was to examine two different reference management software tools, Zotero (a social media free downloaded from Internet) and EndNote (license based), and how these can help to encourage positive learning environments that are connected to the new generation of students.

**Relevance:** Scientific writing is an important aspect of the student's education. Writing requires the student to give reference sources in a proper manner in accordance with a certain style. Experience has found that the process to deal with different styles requires time. Critical thinking is a fundamental requirement in scientific work and as such requires no detailed knowledge about different styles structure. Today's technology makes it possible to facilitate scientific writing using reference management software. The current reference management tools available are license-based and others are available free through the Internet. Frequently used reference management software are Refworks, EndNote, Zotero, Mendeley, and Colwiz CiteUlike among others. In recent years, social media, such as Facebook, Blogs and Wikipedia have received increasing attention. The discussion, in educational settings, has touched on the pros and cons, but also on the potential opportunities using social media in educational settings. Social media creates opportunities for communication, which in turn affects learning. This learning can be described as collaborative. Illeris points out that such learning refers to activities where a group of people strive to learn and develop something together. Thus, it is the technical possibilities that facilitate communication and learning. From an educational point of view Vygotsky appears to be central in terms of pedagogy and technology. His theoretical argument is based on a sociocultural perspective where people learn from each other and are believed to be active in its social context using technology as a helpful instrument. Individual knowledge thus grows between individuals. The teacher's role, based on Vygotsky's sociocultural perspective, is to encourage good learning environments, and thus use existing technology in the educational setting.

**Description:** A pedagogical implementation was conducted in spring 2010 for all students, n= 85, in occupational therapist and physical therapist programs (semester 1).

**Evaluation:** The methods used were interviews as well as a questionnaire. The material was analyzed according to content analysis. The result showed three categories: Usability, Accessibility and Learning Situation. These illustrated the students' perception of how easy, convenient and time saving it is to use reference management software tools. Accessibility describes the technical requirements associated with the tool and learning situation is described by the increased communication through networking and the students feel that they're willing to use the tool in different contexts in the future. Based on the results, we noted that students are positive about the use of reference management software tool. From the results we can conclude that it is crucial to select a reference management software tool which fulfills the requirement of availability.

**Conclusions:** This study shows that neither EndNote nor Zotero meet the requirements regarding the availability of an optimal learning situation.

**Implications:** As an educator it is most important to take into consideration, when using technical devices, that the student feels competent when using devices. This is advantageous for the student by offering them a sense of security and continuity in the learning process.

## SESSION 30

(Platform Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.02

11:10-12:25hrs

#### 30.002

### Motivation of clinical students in the School of Allied Health Sciences, University of Ghana

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**Purpose:** This study sought to determine and compare the motivations of undergraduate clinical students between departments of allied health professions in University of Ghana.

**Relevance:** Motivation is instrumental in producing self-directed and life-long learning health professionals. Motivation in concert with meta-cognitive learning strategies adapts the student favorably to academic pursuit leading to greater achievement and mastery of course content. A mastery goal orientation is related to attitudes of self-directed and life-long learning and is in line with the objective of health professions education, which is desirable for keeping abreast with the changes in the field of practice. The training environment which can affect the quality of student education via the motivation puts students under pressure. There appears to be a dearth of information in Ghana regarding motivation of students pursuing health professions courses.

**Participants:** Two hundred and one (201) students took part in the study.

**Methods:** This cross sectional study entailed the use of a 68-item questionnaire to collect information on goal orientation, causal attributions, learning strategies and preference for difficult or easy task from undergraduate clinical students (Physiotherapy, Radiography, Medical Laboratory Sciences and Dietetics) of the School of Allied Health Sciences, University of Ghana.

**Analysis:** Data was analyzed using descriptive and inferential statistics (Friedman, Wilcoxon Signed Ranks, Kruskal-Wallis and Mann-Whitney U tests) to determine the differences of motivation between gender and course levels. The level of significance was set at  $p < 0.05$  for comparison between genders, departments and course levels for each scale, and  $p < 0.017$  by Bonferroni adjustment within scales.

**Results:** Two hundred and one (201) students took part in the study. Mastery goal orientation was most represented (50 %) and students rated the preference for difficult tasks highest (54%). There was a significant difference ( $p = 0.004$ ) between the mastery orientation students whilst gender yielded no significant difference. On comparison of the performance orientation there was no significant difference between students whilst a significant difference ( $p = 0.020$ ) was observed for gender. There was also a significant difference ( $p = 0.037$ ) on comparison of performance orientation by departments, however there was no significant difference between the superficial learning scale of students, gender and by departments. The difference between meta-cognitive learning and students was significant ( $p = 0.008$ ) but there was no significant difference for gender whilst external locus of control analyzed per department yielded no significant difference. The difference between students, gender, departments on one hand and superficial learning scale, as well as preference of difficult task on the other hand was not significant. Interestingly there was no significant difference between students, gender departments and the preference for easy task.

**Conclusions:** Students were more mastery-oriented, used more meta-cognitive learning, preferred difficult tasks and believe they have control over their success. Females showed more mastery than males while males showed more meta-cognitive learning and preference for difficult tasks. It is suggested that further studies be carried out to determine the differences between clinical and non-clinical students' motivations.

**Implications:** Information on the actual motivations of students in health professions including physiotherapy appears to be scanty in Ghana. Evidence-based policies are needed to effectively deal with the issue of motivation of students and hence the quality of their education.

## SESSION 30

(Platform Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.02

11:10-12:25hrs

#### 30.003

### Educational gaming is an inspirational new way of authentic learning

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**Purpose:** In 2010 Saxion School of Health has initiated a project for the development of gaming as a new form of authentic learning in physical therapy education. Up till then, students were not always optimally motivated by regular classes in a topic that does not have their priority interest: management. We were looking for ways to inspire students to learn by doing in a competitive context and save environment. Gaming appeared to be an excellent solution: creativity, group dynamics, real life situations and competition challenge and inspire students to learn what is involved in the management of a physical therapy setting. Upon the development phase (6 months) a pilot was initiated (6 months). Pilot results brought about modifications in the set-up which were used in the next phase of implementation (6 months).

**Relevance:** In order to prepare students for real life practice they need to be proficient in the management of their own work and their work place, wether it concerns an in- or an out-patient setting. This includes skills regarding patient administration, economic aspects, marketing, patient contact, inter-professional communication and entrepreneurship. In The Netherlands 'management', 'entrepreneurship' and 'innovation' are defined competencies within the professional profile as formulated by the Royal Dutch Physical Therapy Association. Students work on these competencies throughout their formal education.

**Participants:** The gaming concept is meant for 2nd year students to learn how to manage a physical therapy setting. All of the approximately 180 2nd year students are subjected to and involved in the game. 4th year students participate in the co-construction, implementation and continuous development of the gaming concept. Every semester subsequent groups of 5 to 6 4th year students function as game management, supervised by a faculty project manager. Each group of 4th year game management students receive a project assignment focused on continued development, management and evaluation.

**Methods:** In developing the game, literature on gaming in education was reviewed, searching educational databases. Best practices were mapped and one good practice at the University of Groningen, faculty of pharmaceutics was chosen as a model for development. The game is organized in half year cycles, each cycle consisting of planning, doing, evaluating and acting phases. Gaming replaced 2nd year project education. Qualitative and quantitative methods were used to evaluate wether gaming proved to be a more powerfull learning environment.

**Analysis:** Student satisfaction is periodically measured by use of a survey. The initial evaluation included both a survey and interviews. Faculty were informally asked about their opinions.

**Results:** Students involved in the competition evaluate their participation in the game as positive, inspiring and motivating. They appreciate the authenticity, the competion and the demanding characteristics of the game. Consecutive 4th year students, acting as game management were very positive about their assignments. Moreover the learning environment turned out to be significantly more powerful: 5 out of 8 aspects defining a powerful learning environment scored significantly higher.

Faculty initially were somewhat reserved. Currently, as the concept has evolved, most faculty are enthusiastic about the extent of independency in learning.

**Conclusions:** In the experience gained until now, gaming appears to be an interesting new form of physical therapy education in the learning of management skills and competencies. Attention needs be given to population size: the gaming population at one moment had to be scaled down. Also a sufficient introduction for each consecutive group of gamers needs be organized so that they start gaming with the right expectations and preparation.

**Implications:** Gaming should be considered as an alternative way to learn in physical therapy education. With the right set-up it can be a very efficient form.

## SESSION 30

(Platform Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.02

11:10-12:25hrs

#### 30.004

### eMotion: an e-learning tool for gait analysis

**N. Könighofer, S. Pobaschnig**

University of Applied Sciences Vienna, FH Campus Wien, Vienna, Austria

**Purpose:** The statement by Fox and Mills in 1997 »We live in an era of accelerating change which can be expected to lead to major changes in the structure of educational institution« was correct. Due to the exponential increase of the use of internet, e-learning tools have become more and more popular in education. E-learning tools have the advantage that the students can use it individually when, where and as often as they like. E-learning tools can also be used in physiotherapy education, for example for teaching gait analysis. However, at the University of Applied Sciences no such tools have been developed.

**Objective:** to develop and evaluate an e-learning tool called »eMotion« for the gait analysis course of 2nd semester physiotherapy students.

**Relevance:** This e-learning tool provides students the opportunity to practice their gait analysis extensively and helps to get a profound understanding of normal gait which is important to be able to detect pathological deviations.

**Description:** In 2011 an e-learning gait analysis tool was developed including theoretical aspects of gait analysis, practical demonstrations and a self-evaluation part. The theoretical part includes information concerning all gait phases from start to end, the purpose, the range of motion and the most important muscle contractions. In the practical demonstrations video features of a human gait are presented, simultaneously from the front and from the side. While watching the video there are several options: watching the gait of a human (i), or the skeleton for a better understanding what happens inside (ii), the angles of hip-, knee- and ankle-joint (iii) can be shown in the gait analysis as well as the major muscle contractions (iiii). All these options can be combined or observed separately. At any moment students have the possibility to stop or slow down the video for closer analysis. In the self-evaluation part the same video is shown. The video has to be stopped at all different gait phases. After stopping the video six single- and multiple-choice questions pop-up. These questions concern the actual gait phase of the reference leg, the contra lateral leg, the tendency of trunk orientation, the centre of gravity as well as some joint positions and muscular functions in this gait phase. After answering these questions the video is continued, offering a new moment to stop and answer questions about another gait phase.

**Evaluation:** Approximately 120 physiotherapy students of the University of Applied Sciences, Campus Wien are currently using this e-learning tool. Around June 2011 the use of this tool will be evaluated by the students as well as by lecturers of gait analysis and gait instructions. At the Physiotherapy Education Congress in November 2011 the first results will be presented. If the evaluation goes well a following project will be to also provide pathological gait patterns for analysis.

**Conclusions:** Conclusions will be made based on the evaluation results in June 2011

**Implications:** Good knowledge about physiological gait patterns enables students to provide patients with pathological symptoms with the appropriate gait instructions. Providing e-learning tools helps to both correspond to individual learning needs and to bring some more flexibility into the learning-teaching-system.

## SESSION 30

(Platform Presentations)

### Education, transition, and specialization 1

Friday, November 9, 2012

ROOM A.-1.02

11:10-12:25hrs

30.005

### Cost effective digital posture analysis solutions for physiotherapist in master degree programs in developing countries

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**Purpose:** Digital posture analysis systems (PAS) are new approaches on assessment of human postural deformities in clinical practice and research. PAS have advantages on precision and test re test reliability but they are expensive solutions and they are not common in under developed and developing countries.

Generally PAS consist of two parts as image acquisition and image processing. There are limited number of experimental PAS samples in the literature. In the engineering and scientific literature it possible to find open source general purpose solutions for image acquisition and image processing. C++ is the most common language, these solutions were developed in. In physiotherapy education computer programming languages are not a routine lecture. There are free and cheap compilers for C++ but it is an advance level computer programming language. Physiotherapist on master degree programs may have difficulties on learning, developing and modifying solutions in C++.

Matlab is a widespread scientific computing and programming language as C++. It is a standard software owned by most of the universities. Some procedures which are needed for PAS like spatial transformation, edge detection are built in functions in matlab. This advantages reduces needed education on language to develop and modify source code in matlab.

The purpose of this study is to develop a cost effective PAS under Matlab for master degree education programs in developing countries.

**Relevance:** Postural analysis is a fundamental method in physiotherapy practice. PAS are new and expensive solutions with advantages over classical postural analysis methods. In developing and under developed countries, PAS are not common and it is not possible to give vocational training on PAS for physiotherapist in master degree programs. Cost effective solutions may help to disseminate PAS training for physiotherapist in master degree programs.

**Description:** This study is a cost effectiveness and method development research. There is no human volunteer in the study.

**Evaluation:** m files and GUI methods are two solution development methods in matlab. m files have more simple programming architecture than GUI. PAS was written in 4 different m-files for anterior, posterior, left lateral and right lateral postural analysis.

**Conclusions:** A stable PAS software was archived in MATLAB with dynamic measurement and reporting functions. The measurement method is based 2 point slope and 3 point angle measurement. Corresponding bony landmark sets for digital points are requested in an array. At the end of this procedure user can manipulate points in a dynamic way.

Then two kinds of reports generated. The first type report is a color image with measurement result. The identity of the patient is not masked. The second type of the report is a black and white drawing with measurement results which is generated by edge detection method to hide patient's identity. Matlab is a common software in most of the universities. The developed code is an open code for noncommercial purpose. There is no additional cost for the master degree programs.

**Implications:**

The developed PAS can be used in master degree programs with no additional cost.

## SESSION 31

(Platform Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM A.-1.03

11:10-12:25hrs

#### 31.001

### European benchmarking and customized learning

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**Purpose:** When aiming for physiotherapy education at European level, recommendations of the Bologna Process, WCPT, Benchmarking statements, and the 'best practice' results of network organizations like ENPHE are a necessary and rich source for giving direction to educational change. The references guided our institution in the implementation of the Bologna Process. This change is then implemented in the cultural specificity of the local context. Awareness of the mix of factors in this changing process of the involved actors (managers, pedagogical team, learners and external advisors) is a prerequisite to find an effective balance, suitable for this local context. With this presentation we would like to share the experiences in our institution.

**Relevance:** We like to put the idea of a uniform European education in perspective and show the merits and necessity to respect our European diversity in the implementation of new learning. Our experience can highlight the need to adapt recommendations and strategies that are successful in other countries and show the value and the possibility of more variability among Europe to achieve the same goals or competences.

**Description:** With the goal of achieving European quality standards, implement the Bologna demands, achieve the WCPT and ENPHE recommendations for a student centred curriculum and implement physiotherapy competences, the institute implemented changes in the curriculum (structure and content), in the learning strategies and the consequences on an administrative level in 2008/09. With the help of an external and international advisor, the curriculum was shifted from a knowledge based curriculum to a competence based curriculum. Related with this change, case based learning, action learning, learning contracts and portfolio were introduced in teaching and learning strategies. This process demanded an adaptation process for both students, teachers and also the external advisor.

**Evaluation:** After 3 years of implementation, there is a thorough reflection on this process, collected from semi-structured interviews with the actors involved. The managers refer to a more structured curriculum but also an increase in costs. The pedagogical team considers that the impact on students is positive, being more reflective and autonomous, this is validated by the feedback of the clinical educators. At the same time, teachers consider the changes fundamental, but also remark that it still asks extra effort to deal with new learning strategies, particularly with portfolio. The students are very positive about the new strategies having still to adapt to a more explicit increase of autonomous workload. The external advisor found it difficult to adapt this student centred learning to the cultural and contextual factors and needed to adapt methods and strategies to the given context. The informal feedback of ERASMUS tutors and other international experiences, like intensive Programs, show that our students are blending in easily in student centred and outcome based approaches in these contexts.

**Conclusions:** Considering all the factors mentioned above, a mixed system of learning strategies was implemented (student-centred learning and teacher centred learning), having a customized system, that responds to the local needs. Until now this mix turns out to be satisfactory and the performance of students when compared with previous years is similar on the skills and knowledge level but higher on the attitude level, with better levels of meta-cognition and awareness of health needs of patients. Teachers and students are more focused to achieve competences and not only knowledge. The Agency for Assessment and Accreditation of Higher Education, which promotes and ensures the quality of higher education in Portugal, classified the institution being at a very good level, due to the curriculum structure, recognition of prior knowledge, transparency of procedures and mainly for having a good Bologna implementation, not only at the administrative level, but with a fundamental change in methods and learning strategies.

Probably these results were not so consistent without the help of an external advisor, but it's also important to refer that this advisor couldn't implement the same educational system as he experienced in the context of the North of Europe. With the good experience of this implementation, more changes can be implemented in the future according to the evidence of good practices.

**Implications:** When implementing educational changes it turned out beneficial and efficient to have the support of an external advisor with experience in other contexts and systems. The advisors need an open mind and flexibility to adapt their advises to the contextual demands in order to achieve a balanced result. In order to be successful all actors need to be involved. A permanent analysis of the system is needed to make continuous improvement.

## SESSION 31

(Platform Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM A.-1.03

11:10-12:25hrs

#### 31.002

### Inclusion of entrepreneurial competencies within the undergraduate programme

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**Purpose:** The purpose of this paper is to describe the way in which the teachers on the Aarhus physiotherapy degree programme are working to promote the innovative competencies of the students, and the way in which the organisational framework can support these competencies.

We have three focus areas:

- The basic degree programme
- An elective subject
- The faculty

**Relevance:** The importance of entrepreneurial and innovative competencies is underlined in The Bologna Process 2020, in the national and regional strategy for welfare degree programmes. And these competencies have also been defined as a specific learning outcome for the physiotherapy degree programmes in Denmark. The physiotherapy degree programme in Aarhus has been inspired by the work of Professor Sarasvathy on effectuation, as well as by the research of a psychologist named Kirketerp on entrepreneurial didactics. The research shows that in order to promote independence and the entrepreneurial mindset, teaching needs to employ a different form of learning which places the focus on action and reflection on action.

**Description:** The basic degree programme

Innovation is included in three of the 14 modules. In module 1 the students have a day in the woods, doing practical work with motor control. They work in groups using an innovative process and incorporating the woods in a process of rehabilitation. In module 3 (in »Training and movement») and module 10 (in »Organization, management and healthcare economy») the students are involved in the planning of teaching activities with a view to promoting the personal competence of independence, in accordance with the views of Kirketerp. Module 10 involves cross-professional work with students of engineering, with the focus on product development relating to tasks facing external companies.

The elective subject: In module 13 an elective subject is offered in welfare innovation, consisting of a one-week summer camp internship, a facilitating study process, and a study trip to London. This elective subject involves students of nursing, physiotherapy, nutrition and health, teaching theory and practice, administration and social education. The aim is to equip the students to solve the problems of the welfare society in interaction with a variety of representatives of civil society and the private and public sectors.

The faculty consists of 22 teachers who have been involved in innovative processes on a number of occasions and are therefore acquainted with Sarasvathy's effectuation work. On one particular in-service training course for teachers we used the »CIE model« (the Creative room, the Innovation room and the Entrepreneurial room), which has resulted in an innovation week being planned for the students in three different modules.

**Evaluation:** On an ongoing basis we have used observations, informal dialogue and interviews to assess the effect of the new initiatives in relation to both the students and the teachers. The elective subject has been evaluated by a consultant from the Quality Department at VIA University College. This involved input from students, teachers, coordinators, project managers, the companies taking part and education managers.

**Conclusions:** In general the response has been extremely positive – particularly in terms of being involved in an innovative process and working with specific challenges from various public- and private-sector organisations. In particular, the summer school attracted an extremely positive response with regard to the cross-professional element. In addition, four students have taken part in Aarhus University's incubator project.

**Implications:** We now have a good deal of experience when it comes to working with innovative competencies, but we do need to follow up on how innovative processes influence the students after their graduation as physiotherapists. This would be an interesting avenue for further work.

## SESSION 31

(Platform Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM A.-1.03

11:10-12:25hrs

31.003

### Clinical educator decision-making in the context of giving students responsibility on placement

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**Purpose:** This research explores clinical educators' experiences of giving students responsibility on placement. Specifically, it focuses on the decision-making processes that occur, the factors that influence those processes and the interplay between what they term rational judgement and intuition.

**Relevance:** Responsibility is a core concept in physiotherapy education, deeply embedded in ways of thinking and practicing, so much so that we take it for granted. Looking to the future as models of care delivery in the United Kingdom alter, the Chartered Society of Physiotherapy (CSP) has recently developed a Code of Professional Values and Behaviour (2011) which sets out what the society expects of its members; in fact its first principle is that they 'take responsibility for their actions'. This principle incorporates the need for appropriate autonomy and accountability, the need to act within scope of practice and the importance of making informed decisions. In the light of the evident significance of responsibility and its role in professional practice, it is interesting that the ways in which student physiotherapists develop as autonomous practitioners capable of taking on such responsibilities has received scant attention. The first phase of a grounded theory study explored final year students' perspectives on issues of trust and risk based on their placement experience. A strong association between being given and taking responsibility and feelings of empowerment was mirrored by the disempowering effects of being denied responsibility. Building on insight into student perspectives, the second phase of the study sought to investigate the decision-making processes which occur when clinical educators consider whether or not to allocate a task to a student.

**Participants:** A purposive sample of twenty-five clinical educators, with varied years of experience as practitioners, and as clinicians, took part in the study. Their grades varied from Band 5 to Band 7. Their specialties covered the major areas of physiotherapy and the sample included 19 women and 6 men.

**Methods:** The study employed a grounded theory approach. In depth semi-structured interviews with clinical educators lasted between 40-60 minutes and were digitally recorded. The interviews incorporated a visual method of data collection known as 'Diamond Ranking' in which the participants were asked to sort a series of words and statements about the topic into ranked order.

**Analysis:** Data were transcribed and analysed using the constant comparison method. Transcripts were returned to interviewees for verification, consent for use of the data and any further thoughts. A number of patterns and themes emerged.

**Results:** The process of conferring responsibility, which is largely tacit and occurs on-the-hoof in the clinical setting in which time is at a premium, appears to involve a combination of simple heuristics, rational judgement and intuition. A simple model of the process has been generated to illustrate the interplay between the clinical educator's internal and external frames of reference, both of which are influenced by the culture of evidence-based practice. This interplay involves a juxtaposition of intrinsic factors such as professional identity, confidence and sense of duty, with extrinsic factors such as the clinical setting, local policies and the individual student.

**Conclusions:** The decision-making processes occurring when clinical educators consider conferring responsibility for a task to a student are complex and tacit. Whereas simple heuristics play a part and rational judgement is based on factors such as analysis of risk and knowledge of the student, the majority of clinical educators recognise the role of intuition in their decision-making processes.

Further research is required into the dynamics of decision-making of clinical educators and students, giving and taking responsibility respectively. The interplay between heuristics, rational judgement and intuition also deserves further attention.

**Implications:** This study reveals the sophistication of clinical educators' thinking processes when they fulfil their obligation to students by giving them the opportunity to take responsibility for their practice, whilst simultaneously ensuring there are no detrimental effects for clients or the profession. Given that the processes involved are largely tacit and therefore rarely articulated, it will also provide much needed insight and support for new clinical educators and for future students.



## SESSION 31

(Platform Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM A.-1.03

11:10-12:25hrs

31.004

### Clinical competence in physiotherapy education: can simulated patients optimize learning opportunities? A narrative review of the literature

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**Purpose:** The purpose of the study was to identify if the use of Standardized Patients (SPs) can optimize learning opportunities in Postgraduate Musculoskeletal Physiotherapy Education based upon evidence in Medical and Health Care Professions Education.

**Relevance:** Physiotherapy Education must prepare students for autonomous practice. Learning is context specific and acquisition of clinical competence will highly depend upon learning opportunities offered during training. Traditionally 'on the job' training plays a major role. In the past many schools of physiotherapy were affiliated to hospitals or rehabilitation centres offering direct access to clinical practice. Today, trends towards academic learning environments and changes in the health care system make provision of clinical learning opportunities more complicated. The use of Standardised Patients could optimize learning opportunities. "Standardized Patients" (SPs), are actors carefully trained to portray a patient scenario.

**Description:** Does not apply in this study design.

**Evaluation:** For this narrative review a systematic search was carried out to explore the use of SPs in Medical and Health Care Professions Education. Inclusion criteria: review articles on the use of patient simulation in medical education and health professions were searched. No time restrictions were set. The search was limited to English language and humans. Search terms: the terms: »standardized patient (s)« or »standardised patient(s)«, »simulated patient(s) were combined with »Medical Education«, Dental Education, Nursing and« Physical Therapy« or Physiotherapy. Exclusion criteria: articles on high-tech simulation are beyond the scope of this study. Mannequin, intermediate, - or high-fidelity simulation were excluded as well as computer simulation, virtual standardized patients, virtual patient cases, clinical vignettes, intimate examination skills. Simulation in pharmaceutical research and surgery has been excluded from this review. Since education is central in this review unannounced standardized patients measuring clinical competence of physicians have been excluded. The Objective Structured Clinical Examination (OSCE) was not primary focus of this study. Therefore, articles dealing specifically with the psychometrics of the OSCE were excluded. Databases: the databases PubMed, PsycInfo, CINAHL, ERIC where searched until March 2011. Citation searches were carried out and references in the retrieved articles were followed up. Titles of 137 articles were selected. Abstracts were scrutinized. Full texts were retrieved for all studies that seemed to be eligible for inclusion. Finally 55 articles were included in the study (Figure 2). They originate from Medical Education (n=29), Nursing (n= 7), Dental Education (n=1) and Physiotherapy (n= 18).

**Conclusions:** The use of SPs has proved to be a valuable learning tool for various reasons. The simulation can be adapted to the students' level of learning and students can practice until they are confident. The patient scenario can be tailored according to the curriculum needs and can be repetitively used in a standardized manner. Thus, equal learning opportunities for each student can be provided, which is particular important in examinations to improve reliability. Furthermore, the Standardized Patient can have a role in rating the student on observable behaviour by filling out a checklist and give feedback immediately after the encounter. Although expensive to develop, the benefits of the method outweigh the costs. Evidence of the use of SPs in Physiotherapy Education is rare, but the experiences that have been reported in the literature are promising and suggest several options to embed this educational method especially in the field of training in communication, clinical reasoning, and physical examination skills. Areas for further research include: a clear need for more proper designed studies in this area and the development of validated measurement tools to compare clinical performance of physiotherapy students trained in the real clinical environment and those trained with SPs as and add-on to their clinical practice experience.

**Implications:** SPs certainly cannot replace training in the real clinical setting, but can be a valuable bridging tool from the classroom situation to clinical practice and fill gaps where clinics cannot provide specific

learning opportunities.

## SESSION 31

(Platform Presentations)

### Education, transition, and specialization 2

Friday, November 9, 2012

ROOM A.-1.03

11:10-12:25hrs

31.005 What factors explain use of active and evidence based physiotherapy methods with severe disabilities stroke and multiple sclerosis patients in practice?

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**Purpose:** Systematic literature reviews and meta-analysis indicate that the active physiotherapy methods improve functioning of stroke and multiple sclerosis (MS) patients (Paltamaa et al. 2011). The aim of this study was to examine factors, which explained the use of active physiotherapy methods during individual physiotherapy.

The data for this study were collected in Finland by sending a questionnaire to private sector physiotherapy service providers (N= 837) in 2008 as part of the project aiming at developing the medical rehabilitation of severely affected patients (VAKE Development and Research Project), financed by Kela, the Social Insurance Institution of Finland. Physiotherapists response rate was 62% [women 434 (81%), men 99 (19%); average age 46 years (SD 8.8)]. In this study active physiotherapy was determined as methods, which required physical exertion or activity directly during physiotherapy or indirectly after physiotherapy through guidance and counseling. The examined explanatory factors related to physiotherapists, rehabilitee, rehabilitation plan, rehabilitation decision, cooperation and environmental factors. In addition, the disease group was taken into. Statistical methods were Spearman rank correlation coefficient, multivariate methods of segregation analysis and logit models.

Those physiotherapists, who had more cooperation with rehabilitee and with various professional groups, used statistically significantly more frequently active physiotherapy methods. In addition, these methods are used more frequently among younger disease age groups (under 35years of age). Physiotherapists, rehabilitation plan, rehabilitation decision, or environmental factors did not explain statistically significantly the use of active physiotherapy methods. There were also no differences in study results between disease groups.

Based on the results, cooperation with the physiotherapist and rehabilitee as well as with different professional groups is important when developing physiotherapy methods, which based on evidence based physiotherapy, are more participatory and active to rehabilitees. Physiotherapy is required first, effectiveness studies, second, current practice studies and third, studies, which try to explain factors behind the used physiotherapy methods. In addition in future we need more studies, which systematically evaluate how these evidence based physiotherapy is adopted in Bachelor's and Master's education or in continuing education. In future in physiotherapy education should play more attention to both evidence based physiotherapy and in multidisciplinary high-quality teamwork, co-operation between organizations, flexible communication, an evaluation of personal and environmental factors and of the needs and goals of clients.

**Relevance:** Study is related to evidence-based physiotherapy in practice as well as the factors explain use of active and evidence based physiotherapy methods.

**Participants:** Physiotherapists n= 533, [women 434 (81%), men 99 (19%); average age 46 years (SD 8.8)].

**Methods:** The data for this study were collected in Finland by sending a questionnaire to private sector physiotherapy service providers (N= 837) in 2008 as part of the project aiming at developing the medical rehabilitation of severely affected patients (VAKE Development and Research Project), financed by Kela, the Social Insurance Institution of Finland.

**Analysis:** Statistical methods were Spearman rank correlation coefficient, multivariate methods of segregation analysis and logit models.

**Results:** Those physiotherapists, who had more cooperation with rehabilitee and with various professional groups, used statistically significantly more frequently active physiotherapy methods. In addition, these methods are used more frequently among younger disease age groups (under 35years of age). Physiotherapists, rehabilitation plan, rehabilitation decision, or environmental factors did not explain statistically significantly the use of active physiotherapy methods. There were also no differences in study results between disease groups.

Based on the results, cooperation with the physiotherapist and rehabilitee as well as with different professional groups is important when developing physiotherapy methods, which based on evidence based physiotherapy, are more participatory and active to rehabilitees.

**Conclusions:** Physiotherapy is required first, effectiveness studies, second, current practice studies and third, studies, which try to explain factors behind the used physiotherapy methods. In addition in future we need more studies, which systematically evaluate how these evidence based physiotherapy is adopted in Bachelor's and Master's education or in continuing education.

**Implications:** In future in physiotherapy education should play more attention to both evidence based physiotherapy and in multidisciplinary high-quality teamwork, co-operation between organizations, flexible communication, an evaluation of personal and environmental factors and of the needs and goals of clients.

## SESSION 32

(Platform Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM A.-1.04

11:10-12:25hrs

32.001 Introducing a competence-based educational programme based on the different roles that physiotherapists fulfill

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**Purpose:** In Flanders there are 5 institutions that offer full educational programmes to become physiotherapists. All of them offer a Bachelor and Master of Science programme consisting of a 3-year bachelor programme (180 E.C.), followed by a mandatory 2-year master programme (120 E.C.). The University of Antwerp and the Artesis University College of Antwerp in cooperation with the Free University of Brussels developed a competence-based educational programme for physiotherapy students based on the different roles that physiotherapists fulfil. The purpose of this contribution is to identify the different steps in introducing a competence-based educational program for physiotherapy and to elaborate on the rationale behind the model.

**Relevance:** Educational programmes should educate young people to acquire and develop the competencies that they will need to start their professional careers. The programme and the courses are tools to ensure that students can develop the necessary competencies expected to start at entry-level as qualified physiotherapist.

**Description:** CanMEDS is a framework for competency-based medical education that was developed in the early 90's in Canada and was revised in 2005 to clarify the definitions and provide "key" and "enabling" competencies for each role. The CanMEDS framework identifies and describes seven roles that lead to optimal health and health care outcomes: medical expert (central role), communicator, collaborator, manager, health advocate, scholar and professional.

In 2010 a competency profile for physiotherapists was published by the Belgian National Council for Physiotherapy. In this document 3 roles were identified: caregiver, innovator, manager.

The University of Antwerp, together with the Artesis University College of Antwerp, developed an educational programme for physiotherapy using 3 roles, based upon the aforementioned CanMEDS framework and congruent with the roles defined by the National Council for Physiotherapy of Belgium: clinician, scientific researcher and professional.

Within every role competences were formulated, making sure that all of the Dublin-descriptors were covered. The next step was to develop a programme with courses that allows students to acquire and develop all of the specified competencies, using a covering matrix (competencies x courses). Evaluation and assessment were based on competencies and corresponding behavioural indicators. Every course has an assessment matrix, indicating clearly what competences will be assessed, based on which behavioural indicators and what the relative weight of each competence is.

**Evaluation:** The roles and corresponding competencies were presented at a panel of representatives of the profession (n=17) and they were asked (by questionnaire) to which degree they agreed that the specific roles and competencies were important for physiotherapists. Although a vast majority considered the proposed roles (92,8%) and competencies (100%) as a strong characteristic of the physiotherapy education programme, it became apparent that the scientific competencies were generally considered a little less important than the clinical or professional competencies (data not shown in abstract).

**Conclusions:** Introducing a competence-based educational programme for physiotherapy is feasible. However, it should be taken into account that this is a gradual

process that takes time and has to be accompanied by a new way of assessment and will probably result in a redesigned curriculum since the programme is subservient to the competencies that the student has to acquire and develop. Educational institutions have to involve representatives of the profession to align competencies of the educational programme and competencies expected in the professional field with special attention for dialogue about the necessity of scientific competencies needed for evidence-based clinical practise and innovation of the profession.

**Implications:** Representatives of the profession should be involved in defining the roles and competencies a physiotherapy educational program should aim for. An international or European position stand on which roles and competencies should be considered important for physiotherapists could facilitate competency-based physiotherapy education.

Changing to a competency-based physiotherapy educational programme is feasible but has to be accompanied by a new way of assessment and a curriculum that is subservient to the competences that the student has to acquire and develop.

## SESSION 32

(Platform Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM A.-1.04

11:10-12:25hrs

32.002 Competence-based curriculum of the Bachelor of physiotherapy degree at the Zurich university of applied sciences

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**Purpose:** As a result of the transition of physiotherapy education in Switzerland into the higher education sector, in 2009 national final competencies at the Bachelor and Master Degree levels, based on seven professional roles (KFH, 2009), were formulated. Competencies are the abilities and skills necessary to solve defined problems and to successfully and responsibly apply these solutions in a variety of situations (Weinert, 2001).

**Relevance:** The implementation of a competence or outcome-based Bachelor Degree programme presents a pedagogical-didactic challenge. The explicit awareness of the professional roles and the promotion of the respective competences are implemented in the physiotherapy programme using innovative approaches.

**Description:** There are two overriding key features of competence-based teaching: »individual, self-directed learning« and »problem-solving, i.e. the ability to transfer these skills into practice«. The implementation of these requirements uses seven strategies (Feindt & Meyer, 2010) (1) cognitive activation of the students through challenging, stimulating and relevant tasks, (2) a horizontal (transfer to other fields) and vertical (cumulative, spiral development) integration of knowledge and skills, (3) a diverse and reflective practice of physiotherapy skills, (4) training in problem-solving skills in realistic situations, (5) an individual, adaptive and continuous supervision of these processes through all study and practice modules, (6) a competence-based formative and summative performance record of achievement, and (7) a systematic reflection and documentation of individual learning processes and learning goals.

**Evaluation:** As a result, the seven professional roles determine the areas of activity for the continuous development of the required skills, both in the physiotherapy-specific and the inter-professional modules.

We use the following educational settings to implement the above strategies: scheduled treatment of patients under supervision, regular real life problem resolution within a problem-based learning approach, repeated supervised skills training with explicit peer feedback, specially designed blended learning modules, competence-based formative and summative performance tests and a mentoring programme over the whole course time.

**Conclusions:** The revised curriculum provides a wide range of opportunities to learn and improve physiotherapy-specific and inter-professional skills.

**Implications:** It forms a promising basis for the education of accomplished and reflective health professionals.

## SESSION 32

(Platform Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM A.-1.04

11:10-12:25hrs

32.003 Vocational/ professional guidance as a supplement to the training program in the degree of physiotherapy

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**Purpose:** Spanish Universities clearly understand that it is extremely important to link this institution with the business world, opening new doors to brighter prospects for graduates.

**Relevance:** Due to the implementation of the new Graduate studies and the Quality Assurance systems of universities in Spain, there has been an adaptation of the infrastructure, organization, resources and efforts towards the reality of the European Higher Education programmes with the establishment of chronological guidance, support and integration for both, students and graduates

**Participants:** 406 out of the 1956 Physiotherapy graduates who studied their degrees at Universities in Andalusia (Southern Spain) between the years 2003 and 2009 were selected to carry out this research.

**Methods:** The main line for this study is observational, transversal, descriptive and inferential, having been conducted over four stages:

- Questionnaire design and validation by external experts in the discipline field of Physiotherapy.
- Preparation of the questionnaire (14 items on vocational / professional guidance and job search) besides a pilot study with 20 graduates.
- The link to the survey is sent through the Professional Association of Physiotherapists of Andalusia.
- Data collection and analysis.

**Analysis:** Most of the questionnaire items have been described by qualitative variables. To study the homogeneity between different sub-samples, we used the chi-squared test, with a value of  $p < 0.001$ .

**Results:** The level of information about professional careers is very high today, especially if the student has received vocational guidance during the degree (86.5%). 95.2% of the students questioned agreed with the usefulness and necessity of this specific type of guidance during their studies. This guidance and job search was primarily aimed at the third year degree in Physiotherapy (68%). First, the research started by contacting with different Physiotherapy centers (81%). 73.9% of the new graduates decided to look for an employment and continuing with postgraduate training. The University, as in many other pieces of research, is one the last positioned as a job source in spite of the important role of guidance during the degree (77.5%). Finally, the most valued aspects of applying for a job as a physiotherapist are those concerning attitude (99.5%) and the importance of the personal interview (91.5%) at the expense of a lower value placed on academic record (37.6%).

**Conclusions:** - Vocational / professional guidance is highly valued by students of physiotherapy, especially if organized by the University, positively influencing job search.

- Less than a third of the graduates began looking for employment before the end of their studies.
- After finishing their degree, a majority decided to seek employment and begin postgraduate training.
- The attitude and personal interviews are highly valued aspects to get a job as a physiotherapist.

**Implications:** The value of proper guidance has become an imperative among university managers, graduates and employers.

## SESSION 32

(Platform Presentations)

### Education, transition, and specialization 3

Friday, November 9, 2012

ROOM A.-1.04

11:10-12:25hrs

32.004 Transition of master competencies into practice

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**Purpose:** Master degree education aims students to progress from the EKK6 to the EKK7 level. In the Netherlands the EKK6 level in physiotherapy is represented by the bachelor degree education which focuses on the evaluation of the healthcare for the individual patient. The EKK7 level requires the student to contribute to the development of the profession in an individual and original way. To obtain this level, a master degree program started in 2005. It focuses also on the evaluation of the healthcare on group level in order to use the results for the development of the profession. In the Netherlands the master degree is offered together with different specializations in physiotherapy. The research question is to what extent master graduates bring the obtained master degree competences into practice.

**Relevance:** For the master degree education, it is important to keep in touch with the practical field. It enables a follow-up evaluation of the master degree program after graduation and provides information for adjusting the master degree program in order to meet the needs of professional practice.

**Participants:** 295 master graduates of the University of Applied Sciences (UAS) Utrecht. In total, 112 master graduates (38%) completed the survey. The mean age of the respondents was 34,5 ( $\pm 9,5$ ) years. On average, they had 10 ( $\pm 5$ ) years of practical experience in physiotherapy and 54% was graduated with the master degree since one year. 80 % worked in primary healthcare.

**Methods:** The research was carried out by students of the master degree program. The master graduates of the University of Applied Sciences (UAS) Utrecht were approached to complete a survey form digitally. The survey included 10 items about baseline characteristics and 28 propositions based on the role of specialist (closely related to the treatment of patients), professional leader (closely related to implementation of health care innovations) and developer of the profession (closely related to literature and observational research) as formulated by the master degree program of the UAS Utrecht. Respondents could agree or disagree with the propositions with four response options: fully agree, somewhat agree, hardly agree and disagree.

**Analysis:** Characteristics of study participants were summarized using means and standard deviations in case of continuous variables and frequency and percentage distributions in case of categorical variables.

**Results:** The role of specialist was 'fully' and 'somewhat' carried out by 63% and 33%, respectively. The role of professional leader was 'fully' and 'somewhat' carried out by 20% and 64%, respectively. The role of developer of the profession was 'fully' and 'somewhat' carried out by 18% and 63%, respectively. In other items of the survey most of the respondents stated that the master degree program provided a deeper insight into the profession and a bridge between science and practice. This resulted in a better and more evidence based performance in the role of specialist. In general, master graduates were discontent with the reimbursement for the obtained master competencies.

**Conclusions:** The master graduates in this research were able to make the transition of master competencies into practice in a sufficient way. This conclusion should be considered tentative because of response rate of 38% and the limitation to the master graduates of one university. Besides, the use of a survey precludes the assessment of the quality of the transition.



**Implications:** Research with larger groups of master graduates from different UAS also assessing the quality of the transition is recommended.

## SESSION 33

(Platform Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.21

11:10-12:25hrs

33.001 Project based learning in the bachelor physiotherapy program - presentation of an educational model

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**Purpose:** Health Promotion and Preventive Work (HPPW), is part of the second year curriculum of the Bachelor program in Physiotherapy at Bergen University College (HiB). The course takes place as a yearly event across 3 months. It is open for physiotherapy students coming from partner-institutions within the Erasmus Life-long Learning programs and accredited accordingly. The teaching and working language is English. The module is part of the HiB's profile regarding Internationalization at home.

The purpose of the presentation is to give an outline of how we have developed an educational model that challenges the students (to deliver) and is of value to the community. **Relevance:** There are students that for various reasons cannot take advantage of existing exchange opportunities as part of their Bachelor program.

Presenting a model that can be used by others for the purpose of internationalization at home might therefore be of value to other institutions.

**Description:** Project work is a common work form in the HPPW field, and therefore a major part of the module. Three »real-life« projects are included that all incorporate physical activity (PA) in one way or another. Focusing on PA is based on the knowledge that lack of activity is a challenge in today's (western) society. PA is one means that easily can be used in different ways by many groups to promote health as it challenges some of the negative health effects associated with passive lifestyles. PA is not one concept, but covers several approaches that allow a wide range of activities to be included under this heading

In the first project (P1), PA as self-training is focused. P1 runs as a randomized controlled trial (RCT) for about 10 weeks (approved by the Regional committee for Ethics). Testing of fitness and strength before and after intervention is compulsory for all students. The students are introduced to test procedures. Intervention consists of a) strength or b) endurance training and students are randomly allocated to groups. The students' results from testing before and after intervention are used to set focus on statistical methods and data- analyses. Results from the testing and data-analyses are presented in a seminar.

In the second project (P2) focus is on the work place and targets health related complaints in working life. A selection of work sites are visited to form an opinion on the working situation according to defined criteria. The visit results in a written report that is presented in a seminar at HiB before it is presented at the work place.

The last project (P3), focus on physical activity to promote health in specific target groups in the community. Life style problems represent a challenge in today's societies. The way we live influence, not only the actual number of years we live, but also the quality of our lives. The essence of the project can be stated as follows: How can you (as physiotherapists) use physical activity as a means to promote change in lifestyles?

The overall learning aims of the module are as follows

Students should have knowledge of; interactions between the environment and groups/individuals; health problems and risk factors in groups related to socio-cultural differences and in a lifespan perspective; some relevant research methods within the field of HPPW; legislation related to working life.

Students should demonstrate; skills regarding the use of physical activity in HPPW; ability to give information and advice to groups to inspire and promote health changes; ability to work systematically in collection, analysis and presentation of data; writing and presentation skills.

Students should; show competence needed for working within the field of HPPW; understand the importance of motivation in health related changes.

**Evaluation:** The module is evaluated on a yearly basis by students and faculty.

**Conclusions:** We have within the last two years built an educational model that takes advantage of students creativity and is attractive to and useful for a diverse range of partners in the local community. The module is evaluated positively by 95% of the students and function as an effective arena for integration of incoming exchange students.

**Implications:** Mixing qualities of the students and real-life projects as is done in this model, combines physiotherapy practice and education, establishing a win-win situation between students, HiB and the local community. Students learn to use their inherent creativity professionally and the community gets an opportunity to challenge lifestyle issues without costs. It is a model that might be useful for other insitutions and other professions.

## SESSION 33

(Platform Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.21

11:10-12:25hrs

33.002 An investigation into the observation of the ENPHE country coordinators on the influence of the Bologna Process on physiotherapy education across Europe

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**Purpose:** The purpose of this study was to investigate the observations of the ENPHE country coordinators on the influence of the Bologna Process within their respective countries and to compare these observations between the European countries.

This study forms part of a larger study that has explored the influences that the Bologna Process has had within physiotherapy education across Europe.

**Relevance:** The Bologna Process was created in 1999 as an on-going pan-European initiative that was originally intended to harmonise the architecture of the European higher education system through the creation of a European Area of Higher Education (EAHE) by 2010. Throughout these years it would be expected that physiotherapy course programmes across Europe have changed and been redesigned to meet emerging challenges. There has been little study of how the Bologna Process has influenced physiotherapy education across Europe.

**Participants:** 28 ENPHE country coordinators were selected to participate in this study.

**Methods:** Participants were invited to submit their responses to a questionnaire through electronic format using the web-based programme SurveyMonkey®.

**Analysis:** Results for this study were analysed descriptively.

**Results:** 23/28 (82.1%) response rate

The respondents felt that the Bologna Process was 'very important' for the organisation of the physiotherapy programmes in their country, 43.5% (n = 10) and 60.9% (n = 14) indicated that the Bologna Process had influenced change in the organisation of the physiotherapy programmes in their country 'to a large extent'. Physiotherapy is regulated on a national level 91.3% (n = 21).

From a list of Bologna Objectives, the participants were asked to indicate which existed in their respective country as either a national obligation (and therefore were adopted by all the physiotherapy schools by national consensus) or which existed on the basis of an institutional discretion (and therefore were adopted only by certain institutions depending on their individual circumstances). The summary for each of the listed Bologna objectives will be presented.

**Conclusions:** The data presented from the response to a survey questionnaire by the country coordinators within ENPHE reveal that the objectives of the Bologna Process have been implemented to some degree or other in most but not all of the countries.

**Implications:** This study has implications for comparative assessment of the influences of the Bologna Process between countries in Europe.

## SESSION 33

(Platform Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.21

11:10-12:25hrs

33.003 Successing in the transfer of curriculum work into the physiotherapy degree program

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**Purpose:** To reflect on the progress of curriculum work to be able to learn from it. To be able to share the experiences about curriculum work and transfer into the degree program.

**Relevance:** Education systems in transition will face similar difficulties in developing curricula according to local needs, legal requirements and requirements from universities. On the one hand this talk will show a possible way forward to meet the expectations of different stakeholders, and on the other hand a practical example of how to put a curriculum into practice.

**Description:** Curriculum developers at the university of applied sciences, teachers and students of the same institution.

**Evaluation:** Retrospective analysis of curriculum writing process and the transfer of the curriculum into practice. Reflecting on the curriculum writing process and first year of transfer into practice.

**Conclusions:** · Input from various stakeholders (placement partners, teachers, new graduates, employers) provide a varied and more comprehensive view on the curriculum and educational outcomes.

· Defining learning outcomes in all three dimensions (knowledge, skills and attitude) helps to put emphasis on all three dimensions in course planning and examinations.

· Defining all three dimensions allows for a wider discussion of didactic elements within a module or course unit.

· Involving a wide range of stakeholders places more emphasis on the product and facilitates agreement of all stakeholders.

· Using patient examples throughout all modules and course units within one semester facilitates learning, understanding and reasoning for students.

· Using module coordinators helps in communication and in reduction of duplications.

**Implications:** · Curriculum work should be a shared experience from different stakeholders in physiotherapy education.

· Clear definition of expectations in all three dimensions helps in defining course content and didactic strategies.

· The use of cases facilitates a comprehensive view of learning outcomes in one semester for both teachers and students.

## SESSION 33

(Platform Presentations)

### **Education, transition, and specialization 4**

Friday, November 9, 2012

ROOM C.E.21

11:10-12:25hrs

33.004 Transition and specialization in physiotherapy education at the University of Applied Sciences Utrecht

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**Purpose:** Nowadays each university in Europe needs descriptors defining levels in the to use the European Qualifications Framework (EQF). Based on the EQF the University of Applied Sciences Utrecht described criteria for the end level of the master programme physiotherapy. These descriptions helps us to clarify the master degree level in physiotherapy education. In our project we formulated the end level (level 7 of the EQF) for the roles of specialist and developer of professional practice in physiotherapy.

**Relevance:** Based on agreement in the Educational Network of Higher Physiotherapy Education (ENPHE) and national statements for master degree level qualifications, the master programme physiotherapy of the University of Applied Sciences Utrecht in the Netherlands has been developed a new 90 EC modular curriculum with modules of 5 EC's (both end modules are 10 EC). In all Europe it is important to distinguish EQF-levels between bachelor and master programmes (Bologna Declaration). Besides, our university pursues the aim to define the same quality of end level in our five master specializations in physiotherapy: sports; manual therapy, pediatrics; geriatrics and mental health.

**Description:** In our graduate programme we educate our master students to be competent in two main professional roles: 1) Specialist (diagnosing, intervening, supporting health and collaborating) and 2) Developer of professional practice (researching in professional practice, managing change in professional practice and stimulating of competence). The assessment of students' competences in these two professional roles are based in every single module on clear criteria which make explicit that students can act a) methodical, b) well-founded, c) result-oriented, d) communicative, e) creative, f) critical and g) reflective. It makes sure that the five different specializations with different contexts are examined on the same master level.

**Evaluation:** Our university participates in the 'Focusgroup EQF' of ENPHE in which the level discussion with other universities in Europe is started. Besides the Accreditation Organisation in the Netherlands and Flanders (NVAO) positively evaluated the quality of our master programme physiotherapy.

**Conclusions:** We described the transition to an EQF level 7 programme in physiotherapy education and find clear criteria to assess all students' products in the modules of the master programme in five specializations physiotherapy.

**Implications:** Our university has to deliver clear criteria to assess end level (EQF-7) of both practical (role of specialist) and scientific (role of developer of professional practice) competences of students in our five specializations. Transparency is an important tool to survive as an high-quality university.

## SESSION 33

(Platform Presentations)

### Education, transition, and specialization 4

Friday, November 9, 2012

ROOM C.E.21

11:10-12:25hrs

33.005 A survey of views of heads of physiotherapy programmes of the influence of the Bologna Process on physiotherapy education across Europe

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**Purpose:** The purpose of this study was to investigate the views of the Heads of physiotherapy programmes across Europe on the influences of the Bologna Process on physiotherapy education.

This study forms part of a larger study that has explored the influences that the Bologna Process has had within physiotherapy education.

**Relevance:** The Bologna Process was created in 1999 as an on-going pan-European initiative that was originally intended to harmonise the architecture of the European higher education system through the creation of a European Area of Higher Education (EAHE) by 2010. Throughout these years it would be expected that physiotherapy course programmes across Europe have changed and been redesigned to meet emerging challenges. There has been little study of how the Bologna Process has influenced physiotherapy education across Europe.

**Participants:** 201 heads of departments from 26 European countries were selected to form part of the study.

**Methods:** Participants were invited to submit their responses to a survey questionnaire through electronic format using the web-based programme surveymonkey®.

**Analysis:** The results for this study were analysed descriptively.

**Results:** 91/201 (45.3%) response rate.

52.9% (n=46) felt that the Bologna Process was 'very important' for the organisation of the physiotherapy programmes in their department with 58.6% (n = 51) claiming that the Bologna Process influenced changes in the organisation of the physiotherapy programmes in their department 'to a large extent'.

98.9% (n=90) of the participants reported that their department offered a Bachelor degree programme of studies of which the duration ranged between 3 years (60.7%, n=54), 3.5 years (10.1%, n=9) and 4 years (32.6%, n=29).

38.2% (n=34) of the heads of departments claimed that their students spent between 1001 and 1200 hours in clinical practice throughout the Bachelor degree programme.

34.5% (n=30) reported that the average student work load during a full-time physiotherapy study programme for each year was between 1500 to 1600 hours.

84.5% (n=71) of the heads of departments reported that they had implemented the ECTS. In terms of student workload the number of hours that 1 ECTS accounted for varied between 25 and 30 hours.

**Conclusions:** The data from the response to the survey by Heads of Department of physiotherapy schools reveal that the objectives of the Bologna Process have been implemented, to different extents, in most but not all countries. It provides information on institutional implementation and application of the objectives that may serve as a benchmark for programmes to compare their position to other programmes.

**Implications:** This study has implications for the comparative assessment of the influences of the Bologna Process between countries in Europe.

## SESSION 34

(Platform Presentations)

### Education, transition, and specialization 5

Friday, November 9, 2012

ROOM C.E.02

11:10-12:25hrs

34.001 Go Fish! A classroom activity to challenge assumptions about and enhance empathy for patients/clients in physical therapy students

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**Purpose:** This classroom activity provided an opportunity for doctor of physical therapy (DPT) students to challenge their baseline assumptions about patients who have multiple and varied biopsychosocial attributes and to reflect on these assumptions as developing health care professionals.

**Relevance:** Physical therapy patients/clients present with many variables outside the "physical" realm. The term biopsychosocial implies that social and psychological concerns may have a strong influence on an individual's physical condition. This is vital for physical therapist (PT) students to understand. As the profession moves toward autonomy, PTs are increasingly being expected to consider the whole person, not just the medical diagnosis. PT students may have judgments, biases, and stereotypes about patients perceived to be 'different' from themselves, especially concerning socioeconomic and psychological status. These may directly or indirectly affect the quality of care provided and the level of empathy developed for patients. Helping students recognize potential biases is important so they may provide the highest level of care to any patient regardless of biologic, psychologic, or social condition.

**Description:** This three-phase assignment was presented to students one phase at a time to avoid influencing assumptions or attitudes during reflection in any phase. The assignment occurred in a first-year DPT course and required each student (n=44) to select one challenging attribute from each of three fishbowls: biologic (medical), psychologic (emotional/mental), and social condition. For example, a student may have drawn T12 spinal cord injury, bipolar disorder in depressive state, and losing home to bank foreclosure. No student had the same combination of attributes. Phase 1 placed students in the role of the PT for the patient with the chosen attributes. Immediately after drawing the attributes, students completed a survey describing positive and negative assumptions about their patient, and any concerns about being this patient's PT. Once this survey was completed, Phase 2 commenced which required students to shift into the role of the patient with these attributes for a period of 6 weeks. They recorded the impact these attributes would make on their daily routine and their lifestyle as a whole. Extra credit was given for »diving deep« if a student made an effort to experience life with these attributes in a more profound manner. After 6 weeks, students completed a survey regarding the daily and life-long impact of 'being' this patient. Once this survey was completed, Phase 3 was initiated where students were placed back in the role of the patient's PT. Students completed a final survey to record any changes in their assumptions of working with a patient with these attributes.

**Evaluation:** Data were collected from a pre- and post- assumption-based survey (PT role), a function-based impact rating scale (patient role), and a pre- and post- Empathy Construct Rating Scale (ECRS).

**Conclusions:** In the initial role of the PT, many students reported apprehension and negative assumptions about working with patients with the selected attributes. Comments included, »I fear they might know bad people,« and »high school dropout makes me think dumb/unwilling to try.« Once in the role of the patient, the average overall life impact of the selected attributes was rated as »significantly more difficult than usual.« Reflecting upon life factors, students frequently cited relationships, employment, and social stigma as the most challenging issues. Finally, when students returned to the role of the PT, they described themselves as more compassionate toward the individuals with the selected attributes. Comments included, »my fear now is that I won't be able to develop a relationship with this patient,« and »it may be wrong to be so judgmental.« Pre-assignment, most students were rated as "moderately empathic" on the ECRS. Post-assignment, most students were rated as "extremely empathic."

**Implications:** The American Physical Therapy Association Core Value of Compassion/Caring is difficult to teach. Though this classroom activity was conducted in the U.S., recognition of the influence and impact of biopsychosocial factors is increasing worldwide. This assignment is an innovative method to increase student awareness of the need to demonstrate concern and empathy when working with patients with various biopsychosocial challenges.





## SESSION 34

(Platform Presentations)

### Education, transition, and specialization 5

Friday, November 9, 2012

ROOM C.E.02

11:10-12:25hrs

34.002

### Arts, literature and reflective writing as educational strategies to facilitate empathy and reflexive skills among physiotherapy students

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**Purpose:** The purpose of this qualitative study was to explore the final year physiotherapy students' perspectives about the contribution of arts, literature and reflective writing in facilitating empathy and reflexive skills.

**Relevance:** The use of arts, literature and reflective writing has becoming increasingly popular in health professionals education, especially in medical courses. Its use increases health professionals' sensitivity to understand the singularity of patients' context and the meaning they give to patients' illness. Through arts and literature, health students develop skills to observe, absorb, interpret and respond empathically to patients' stories. Simultaneously, reflective writing challenges students to reflect about their clinical experiences from the perspective of both themselves and patients. Despite the regular reference to the use of arts, literature and reflective writing in the education of health professionals, research examining its contribution as an educational strategy to promote empathy and reflexive skills in physiotherapy is limited, particularly from the student perspective.

**Participants:** Following ethical approval obtained from the Ethics Committee of the host Polytechnic students were given an information sheet concerning their participation in the study. Students, who voluntarily decided to participate, signed a consent form. Data were gathered from eighteen students that had successfully completed a course using arts, literature and reflective writing.

**Methods:** Three focus group meetings using a semi-structured interview schedule were used to collect data. Focus group sessions were audiotaped and transcribed verbatim.

**Analysis:** Interpretative phenomenological analysis was used to conduct the study and analyze the transcripts.

**Results:** Three superordinate themes emerged from data Anal **Analysis:** »developmental understanding of the patients' experiences«, »developmental understanding about the self« and »embedding reflection in clinical practice«. Students emphasised an increasingly capability to be sensitive and vicariously experience the others' experience. They discussed their experience in looking at paintings and literary texts as a metaphor of patients and use them to develop imagination and interpretative skills. They feel more competent and skilful in observing, listening and interpreting patients' narratives. Students also reported that they became more aware of themselves, personally and professionally. Through reflective writing students reported they are more capable to think critically about their practice and learning needs for continuous professional development. They considered reflective writing demanding but critical to improve their capabilities to learn through reflection. Finally, students highlighted the contribution of these strategies in making reflection part of their daily practice.

**Conclusions:** Final year physiotherapy students reported enhanced skills of empathy and reflection, which they related to the educational strategies used in the course.

**Implications:** This findings support the inclusion of those strategies within the physiotherapy undergraduate curricula, but further studies are needed to examine how those skills impact on students' clinical practice.

## SESSION 34

(Platform Presentations)

### Education, transition, and specialization 5

Friday, November 9, 2012

ROOM C.E.02

11:10-12:25hrs

34.003

### Staying attuned kinesthetically in professional intercorporealities. How students of physiotherapy do bodies and become more embodied bodies during training

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**Purpose:** To generate new knowledge about different ways of coming to know the corporeal and the intercorporeal among students of physiotherapy.

**Relevance:** Corporeal and intercorporeal knowledge often operate in a tacit manner, hence it is pivotal to find ways of bringing this kind of knowledge to the fore.

**Description:** The core empirical material for this study comprises a total of 61 interviews conducted with 29 Norwegian students of physiotherapy.

**Evaluation:** Method: A set of complementary qualitative / ethnographic methods were employed: Repeated dialogic interviews/conversations with students of physiotherapy; Participant observation in the out-patient department at Oslo University College; Formal and informal discussions with teachers/lecturers at the physiotherapy programme.

**Analysis:** Transcribed interviews and fieldwork notes (from the observations) were read through in its entirety, before significant themes were identified and the material organized accordingly. The material (quotations and field notes) were structured so as to allow tracing participants and topics over time and in different educational sites.

The paper is theoretically informed by works of William James, Michael Polanyi, Donald Schön, Vinciane Despret, Maxine Sheets-Johnstone and Bruno Latour.

**Conclusions: Results:** Physiotherapists possess at least two modes of knowing – of which only one can be adequately articulated verbally. Hence, in physiotherapy we encounter a lack of articulatory tools, such as a vernacular that makes it possible to both speak about and acknowledge the kinds of knowing that operate in an embodied, incorporeal and often tacit manner. Students become more embodied bodies during training. They learn to stay attuned kinesthetically (Sheets-Johnstone 1999) by allowing themselves to be affected and sensitive to corporeal and intercorporeal differences and nuances (Lator 2004), and by exploring and challenging their own bodily habits of attention (James 1950 [1890]). Indwelling (Polanyi 1966) and reflection-in-action (Schön 1987) are crucial in this process. Students learn both about and through the body in different educational sites like anatomy, physiology and pathology classes, manual examination and treatment technique classes and movement classes.

**Conclusion:** The knowledge physiotherapists possess, is perhaps best conceptualized as radically different, albeit complementary, forms of knowing rather than as one uniform knowledge base. We find one mode of knowing about the body which can be (and is) explicitly and verbally articulated, together with an other mode of knowing through the body, a knowing which frequently operates in a taken-for-granted and/or tacit manner and, hence, is articulated through other means than words. Importantly, there is a dialectical relationship between these two forms of knowing – they interact and inform each other.

**Implications:** There is a need to find ways of acknowledging this latter mode of knowing and of bringing it to the fore in the ongoing endeavour of educating physiotherapists.

## SESSION 34

(Platform Presentations)

### Education, transition, and specialization 5

Friday, November 9, 2012

ROOM C.E.02

11:10-12:25hrs

34.004

### First the performance and then train, train, train: a sophisticated model of learning the practice by novice physiotherapists at the University of Applied Science in Bochum

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**Purpose:** The purpose of the study was to explore the development of experience and competence in novice physiotherapy students during the early introduction of practice in a real clinical setting during the Bachelor degree programme.

**Relevance:** Physiotherapy students usually start their clinical placements after gaining some background knowledge such as anatomy, physiology and basic physiotherapeutic techniques. Placements with patient contact do generally not start before the third semester of the professional training and the treatment of patients is based on cognition and theory-led reasoning about pathology. In recent research the relevance of the socio-cultural context and its impact on the learning processes received more attention (Black et al., 2010; Kilminster, 2009). This led to the development of a model of learning clinical practice which is based on the assumption that clinical decision making is not only dependent on theoretical knowledge, but also dependent on the clinical setting and the socio-cultural context. Therefore, the students' learning process is influenced and enhanced by the real working environment. This idea was implemented in the Bachelor degree programme in physiotherapy at the University of Applied Sciences in Bochum. From the first week of their study and throughout the first semester, students carried out tasks and solved problems under supervision in a physiotherapy practice setting during one day a week. The students had to take immediate responsibility for their learning and had the chance to see and feel patients with various diagnoses. In addition, the students gained experience in communicating with patients and saw different treatment strategies of experienced physiotherapists working with patients. Later during the placements advanced clinical judgment was expected and monitoring of the students had been reduced. Different kinds of instruments were implemented in order to assist and enhance the transition from hands-on experience to theory-based knowledge and to increase the effectiveness of the learning process.

**Description:** A survey over the period of the first three semesters was used for analysis. Two cohorts of students (n=87) during their placements in clinical settings participated, resulting in three sets of data in the first and one set of data in the second cohort.

**Evaluation:** The collected and analysed data included (1) questionnaires at the end of each semester and (2) a structured review of portfolios, including learning-tasks and reflective journals. All data were analyzed descriptively.

**Conclusions:** The most important results from the student's perspective include: (1) The identification of the praxis' diversity and reflexion of the theory in learning-tasks resulted in a positive influence on the theoretical understanding of the physiotherapeutic background knowledge. Sensibility for differences between patients with the same diagnosis emerged. (2) The students discovered that acquiring skills, performing and communicating with real patients were different from working with fellow students only. (3) The students' self-confidence increased through communicating with patients and receiving positive feedback from the supervisor. These feedbacks and the feeling of being a member of the community of practice were directly related to an enhanced development of the novices' professional identity. (4) Supervisors had generally little confidence in the novices' skills and therefore hardly encouraged hands-on experience under supervision.

**Implications:** Analysis of the present data in this ongoing study showed that exposition of novice physiotherapy students to real clinical physiotherapy practice at an early stage of study encouraged the development of professional identity. In particular, increasing self-confidence in communication with patients and observation of expert physiotherapists during therapy facilitates this process. Further research should focus on what exactly facilitates the novices' development, such as the sense and use of tacit knowledge on the learning process in a socio-cultural context. Furthermore, the meaning of being a community of practice member and its impact on the intrinsic motivation in developing professional identity needs to be researched in more depth. In addition, the role of supervisors instructing and guiding the students' learning process should be included in further research.

## SESSION 34

(Platform Presentations)

### Education, transition, and specialization 5

Friday, November 9, 2012

ROOM C.E.02

11:10-12:25hrs

#### 34.005

### Practitioner and patient impressions of physical therapy practice in the emergency department of a level 1 trauma hospital: a rapidly emerging practice in the United States

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**Purpose:** This study: 1) assessed the opinions of emergency department (ED) practitioners regarding the value of physical therapist (PT) practice in this setting, and 2) assessed the opinions of patients who were evaluated and treated by a PT in the ED regarding the perceived value of this service in this setting.

**Relevance:** PT practice in the ED is not widely accepted or understood in the United States (US). There are fewer than 15 hospitals in the US in which PT practice in the ED is at least partially-established. As more patients utilize the ED for non-urgent conditions, the presence of PTs may better allow physicians to treat patients with life-threatening conditions as opposed to sprains/strains, balance problems, wound care, etc. Not only are these patients more appropriate for PT evaluation versus that of an ED physician, the interventions given are more likely to address underlying reasons for the condition and prevent a return to the ED for the same problem. Unfortunately, PTs who wish to practice in this setting are often met with resistance from medical personnel. A common question from unknowing ED practitioners is, "What would a PT do in the ED?" This highlights the global lack of understanding of health care providers who do not grasp the education and skills of a PT. Therefore, 'education through practice', where providers learn by working alongside PTs in this setting, may help to decrease this resistance. If support from medical practitioners can be established, the presence of PTs in the ED has the potential to rapidly expand.

**Participants:** Practitioner Survey: Participants included 85 ED practitioners (30% staff physicians, 10% residents, 20% nurse practitioners, 50% nurses). Patient Survey: Participants included 250 patients seen by a PT in the ED.

**Methods:** This study took place in a large level 1 emergency/trauma hospital that employs two full-time and four per diem PTs, one of whom has practiced in this ED for 10+ years. Practitioner Survey: All medical practitioners employed in this hospital's ED were invited via email to complete a survey regarding opinions of PT practice in the ED. Patient Survey: Patients were recruited to participate by either of the full-time ED PTs. If a patient agreed to participate, he or she was called by an alternate researcher two weeks following the ED visit and a verbal survey regarding opinions of receiving PT care in this setting was completed.

**Analysis:** Data from both surveys were collected and analyzed descriptively.

**Results:** Practitioner Survey: All medical professionals who completed the survey were overwhelmingly positive regarding PT practice in this setting. The only dissatisfaction related to not having PTs available 24 hours/day and not having enough PTs to see all appropriate patients. Few practitioners were concerned about the extra cost a patient might incur. Nearly half were concerned about the extra time a patient might spend in the ED to receive PT services. There was strong support for implementing standing PT orders for a variety of conditions common to patients in the ED. Patient Survey: Nearly all patients who completed the survey were highly satisfied with their PT evaluation and intervention. A large majority were very appreciative of the education they received from the PT regarding their condition, as well as the personal attention given by the PT. Few patients returned to the ED for the same problem within the two-week time period.

**Conclusions:** Results of this study demonstrate that PTs provide a value-added service in the ED. Practitioners and patients alike appreciate the knowledge, skills, and education a PT can provide in this setting.

**Implications:** While PT practice in the ED may be in its infancy and poorly understood by the medical community, the results of this study indicate that medical practitioners who have worked with PTs in this setting overwhelmingly recognize the benefits to patients as well as to the ED staff. Patients who receive PT services in the ED, while surprised to have encountered PT in this setting, are equally pleased with the care they received. Once the value of PT practice in the ED is better understood, the presence of the profession in this setting will likely grow quickly.

## SESSION 35

(Platform Presentations)

### Education, transition, and specialization 6

Friday, November 9, 2012

ROOM C.E.20

11:10-12:25hrs

#### 35.001

### Peer-learning in an international perspective

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**Purpose:** Internationalization is a focused area in higher education at Bergen University College, and aims at three domains: student, faculty and research exchange. In cooperation with Haukeland University Hospital (HUS), Haralds plass Deaconess Hospital (HDS), Duke University and Sheffield Hallam University one specific aim is student exchange in clinical placement. However, non-Scandinavian speaking students represent a special challenge both concerning patient communication and documentation. The aims of this project are: to develop a model for peer-learning in clinical practice in an international perspective, assess how international peer-learning can enhance physiotherapy students' professional development, strengthen tutorial competence and stimulate student involvement in learning processes.

**Relevance:** Learning is a social process that can be enhanced by involving peers. Several studies recommend the 2:1 model in student-tutor relationship as this appears to encompass all the advantages of peer-support and peer-learning. Peer-learning is defined as a two-way reciprocal activity involving networks of learning relationships among students and significant others. In peer-learning, students learn with and from each other. This study describes how peer-learning in clinical practice can be planned, organized and implemented in an international cooperation, which also implies promoting cultural understanding between students, clinical instructors and academic staff.

**Description:** International and Norwegian students work together in pairs in different hospital units (HUS and HDS) with one clinical tutor for 10 weeks.

From 2009-2012 ten third year students (eight female and two male) and two interns (one female and one male), three tutors (all female) and 2 managers (one female and one male) have participated in the project. All students were selected through applications and interviews.

The students assessed and treated patients together and alone, and tried out different ways of cooperation. The clinical tutor observed and gave feedback on their clinical work and communication process. Tutoring was organized both individually and in pair

The general objectives were to: Use the problem-solving process in communication, clinical reasoning, reflection and documentation. Implement, evaluate and document intervention. Develop independence in the physiotherapy role.

**Evaluation:** The peer-learning process was evaluated through: Interviews with students and tutors, individually and in group. Observation of clinical situations and tutorials. Assessment of patient journals, reports and reflective writing.

The data were analyzed using qualitative content analysis.

**Conclusions:** Four main themes stood out from the evaluation:

Learning: Students challenge and complement each other. Physiotherapy traditions differ in use of methods, techniques and time. The process also implies development for the clinical tutor.

Tutorials: Feedback on the peer-learning process is important. Individual sessions must to be considered.

Challenges in communication: Translation in patient situations. Differences in knowledge of professional language. Documentation in patient journals.

Important in patient situations: Clarification of roles. Encouragement of peer-tutoring. English speaking patients lighten the learning process.

**Implications:** Knowledge from this study should be considered when planning clinical placement for international students. Peer-learning should be encouraged in all learning situations. International cooperation is widening students' professional perspective.

## SESSION 35

(Platform Presentations)

### Education, transition, and specialization 6

Friday, November 9, 2012

ROOM C.E.20

11:10-12:25hrs

35.002

### Implementation of collaborative strategies and multiple mentoring models to facilitate peer learning in clinical education

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**Purpose:** The purpose of this project was to introduce new collaborative education models into clinical education in a Swiss hospital setting. It was intended to provide and enhance opportunities of peer assisted learning for physiotherapy students within their clinical placements and facilitate clinical educators to reflect on learning-theory oriented models and methods of the facilitation process of students.

**Relevance:** Motivation to adopt different approaches for clinical education and facilitation of students' learning has been triggered by several contextual circumstances. The transition of physiotherapy education from technical colleges to universities of applied sciences led to reflections on respective potential impacts for the clinical education setting. Second, an anticipated shortage of clinical educators, in addition to transitionally higher numbers of physiotherapy students raised concerns about scant resources for appropriate facilitation of students. Finally, the changing environment of service delivery in the hospital had to be considered. Furthermore an increasing number of papers from different fields have shown that peer assisted learning and peer collaboration are highly relevant for learning in clinical placements.

**Description:** In the first phase, five clinical educators reviewed as a group, the literature about clinical education models (Lekkas et al. 2007; Strohschein et al. 2002) and peer assisted learning (Ladyshewsky 2000 & 2006). In a second phase a flexible multiple mentoring model alongside collaborative student sessions with and without support by clinical educators was piloted and adopted in. Feedback from involved clinical educators led to some ongoing adjustments, such as the development of a "tool box" containing a list of different questions, tasks, and instructions of case presentations and discussions.

**Evaluation:** The newly implemented educational approaches were continuously evaluated by using a semi-structured debriefing interview with each student at the end of their clinical placement. Interview questions cover advantages and problems experienced with the collaborative settings as well as suggestions for improvement. Results led to further adaptations of these introduced settings.

**Conclusions:** In general, peer learning opportunities were highly appreciated by most students, although some challenging issues were identified, such as questions of group dynamics. However, feedbacks from students support the notion that such collaborative learning approaches are also suitable for groups including students from various phases of study and from different universities of applied sciences.

**Implications:** The positive experiences and from such a bottom-up and pragmatic approach for introducing innovative educational strategies within a single clinical education setting lead us to believe that such an approaches could be considered by other institutions. Organizational and structural changes for clinical education in our institution proved to be a helpful and valuable means for further development of the involved clinical educators, such as moving from a more traditional and clinical educator-centred approach to a more student-centred one.

## SESSION 35

(Platform Presentations)

### Education, transition, and specialization 6

Friday, November 9, 2012

ROOM C.E.20

11:10-12:25hrs

#### 35.003

### The PPA form: an easy way to enhance clinical reasoning

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**Purpose:** Developing an instrument to enhance clinical reasoning

**Relevance:** The ongoing development of the physiotherapy profession leads to more autonomy in most European countries. This autonomy comes with increasing responsibilities and the need for high level clinical reasoning skills. The profession has adopted the ICF framework as the language in which we describe health problems, and thus the ICF is a prerequisite in acquiring clinical reasoning skills. The ICF approaches the health problem from three perspectives, body, individual and societal, while acknowledging that the health problem is influenced by personal factors and the context in which the subject acts. In determining the most adequate intervention for a specific subject with a health problem, clinical reasoning has to go beyond describing the health problem. A hypothesis about the interrelationships, between the in the ICF described factors is necessary. This also involves explicit statements about presumed causality and factors that can be altered by physical therapy interventions.

In our institute, the Physical Therapy department of the Utrecht University of Applied Sciences, we used several tools to support the learning of clinical reasoning by students. Although these instruments have proven to have some use, we still experienced two major problems in the final clinical reasoning skills in graduate students. The first was the lack of depth in students analysis of the health problem. Students mainly confined to the level of description of the health problem without hypothesis about interrelationships and causality of the described factors within the ICF. The second was the lack of focus on movement related functions. Tools like the Rehabilitation Problem Solving form (Steiner) and the PT-CRT (Atkinson) use a very clear visual representation of the health problem. In the centre of these forms the description of activities can be found. The ICF domain of activities is necessary for describing the health problem on every level of the individual, and of utmost importance in determining treatment goals. However, except in interventions like graded activity, it is not the ICF level of activities, but the level of movement related functions that functions as starting target of the intervention,

**Description:** We developed a problem analyzing form that supports clinical decision making, and stimulates the explicate formulation of causal relationships with movement related functions as the centre of the movement problem, thus being a specific tool for physical therapist. The form itself is not something completely new, it is merely a slight adaptation of the aforementioned tools. However, in the two months that have passed since the introduction in our institute, the impact on clinical reasoning by students and staff has been substantial.

In this presentation we will discuss the added value of this analyzing form on the basis of two cases. We also hope to present the experiences with this form over a longer period.



## SESSION 35

(Platform Presentations)

### Education, transition, and specialization 6

Friday, November 9, 2012

ROOM C.E.20

11:10-12:25hrs

35.004

### The clinical case study capstone: Teaching physiotherapy students to apply evidence base clinical decision making for »Best Practice« during clinical internships to advance physiotherapy

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**Purpose:** The purpose of this presentation is twofold that is, to describe a clinical education capstone project—the »clinical case study« as a comprehensive mechanism to demonstrate doctor of physiotherapy [DPT] program efforts to teach students to incorporate evidence into every aspect of patient/client management during clinical practice; and showcase how students learn to engage in consistent evidence based critical thinking and proactive decision making that links didactic learning with clinical learning to enhance their clinical internship experience.

**Relevance:** In the 21st century, physiotherapy is advancing towards becoming an increasingly »Doctoring« profession with physiotherapists becoming practitioners of choice and having direct access to their patients. Consequently, it is imperative for physiotherapists to become evidence based practitioners. To do this, physiotherapy teaching institutions must bear responsibility of initiating this process in the formative years of teaching students to become physiotherapists. Therefore, the Doctor of Physical Therapy program [DPT] at Langston University [LU], Oklahoma, U.S.A. designed a clinical education capstone project for physiotherapy students in an effort to ensure that students are able to incorporate evidence based practice in every aspect of patient/client management prior to graduation.

**Description:** Becoming a practitioner of choice in the »Doctoring« profession of physiotherapy is not without responsibility and accountability for clinical decision making. This concept of responsibility and accountability as part of the profession's core values is introduced in the very first semester of the physiotherapy curriculum to the LU-DPT program students who are taught to become evidence based practitioners gradually over the three years in the program. To confirm understanding and carryover of this important ethical and legal duty, the LU-DPT students must demonstrate proficiency in being able to apply evidence based principles to all aspects of patient/client management while working with patients in their clinical internships. Therefore, the third year LU-DPT students are required to present a clinical case study prior to graduation as part of their clinical education capstone project.

**Evaluation:** The clinical case study capstone is a distinct two part process for the LU-DPT student. The first part is the patient/client interaction that occurs in a clinical environment followed by the second part which is the clinical case study presentation that occurs on the academic side on campus. To accomplish this, students enrolled in their third year in the LU-DPT program are assigned to attend a twelve week clinical internship. Prior to start of the internship, each student is paired with a faculty mentor who serves as an academic resource/case study advisor to the student. During the internship, each student must identify a patient/client as the candidate for their clinical case study capstone. Prior to initiating work on the case study, students solicit clinical facility permission and patient/client informed consent. The student's clinical instructor serves as a resource/facilitator to challenge student decision making at each step of the patient/client management process. The student prepares a draft of the clinical case study by midterm and submits to faculty advisor for review and feedback. The faculty advisor provides written feedback to student on areas such as unresolved patient/client issues still needing to be addressed, areas demonstrating lack of evidence to support clinical decision making, support for P.T. diagnosis, rationale for plan of care. Upon receipt of faculty feedback, students have opportunity to correct and or get additional information while still at the clinic. Upon return to the school at conclusion of the clinical internship, students are required to present their capstone clinical case study as a presentation to the faculty of the school of physiotherapy and their classmates. Following conclusion of presentation, all present have an opportunity to ask questions. The presentation however, is graded by the faculty advisor assigned to the student using a case study rubric.

**Conclusions:** The clinical case study capstone has been successfully used by LU-DPT program for classes of 2005–2012 clinical internships with overwhelming student success and proficiency in being able to apply evidence based principles to all aspects of patient/client management clinical decision making as evidenced by students successfully completing assigned course each year. Faculty recommended continued use of this capstone each year.

**Implications:** The clinical case study capstone has universal application and long term benefits. The core concept of progressively teaching physiotherapy students to integrate evidence based principles into every aspect of the patient/client decision making process while they are learning to become physiotherapists is critical to generating physiotherapists committed to being lifelong evidence based practitioners. The program format can be easily modified and adapted for use by any physiotherapy curriculum anywhere in the world.

## SESSION 35

(Platform Presentations)

### Education, transition, and specialization 6

Friday, November 9, 2012

ROOM C.E.20

11:10-12:25hrs

35.005

### Challenges of teaching and learning clinical reasoning in undergraduate pre-clinical education

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**Purpose:** This study explores how teachers of undergraduate pre-clinical physiotherapy students in Switzerland understand Clinical Reasoning (CR) and how they describe their experiences and views about integrating CR into their teaching within the musculoskeletal field.

**Relevance:** CR is viewed as lying at the core of PT practice and CR competences can be seen as one of the practical demonstrations of preparedness for independent practice. It is argued that development of CR skills are closely linked to clinical practice and to lifelong learning. However there is little research into the initiation for this development during undergraduate pre-clinical physiotherapy education.

**Participants:** As teachers reflect important role models and provide a powerful socialisation element in this first educational phase, CR is explored from their perspective. By a criterion-based selection, 16 teachers from different institutions were included, all of them lecturing within the musculoskeletal field.

**Methods:** A generic qualitative research design (Caelli et al. 2003) was adopted with focus groups and individual interviews as methods of data collection. Focus groups and interviews were audio-taped and a semi-structured interview guide has been used.

**Analysis:** Audio-data were transcribed and approached inductively by a thematic analysis. Six phases of analysis from familiarizing with data to member check and peer review were adapted from Braun & Clarke (2006).

**Results:** Three main themes emerged. The first theme reflects "conceptualisations of CR" and is summarised and interpreted as three different aspects of CR: a) a cognitive process described along a continuum; b) procedural steps of CR; and c) orientations of CR. The second theme "indications of broader views of CR" includes less frequently mentioned views about CR within the data. Different tensions and problems around CR in relation to educational contexts lead to the third theme, "difficulties of integrating CR into pre-clinical education".

**Conclusions:** The participants portrayed different conceptualisations of CR. However predominant views reflect traditional concepts of CR, which are in contrast to evolving multidimensional views within current literature. To overcome some of the difficulties for integrating CR into pre-clinical education, CR needs to be (re-)conceptualised by incorporating recent multidimensional understandings of this phenomenon. Limitations such as the self-reported characteristics of focus groups and interview data, lack of explorations of underpinning curricula with their educational philosophies and strategies are acknowledged. Further research is also needed to integrate views and perspectives of other key people such as students themselves or clinical educators.

**Implications:** Considerations of the characteristics and conceptualisations of CR are an essential prerequisite for further discussions of appropriate educational strategies. Furthermore thoughts about which dimensions of CR would best be emphasised within the classroom context and which ones within the clinical placement settings should be included. Making explicit the role and place of CR within pre-clinical education might help to address some challenges of teaching and learning CR in this early educational phase.

## SESSION 36

(Platform Presentations)

### Education, transition, and specialization 7

Friday, November 9, 2012

ROOM C.E.18

11:10-12:25hrs

#### 36.001

### Establishing a university outpatient clinic to link education, science and practice

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**Purpose:** The purpose of the report is to demonstrate a way how education, science and practice can be linked by introducing the concept of an University Outpatient clinic.

**Relevance:** In Germany Physiotherapy training is mainly achieved using a school-like system, concluding with a state exam. Prior to 2001, there was no academic education for Physiotherapists (ZVK, 2012) but since then the academic route has developed and now there are three models available to gain the Bachelor degree in Physiotherapy: 1) finishing school with the exam, then studying 2) starting training at a school and after the first year doing both at the same time – learning at school and studying 3) studying for the Bachelor degree and the state exam is integrated in the degree (Bauer, 2011). While model 3) is the only way to qualify in most countries, it is currently only trialed in Germany at four applied Universities in contrast to 275 non-academic programs. One of the major differences between the training at school and the University degree is the emphasis on scientific foundations and evidence with focus on clinical reasoning and evidence based practice (EBP) during the academic degree.

This new way of Physiotherapy training requires a close link between education, science and practice. EBP links together the experience of the Physiotherapist and the evidence from clinical research to inform together with the patient's aims and preferences the choice of treatment. However, during the daily routine it can be a challenge to implement the research part of the EBP. Several reasons are reported, for example limited access to full text articles, sometimes languages barriers, and limited skills in correctly interpreting the results of the studies (Maher et al., 2004), lack of time and money (Barnard & Wiles, 2001) and difficulties for implementing changes (Metcalf et al., 2001). In a typical work setting in Germany with non-academic therapists working in a private practice with a high frequency of therapies, these challenges apply and therefore evidence from clinical trials is rarely considered. For students going on placement in such a setting it is difficult to see how research can be a part of EBP.

Therefore, the SRH started a University Outpatient Clinic (UOC) using an innovative setting to explore different ways of linking education, science and practice and to show students how EBP could be implemented into the daily routine. The advantages of such a setting in comparison to cooperating with an external practice are: quick feedback (between education, science and practice), openness to feedback from patients and students, a variety of knowledge from the team (different members have focus on science, education and/or practice), the team sharing the same philosophy about Physiotherapy practice, early hands-on experience for students (during first semester), students can find their own way of implementing EBP, patients know they are in a learning environment and have a positive attitude towards this and acquiring learning material from patients. The model of UOC will help to adapt learning outcomes of education to fit the practice, enables to implement up to date research into practice (i.e. treatment guidelines, valid standardized tests...) and will help to generate research ideas and to carry out projects.

Some Physiotherapists have the fear that the profession will be split into those who deal with the theory and those who deal with practice and that the gap between the two 'groups' will widen. The UOC shows that even though there might be emphasis on one or the other, in the ideal setting they work together to achieve an optimum treatment for the patient.

**Conclusions:** So far, patients have been positive about this unique setting, enjoying the extra time and care. The students feel better prepared and more confident for their first external placement. The team working at University and in the clinic is highly motivated to make this model work, to set an example for other Universities and to contribute to the development of the professional practice of Physiotherapists in Germany. Since this Clinic has started only recently, there is scope for optimizing this concept and for its evaluation.

## SESSION 36

(Platform Presentations)

### Education, transition, and specialization 7

Friday, November 9, 2012

ROOM C.E.18

11:10-12:25hrs

#### 36.002

### Physiotherapy documentation for the best practice – Towards common structures

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**Purpose:** Documentation in physiotherapy is an essential part of the clinical process and a way of showing evidence of practice. Good record-keeping is a vital tool of communication between physiotherapists and other health care professionals. The interoperability of health information systems is one of the eHealth aims in European Union and Finland. The legislation requires all public and private health care organisations to join the National Archive of Electronic Health Records by 2015. To achieve this aim within physiotherapy Finnish Association of Physiotherapists established a working group to enhance common structures in physiotherapy documentation. The purpose of this presentation is to describe the activities of the project

**Relevance:** Most health care organisations in Finland store their patient records electronically. Research shows that documentation in physiotherapy is inconsistent with various headings and most of the text is narrative. Data standardization and commitment to use classifications are key factors in enhancing information retrieval and information exchange across systems in health care. National recommendations for standardized data concerning the documentation of the core knowledge, headings and structured information in different professional fields are published. Nevertheless, there is a lot of confusion and need for agreement on headings used in physiotherapy documentation.

**Description:** The activities for making physiotherapists acquainted with data standardization and the National Archive were as follows: education and awareness raising by publishing a handbook and key instructions for documentation and by writing articles in the national physiotherapy journal. Eight seminars were organised in different regions around Finland. The programme consisted of legal requirements for electronic health records, definition of structured documentation and explanation of the key concepts. An important part was the use of The National Classification of Physiotherapy Practice and the ICF in physiotherapy documentation. In each seminar a representative of the regional physiotherapy organisation presented developments of physiotherapy documentation in their unit. Altogether 520 physiotherapists participated in the seminars.

**Evaluation:** The feedback from the seminars was mainly positive. The awareness about the benefits of the electronic health record systems had increased. The content was diversified and important. Some of the participants missed concrete examples. The structure of the documentation and 11 suggested headings are not enough to guide the documentation. The National Classification of Physiotherapy Practice was in use in every day practice in most units on the contrary to the ICF which was experienced complex and difficult.

**Conclusions:** Physiotherapists need further education and managerial support in adopting the use of national headings and classifications in electronic health record systems. The use of electronic health records allows the safe and reliable storing and retrieval of patient information and better interdepartmental communication for improved quality of physiotherapy.

**Implications:** The need for common structures in physiotherapy documentation is evident, taking also the work processes into account. In the future, documentation is a challenge and an opportunity for physiotherapy at the EU level, when patients will seek services across borders in near future.

## SESSION 36

(Platform Presentations)

### Education, transition, and specialization 7

Friday, November 9, 2012

ROOM C.E.18

11:10-12:25hrs

#### 36.003

### Specialization in Austria - the development of a model

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**Purpose:** Physiotherapy continues to evolve. As part of the ever-growing medical and physiotherapy insights and challenges, the question of the need for specialization within the physiotherapy arises again and again. In other countries specialization programmes have already been established. Also ER-WCPT has taken up the issue and published the ER-WCPT Specialization report.

In order to that, the Executive Board of Physio Austria, the Austrian Physiotherapy Association, decided to set up a project to develop a Model for specialization for physiotherapists in Austria, taking into account international developments and a possible practical implementation in Austria. Another aim was that the model may be applicable to all clinical fields.

**Relevance:** The establishment of specialization programmes plays an important role in the advancement and promotion of the profession. The implementation of a specialization programme shall influence the promotion of scientific activity in the physiotherapy community and evidence based physiotherapy. In addition to that it shall strengthen the position of Physiotherapy in the health care system.

**Description:** Setting up the project team it was taken care of the the following skills and experiences to be represented in the working group: Experience in the international field/with international cooperations, Master Degree, a Physiotherapist known as an "expert" in Austria, leader of a working/special interest group of Physio Austria, lecturer, employed Physiotherapist, Physiotherapist in private practice. Plus a Non-Physiotherapy expert in the field of education.

In terms of working ability of the project team "personal unions" were desired. So the team (mentioned as Authors) was set up with the project manager plus five project members.

**Evaluation:** To develop the "Austrian Model for Specialization", different Physiotherapy Specialization Programmes from abroad - european as well as from overseas - have been considered. Information was mainly gathered through Internet-research as well as personal contacts to Physiotherapy Associations and special interest groups abroad. An important basis for the development of the model was the recommendation of the European Region of the WCPT (ER-WCPT). Additional findings concerning Specialization in other fields than Physiotherapy were included.

**Conclusions:** The analyses has shown that both the practical clinical experience, supervision, continuing education and academic skills are essential ingredients. Based on these findings and taking into account comparability with international specialization programs, the model has been developed. An essential component in addition to the completion and proof of professional experience, scientific skills and ongoing training, a two to four year old specialization programme with a focus on peer groups was developed. The next steps should be follow up projects to work out the programme in detail and implement the programme, starting out with pilots.

**Implications:** The implementation of the specialization programme may lead to new career paths. In addition it should be mentioned that Non-Specialists shall not be restricted in their professional practice. The implementation of the programme might require the adaptation of some practical-training programmes and implementation of new training opportunities.

The promotion of expertise in physiotherapy shall strengthen the profession as a whole.

## SESSION 36

(Platform Presentations)

### Education, transition, and specialization 7

Friday, November 9, 2012

ROOM C.E.18

11:10-12:25hrs

36.004

### Implementing journal clubs in teams of lecturers in health care

H. Dekkers

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**Purpose:** Share information about successful implementation of journal clubs as an instrument of education within teams of lecturers in health care.

**Relevance:** Science has got a central role in health care and health care education nowadays. To stay aware of new developments and to have the ability to understand and weigh scientific information, special knowledge and skills are needed. Journal clubs enable participants to gain and keep up knowledge about methodology, statistics, epidemiology and actual evidence for medical interventions. Furthermore in journal clubs one can train skills in finding and judging appropriate information.

**Description:** A literature review on implementation and on journal clubs in health care was used to come to an implementation strategy and process.

Sidorov (1995) stated that it is easy to start a journal club but hard to successfully continue it for longer times. This presentation provides background information and tips for a successful process of implementing journal clubs in teams of workers in health care. Tips are based on literature on this subject and on gained experiences. The gained positive experiences come from a successful implementation process at the department of Physical Therapy at University of Applied Sciences Utrecht in the Netherlands.

In this presentation, a journal club (JC) is defined as a group of individuals who meet regularly to discuss articles in the current medical literature (Linzner, 1987). In Utrecht we organized meetings once a month. Because continuity in JC has proven to be hard, implementation was defined successful if after 2 years, 75% of all lecturers were present at least on 75% of the monthly JC meetings.

To optimize the chances for success, we followed the steps that Grol (2007) has advised for implementation processes: analyze the present situation and context and describe the group that is involved, describe the theoretical fundamentals and aims, plan implementation strategies and interventions, take concrete actions for implementing and describe the evaluation process.

**Evaluation:** To analyze the situation in lecturers at University of Applied Sciences Utrecht, we used multiple choice questionnaires. We asked information about the knowledge and use of scientific literature and databases, methodology, statistics, clinimetrics and wishes for supportive education. Before analyzing responses, criteria were defined for implementation interventions. Grol (2007) recommends to use different kinds of interventions to enhance implementations.

**Conclusions:** Based on the gathered information from our team, two main goals for JC were formulated: 1st: increase scientific knowledge and skills needed for Evidence Based Medicine and 2nd: share and discuss actual information about medical interventions. To evaluate the successfulness of the JC the main goals were put into 6 concrete aims. Based on these aims six indicators were formulated to measure success. Journal clubs were defined successful if all indicators scored over 60%.

Information and recommendations in literature led to the following starting points:

presence is obliged, use a predefined structure for reading and discussing articles, a trained scientist is present for support, link outcomes of JC meetings to other educational processes, make someone responsible for organizational aspects, define explicit goals, involve managers, involve participants in planning and create groups of 8 – 10 participants. Furthermore, in Utrecht, the use of a website on the intranet in which articles, links to tools and reports of meetings are available has proven to be beneficial for success.

**Implications:** Journal clubs must be considered as a useful instrument for education in teams of health care professionals.

## SESSION 36

(Platform Presentations)

### Education, transition, and specialization 7

Friday, November 9, 2012

ROOM C.E.18

11:10-12:25hrs

36.005

### Enhancing the care of people with dementia in acute hospitals - the development of an e-learning resource for physiotherapists

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**Purpose:** Acute functional decline is a major risk of hospital admission for older people. Decrease in function can be seen as quickly as two days after admission (Poynter, Kwan, Sayer and Vassallo, 2008). In the authors' experience physiotherapists play a major role in attempting to prevent acute functional decline, or dealing with its consequences. However, Pope (2009) found that there is little published evidence on the education of physiotherapists regarding how to best work with people with dementia.

The aim of this study, undertaken as part of an accredited professional independent study module, was to critically examine the available evidence relating to the physiotherapy management of patients with dementia in the acute hospital setting and to develop an e-based education resource to support qualified practitioners working with this client group.

**Relevance:** Working as a senior physiotherapist in an acute hospital setting, it is continually observed that many physiotherapists struggle to cope with the complexity of effectively assessing and treating people with dementia, and therefore need support. It is rare that people requiring physiotherapy input are admitted to hospital with a primary acute dementia diagnosis (Natalwala, Potluri, Uppal and Heun, 2008; Sampson, Blanchard, Jones, Tookman and King, 2009). Commonly, the physiotherapist will be involved with treating other physical ailments that the person has presented with or working to prevent or reverse acute functional decline (Sampson et al., 2009). Bachman et al. (2010) conducted a meta-analysis of available randomised controlled trials of inpatient rehabilitation programmes. They concluded that where implemented, these programmes show sustained improvements in functional status and reduced admissions to institutional care. However, inpatient rehabilitation specifically designed for older adults to address the special aspects of ageing is not standard practice, but can potentially improve function and prevent institutionalisation. An e-based training package was therefore developed to support these practitioners working in an acute setting.

**Description:** It appears to be generally accepted that there is a poor understanding of dementia by health professionals in the acute setting, and that this leads to physiotherapists struggling to deliver effective treatment (McGilton, Wells and Teare, 2007; Pope, 2009). The literature review undertaken supported the need for a training package based on physiotherapists' gaining an improved understanding of the disease processes, the background of the person, and an awareness of the possible stressors, including pain, the acute hospital setting places on people with dementia. In addition to improving the professionals' knowledge of the dementia process, it was identified that communication and manual handling strategies aimed at addressing these issues, should further improve patient outcomes.

It was recognised that a training package for physiotherapists working in the acute setting would need to have a diverse structure accommodating a variety of learning styles (Brown, Cosgriff and French, 2008). The package developed was therefore designed to include both theoretical and practical learning elements. Using a wiki format, sections included an overview of disease processes; communication; depression; delirium; pain; manual handling; rehabilitation; handy hints; useful links; and end of life care. Theoretical and practical sections, knowledge testers and »handy hints«, with links to other sites for further support and reading were incorporated. Each section linked to feed-back forms and reflection proformas.

**Evaluation:** The results of conducting this literature review enabled the presenter to develop a training package for physiotherapists working with patients with dementia, based on the best available evidence. Although the process of evaluation and development is on-going, this presentation will demonstrate the prototype and highlight the findings of the early evaluation of the training package. Preliminary results based upon feedback from clinicians and an audit of care will be presented along with a demonstration of the e-based education resource.

**Conclusions:** A critical examination of the literature regarding the physiotherapy management of patients with dementia in the acute hospital setting, was undertaken as part of the presenter's accredited continuing professional development. The results of the review enabled the presenter to develop a training package, based on the best available evidence, for physiotherapists working with these patients. Although predominantly based on expert opinion and qualitative research, the resulting training package was aimed at enhancing the practitioners' understanding the disease processes, the background of the person, and an awareness of the possible stressors the acute hospital setting places on people with dementia. Ultimately, having the knowledge and strategies to be able to manage these issues should improve patient physiotherapy outcomes.

**Implications:** Enhancement of physiotherapy care for patients with dementia and the potential for wider dissemination of aspects of the training resource developed, to other health and social care professionals.

## SESSION 37

(Platform Presentations)

### Education, transition, and specialization 8

Friday, November 9, 2012

ROOM C.E.19

11:10-12:25hrs

37.001

### Paediatric physical therapy in Austria: curricula survey

C. Timmerer-Nash

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**Purpose:** This presentation outlines the paediatric physical therapy classes taught in Austrian universities of applied science and as part of continuing education programs. The presentation focuses on the classes taught to students graduating in 2012 and describes curricula changes that are currently in progress. This part of the research consisted of a survey of the Austrian universities of applied sciences that currently offer a Bachelor degree in physical therapy. This data will also be helpful for international data collections. In addition to the bachelor level survey, the research developed an overview of the existing paediatric physical therapy program at the graduate level and as part of continuing education programs in Austria. As part of this analysis a clear distinction was drawn between clinically-based education and research/teaching-based programs. The research goal was to identify similarities, differences and specializations between curricula. This provides a baseline for helping to improve the teaching program and identifying possibilities for making the programs more effective. It is designed to serve as a starting point for discussion among the university teachers and professionals working in the field of paediatric physical therapy. Concrete future steps include developing a network of paediatric PT teachers to help develop quality standards, minimal learning outcomes, common teaching materials, continuing education programs and other projects.

**Relevance:** The research survey directly analyzed physical therapy education in Austria concerning their pediatric physical therapy components. This information has not previously been available and therefore contributes directly to the evidence base of educational programs in PT.

**Description:** Not directly applicable. A survey was made of educational institutions in Austria.

**Evaluation:** Survey and analysis of results.

**Conclusions:** The data shows that there is variety in the courses taught in paediatric physical therapy in Austria. Furthermore, the pediatric physical therapy teachers are highly specialized in their field. Sharing information about curricular contents, teaching experiences, implementation of new concepts/ideas would help to improve learning outcomes and plan effective future changes.

**Implications:** The research is designed to assess the state of Austrian pediatric physical therapy education in the context with international practice. This could lead to changes in the way PT is taught in Austria and help develop a foundation for a consistent set of teaching standards and courses.



## SESSION 37

(Platform Presentations)

### Education, transition, and specialization 8

Friday, November 9, 2012

ROOM C.E.19

11:10-12:25hrs

37.002

### Clinical specialist physioswiss – a new concept for professional development

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**Purpose:** Physiotherapy education in Switzerland changed to a university level, 3 years BSc degree program in 2006. Physiotherapists with their degrees may continue on to the university master's degree program to further develop their professional careers.

Practicing physiotherapists are also very interested and willing to increase their knowledge and skills and further their professional development. Economically, a highly trained, proven expert Physiotherapist earns exactly the same amount of money for their treatments as a relatively new graduate.

The concept aims to offer a possibility to structure clinical experience and the continuous clinical training for professional practitioners.

**Relevance:** The presented concept is highly relevant to professional specialization and lifelong learning. To balance the new trend for academic training and to upgrade and validate longstanding clinical careers as practitioners, the Swiss Association of Physiotherapy decided to constitute a process and certification for clinical specialists. Clinical specialist certification is possible in 6 domains; General Physiotherapy practice, Geriatrics, Pediatrics, Internal Medicine (Pulmonology, Cardiology, Angiology and Pelvic Floor), Musculoskeletal System and Neuromotor and – Sensory System.

**Description:** The Swiss APT developed 2 structured pathways to attain the Clinical Specialist title; the clinical and the academic paths. In the clinical path, one acquires expert competency by proving continuing education of a minimum of 800 course hours in the specialized field as well as proof of 1200 hrs clinical / reflective practice based on a minimum of 5 years, 100% clinical practice (or equivalent). Those professionals, who take the academic path, successfully complete the course work in a clinically based MAS program offered at universities of applied science. They are also required to provide proof of an additional 500hrs. of clinical-reflective practice.

The final competencies of a clinical specialist are described using the CanMEDS Role Model. This model seems to be adequate to describe potential roles not only as a clinician, but as a consultant, a health promoter, an instructor, a supervisor, etc.

A tool was established to document the 1200 h of reflective clinical practice. The structured tool allows assessing if the applicant is a reflective clinician, a teacher and a clinical researcher in his/her specialized field. At the same time the tool contributes to the development of clinical expertise.

A quality labeling system has been set up in parallel, for the multifaceted continuing education courses being offered, and will be implemented after acknowledgement by the Swiss APT General Professional Assembly.

**Evaluation:** During a pilot phase 2011, the newly developed instruments for the Clinical Specialist title were tested with totally 21 candidates, with representatives from each domain. A high response rate with more than 100 applicants resulted from the first call for pilot candidates, illustrating the high interest of the Physiotherapy professionals in Switzerland.

**Conclusions:** The results of the pilot phase provided evidence that the new tools are applicable. It also helped to slightly reshape the tools and the planned way into the implementation of the concept. It showed necessary to extend a transition period until the end of 2016.

**Implications:** After the approval of the concept the first official call for candidates was launched. The first »Clinical Specialists physioswiss« titles were awarded in May 2012. A marketing concept to promote the title is in place.

## SESSION 37

(Platform Presentations)

### Education, transition, and specialization 8

Friday, November 9, 2012

ROOM C.E.19

11:10-12:25hrs

37.003

### Global perspectives on education in pediatric physiotherapy

**R. Nijhuis-van der Sanden**

Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

**Purpose:** The purpose of this presentation is to challenge the visitors of this international congress to increase the quality of physiotherapy in Pediatrics by working together internationally and to explore the possibilities for Austria to participate in the International Organization for Physiotherapy in Pediatrics (IOPTP). Using working groups during international congresses as implementation strategy of international collaborations seems to be successful.

**Relevance:** While environments and resources for physical therapy practice differ around the globe, children with disabilities and their families often have similar goals. The International Organization for Physiotherapists in Pediatrics is a subgroup of the World Confederation for Physical Therapy (WCPT). The IOPTP will empower physical therapists with an interest in pediatrics to provide effective PT services for children throughout the world. In order to promote effective services for children (birth into adulthood) and their families throughout the world, the mission of the IOPTP is to: provide professional development; disseminate current resources; develop and disseminate new resources; promote research; and provide opportunities for communication and networking for physical therapists.

**Participants:** Eleven countries participated in the survey study. People out of eight different countries participated in an international working group sessions at the WPT in Amsterdam

**Methods:** One of the IOPTP working groups focuses on education. To explore the actual worldwide situation in the specialization opportunities in pediatric physiotherapy a survey was sent to the participating countries. Eleven countries participated in the survey study. This resulted in an overview of the educational trajectories and existing courses in the participating countries. These results were discussed during the WCP in Amsterdam June 2011. People out of eight different countries participated in an international working group sessions at the WPT in Amsterdam in which the basic competencies in pediatric professional education were discussed.

**Analysis:** Results of the interviews and international working group were grouped together resulting in an overview of the actual state-of-the-art. Based in these data a strategic plan for the IOPTP.

**Results:** The results from the survey study, the network sessions and the opportunities in worldwide development of teaching/educational modules in pediatrics will be presented in a short overview. And the strategic plan from the IOPTP will be presented.

**Conclusions:** There are a lot of differences between countries in the educational level of pediatric physical therapists varying from 4-years post professional master trajectories to only a number of courses.

**Implications:** International collaboration will increase quality of education and thereby quality of care in pediatric physical therapy.

## SESSION 37

(Platform Presentations)

### Education, transition, and specialization 8

Friday, November 9, 2012

ROOM C.E.19

11:10-12:25hrs

37.004

### The pathway to specialisation utilizing a virtual learning environment

V. L. Smith

Australian Physiotherapy Association, Camberwell, VIC, Australia

**Purpose:** The Australian Physiotherapy Association (APA) has developed the "Member Lifelong Learning Pathway" to support physiotherapists in their career progression from graduate entry through to Specialist level.

The geographic nature of Australia in regard to distance and the demand for professional education was a challenge for successful delivery of post graduate specialist training. To obtain the title of Specialist and Fellowship of the College demanded an innovative and effective delivery methodology for our members. The virtual environment was explored to provide entry to the Australian College of Physiotherapist's Training Program for any candidate with the required prerequisites and clinical experience, no matter where they were located. It was important to remove the barriers of distance and provide access to those who were eligible to apply. With the everyday use of technology now in every clinicians reach, candidates were challenged with using a virtual environment to communicate, learn, reflect and successfully complete the two year training program and ultimately, if the standards were met, be awarded Fellowship of the Australian College of Physiotherapists.

**Relevance:** The Australian College of Physiotherapists (College) is the awarding body of the Australian Physiotherapy Association (APA), awarding Fellowships by one of two processes:

1. Fellowship by Specialisation
2. Fellowship by Original Contribution.

Fellowships of the College are nationally recognised qualifications which are granted in recognition of high standards of clinical skill and scholarship. The two year training program successfully completed is the Fellowship by Specialisation.

**Description:** This post graduate specialist training program is critical in the advancement of the profession both domestically and internationally and for the career development of the individual physiotherapist. This virtual learning environment provides access and equity for all who have been accepted to apply.

This presentation will demonstrate the successful implementation of the virtual learning environment as an incredibly interactive and innovative learning tool not only for the candidates but also for the facilitators involved. This methodology supports the learning and the ability to provide flexible options for the candidate.

Candidates apply to enter the training program and must be a registered physiotherapist in Australia; be a titled member; show initiative, be a self-directed learner, be willing to contribute to knowledge and practice, accept feedback and evaluation of peers and facilitators in the learning process. The candidate must be able to meet for a face-to-face supervision component during the training program.

The candidates must also demonstrate their involvement during the training program in the areas of: research, teaching and clinical practice, and reflect on the professional development they have undertaken.

The facilitators use the virtual environment to challenge the candidates to document and demonstrate their skills and experience. This can be in the form of journaling, reflective practice, peer group discussions, researching and above all developing best practice. Facilitators support and direct the learning from a distance using the virtual learning space and utilise tools such as Skype, web conferencing, YouTube, blogging and forums.

**Evaluation:** At the beginning of the specialist training program the candidate and the facilitator create a Learning Contract which documents the candidate's level of expertise prior to commencing the program and then the development of the learning objectives and outcomes to be achieved by the conclusion of the two years. This contract is created by the candidate and the facilitator and agreement is made before signing off. It is a pivotal tool for communication between the candidate and the facilitator for the review and ongoing development of skills throughout the program.

Throughout the specialist training program there a number of evaluation surveys undertaken by the candidates and the facilitators. These evaluations are designed to ascertain if the program is supporting development, learning and successful results. These results will be detailed in this presentation.

**Conclusions:** This two year training program has encouraged physiotherapists to undertake further study to challenge their current skills and to be proactive in increasing their expertise and skills further to the Specialist level. This training program undertaken by very experienced and motivated physiotherapists demonstrates commitment to discipline-specific professional development.

**Implications:** Development of innovative training programs to meet the needs of physiotherapists who, due to business commitment, family, life work balance, want to learn where and when they want, is critical to the uptake of professional education and increase in clinical skills, with distance not being a barrier.

## SESSION 37

(Platform Presentations)

### Education, transition, and specialization 8

Friday, November 9, 2012

ROOM C.E.19

11:10-12:25hrs

37.005

### Specialisation in pediatric physical therapy at an academic level in the German-speaking region

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**Purpose:** Comprehensive specialist postgraduate education is essential to obtain the level of qualifications necessary to work as a physical therapist in the field of Pediatric physical therapy. These qualifications cannot be acquired within the framework of an entry-level bachelor program.

In 2011, the Institute of Physiotherapy at the Zurich University of Applied Sciences started a postgraduate program (Certificate of Advanced Studies) in »Clinical Expertise in Pediatric Physical Therapy«. This is the first comprehensive specialist postgraduate education for physical therapy professionals in the field of pediatrics at an academic level to be offered in the German-speaking region.

**Relevance:** The aim of the postgraduate program is to train physical therapists as experts in all relevant fields (e.g. orthopedics, rheumatology, pneumology, neurology, development). The students will qualify as clinical experts, allowing them to fulfill all the roles that lead to optimal health and healthcare outcomes.

**Description:** The CAS in »Clinical Expertise in Pediatric Physical Therapy« conforms to the Bologna Process. The qualification awards 15 credits which allows, due to the European Credit Transfer System (ECTS), transparency, comparability and recognition throughout Europe. The program is oriented towards both academic objectives and professional competences. The students are intensively active in the course, accept a high level of individual responsibility and use various learning methods and platforms, including networking and collaboration learning. Tandem work is very efficient and satisfying because younger BSc students and students with long clinical experience can profit from each other. The academic teaching philosophy includes classroom teaching (40%), guided self study (15%) and autonomous self study (45%). Each module ends with an oral and/or practical and/or theoretical proofing of competencies.

**Evaluation:** The participants of the first »Clinical Expertise in Pediatric Physical Therapy« program described this advanced education as demanding, evident and very educational. Self study, Evidence Based Practice and tandem work are all considered very efficient and satisfying learning methods.

**Conclusions:** The positive feedbacks of the participants confirmed our plans to further develop the program to master level.

**Implications:** The comprehensive program enables students to work as generalists in the field of pediatrics in hospitals as well as in private practice. The extensive professional leadership skills learned (e.g. law, insurance, ethics, educational theory, didactics, communication) means that physical therapists are equipped to cope with the patients' clinical and various other questions.

## SESSION 38

(Keynote)

### Keynote Session 3

Friday, November 9, 2012

ROOM Festsaal

13:40-14:25hrs

#### 38.001

### Quest and best of both worlds, research and practice, incorporated in physiotherapy education

**N. Van Meeteren**

Netherlands

**Learning Objective:** Collective critical appraisal of scientific and practice paradigms and paradigm shifts and their consequences for physiotherapy and physiotherapy education.

**Description:**

Several paradigms relevant to physiotherapy will be reviewed and discussed in the context of the changing opinion concerning health and their influences on clinical reasoning and decision making. Paradigms that will be dealt with are amongst others: innovation paradigms as technological- and social- and cultural- innovation approaches; physiologic paradigms as homeostasis and allostasis; analytic paradigms as linear- and nonlinear-/dynamic approaches; methodological paradigms as reductionist- and more ecological-, consulting-room valid approaches; movement paradigms as the motor versus the action approach. All paradigms and approaches are expected to interact with and change the scene and context of physiotherapy, and physiotherapy research and education.

**Implications/Conclusions:**

After decades of physiotherapy- and physiotherapy related applied research done by all sorts of 'others', physiotherapists started their own scientific enterprises, gradually embedded in the more basic  $\mu$ - and  $\nu$ -sciences and this process will in the future probably pay off for society as a whole and for the profession in specific. Pivotal here are a. the willingness to cooperate durable between the worlds of physiotherapy-research and -practice via mutual intelligent generosity and b. the constant and durable grounding of the revenues of the whole process of both worlds in all – preferably academic – physiotherapy education programs.

## SESSION 39

(Platform Presentations)

### **Bringing evidence into practice: linking science and practice in education 5**

Friday, November 9, 2012

ROOM A.-1.02

14:35-15:20hrs

#### **39.001**

### **Weight bearing after hip fractures, when to start?**

**M. T. M. Aly<sup>1</sup>, F. A. Hegazy<sup>2</sup>, I. M. Emran<sup>3</sup>, M. M. Ibrahim<sup>4</sup>, M. A. A.**

**Abdelmegeed<sup>4</sup>**

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**Purpose:** 1. to compare between the effect of early and late weight bearing after trochanteric femoral fractures fixed by dynamic hip screw (DHS). 2. To establish a consensus about when to start weight bearing after trochanteric hip fractures. 3. to quantify the implication of weight bearing on functional improvements after trochanteric femoral fractures in elderly population.

**Relevance:** This study will help to objectively document the effect of early and late weight bearing as a step for building a rehabilitation intervention and consensus regarding ambulation after trochanteric hip fractures fixed by DHS.

**Participants:** Thirty patients had participated in this study. They were randomly assigned into two experimental groups; group A which consisted of fifteen patients (nine males and six females) with a mean age of  $57.93 \pm 5.90$  years, and group B which consisted of another fifteen patients (eight males and seven females) with a mean age of  $59.13 \pm 3.34$  years. Patients with stable trochanteric femoral fractures fixed by DHS were only included in the study.

**Methods:** Patients in both groups received from the first day post operative a physical therapy program consisted of: respiratory, range of motion, static quadriceps, and strengthening exercises for the hip and knee muscles. Patients in group (A) started an early weight bearing program that was commenced on postoperative day three and progressed to full weight bearing at the end of the sixth weeks. Patients in group (B) started the weight bearing program after two weeks of the operation and progressed as in group A. Treatment was given three times/week, every other day, for six consecutive weeks. All patients were evaluated pre ,at the end of fourth week and post Rehabilitation program for their pain severity using visual analog scale (VAS) and function was evaluated using the Harris Hip Score.

**Analysis:** Results are expressed as mean  $\pm$  standard deviation (SD). Comparison between the mean values of pain and function variables in the two groups measured at different times of treatment was performed using unpaired student t test. SPSS computer program (version 12 windows) was used for data analysis. P value less than or equal to 0.05 was considered significant and less than 0.01 was considered as highly significant.

**Results:** The results revealed that there were statistical significant differences between both groups in favor of group A regarding the reduction in pain severity ( $P=0.019$ ) and the improvement in function that was assessed by Harris Hip Score ( $P=0.004$ ) after the fourth week and after the sixth week there was statistical significant differences between both groups in favor of group A in improvement in function that was assessed by Harris Hip Score ( $P=0.025$ ) but there was no significant differences between both groups in reduction in pain severity ( $p=0.167$ ).

**Conclusions:** Functional ability and pain severity in patients having trochanteric hip fractures had significantly improved after a program of early weight bearing and physical therapy in comparison to patients received the same physical therapy program with late weight bearing. Therefore, it is recommended to commence ambulation early in the rehabilitation after stable femoral fractures fixed with DHS.

**Implications:** This study enhances the awareness of the importance of early weight bearing in the rehabilitation after femoral trochanteric fractures in older subjects, and can show the improvement of functional activities in those patients.

## SESSION 39

(Platform Presentations)

### **Bringing evidence into practice: linking science and practice in education 5**

Friday, November 9, 2012

ROOM A.-1.02

14:35-15:20hrs

39.002

### **The experiences of neurological physiotherapists using injection therapy within practice following a postgraduate injection therapy module**

**J. Sellars**

Coventry University, Coventry, United Kingdom

**Purpose:** The Chartered Society of Physiotherapy, in the United Kingdom, extended the scope of practice of physiotherapists to inject in December 1995, provided that physiotherapists were appropriately educated and could demonstrate competence. In 2004, Coventry University launched a Neurological Injection Therapy Masters module, the first botulinum toxin course specifically for physiotherapists in the UK. Although some research has considered musculoskeletal therapists use of injection therapy, there is a lack of literature exploring neurological physiotherapists' experiences. This study explored how physiotherapists who had completed the Injection Therapy module were integrating their knowledge and skills in relation to injection therapy into practice and how they were maintaining competence in this extended role.

**Relevance:** Botulinum toxin (BTX), intra-muscular injections have been proven to provide significant relief to the disabling symptoms of spasticity and their role in neurological rehabilitation is expanding. It is acknowledged in the literature that physiotherapists are ideally placed to take advantage of the selective muscle weakness after BTX injections and the importance of effective post-injection management is recognised. In addition, physiotherapists often have a greater understanding of the contribution of spasticity to the patients' problems and are often called upon to advise on the appropriateness of BTX and where best to inject. As a consequence many physiotherapists within the UK have extended their scope of practice and are now injecting BTX.

**Participants:** All physiotherapists who had completed the Masters Injection Therapy module at Coventry University were invited to participate in the study. Participants were all senior adult or paediatric neurological physiotherapists.

**Methods:** A survey method adopting the use of self-administered questionnaires was used to meet the aims of the study. The questionnaire was piloted on a small number of physiotherapists with an interest in injection therapy, prior to it being sent to the study participants. A participant information sheet was included in addition to a pre-paid envelope for return of the questionnaire. Informed consent was assumed if the questionnaires were returned. Questionnaires were coded to allow the researcher to send non-responders a reminder letter to maximise the response rate.

**Analysis:** The responses from closed questions included in the questionnaire were analysed numerically and summarised using descriptive statistics. The responses relating to open questions were grouped according to key themes and patterns emerging from the data.

**Results:** The injection therapy module was positively evaluated, providing evidence-based theory, practice and support. The respondents described having increased confidence and felt empowered by their new knowledge and skills. They had a greater level of autonomy, were considered experts by other professionals and had a greater level of respect from medical colleagues. Without exception all the respondents considered that their involvement in injection therapy had had a positive impact on patient care. The majority were working in clinics alongside medical colleagues but others were working independently in therapy led clinics. They described their involvement leading to a more efficient, effective and evidence-based service, however, several respondents were frustrated that political issues and competing time pressures negated service development. For the most part competence was maintained through collaborative working with medical and physiotherapy injectors. Some respondents described feeling isolated in their extended role and the need for more structured support mechanisms. Future aspirations included the desire to become independent prescribers.

**Conclusions:** This research has provided insight into how physiotherapists are implementing their extended knowledge and skills, gained through an injection therapy module, into practice. The respondents are clearly experts and innovators in the area of injection therapy having made a positive impact on patient care and the wider service provision. Having adequate ongoing support and training, however is vital to ensure competence is maintained.

**Implications:** The outcomes related to physiotherapists using injection therapy has clear implications for patient care, for professional autonomy and for the development of the profession. Supporting advanced practice in a time of change in models of healthcare delivery, however, is imperative. A series of follow up interviews will aim to explore the study's findings further and gain a greater understanding of the lived experiences of practitioners in advanced practitioner roles.

## SESSION 39

(Platform Presentations)

**Bringing evidence into practice:**

**linking science and practice in education 5**

Friday, November 9, 2012

ROOM A.-1.02

14:35-15:20hrs

**39.003**

### **Physical activity and health condition of elderly people participating to the community offered exercise services**

**M. Julin<sup>1</sup>, H. Penttilä<sup>1</sup>, E. Yletyinen<sup>2</sup>**

<sup>1</sup>Laurea University of Applied Sciences, Espoo, Finland, <sup>2</sup>City of Espoo, Espoo, Finland

**Purpose:** The city of Espoo is offering exercise services free of charge to all its 68 years and over old inhabitants. The purpose of the study was to find out who are these persons who are using community offered exercise services in the City of Espoo. Special attention was given to person's state of physical activity and health condition. Our secondary object was to think how to improve these exercise services.

**Relevance:** The growing number of elderly people challenges physiotherapy to create new approaches to improve and maintain the aging population's physical capacity. The co-operation between Laurea University of Applied Sciences Physiotherapy Department and the Department of Sports and Exercise Services of the City of Espoo has been found promising way to develop services. This study will provide evidence based material for the base of these exercise services.

**Participants:** 2376 participants fulfilled a questionnaire while getting the card that entitles them to the services. 1332 (56%) were women, 968 (41%) were men and 77 (3%) did not state their sex. The mean age was 72 years (SD ± 4,4). The mean age for the women was 72 years (SD ± 4,4) and also for the men 72 years (SD ± 4,2).

**Methods:** The data was collected with a questionnaire of 14 questions. Eight questions asked about the physical activity or health issues. The questionnaire was partly based on the questionnaire used in the Health 2000 study administered by the National Public Health Institute.

**Analysis:** All the questionnaires were transported into the PASW 18 program for the statistical analysis. Descriptive analysis was used to analyse the data.

**Results:** Current health condition and current physical fitness were asked with a scale from 0 (worst) to 10 (best). The mean ranking for health condition was 7,6 (SD ± 1,4) and for the physical fitness 7,2 (SD ± 1,4). For the women these values were 7,7 (SD ± 1,3) and 7,2 (SD ± 1,4). For the men the mean health condition value was 7,5 (SD ± 1,4) and the mean physical fitness value was 7,2 (SD ± 1,4), respectively. 85% of the participants were physically active at least 2-3 times per week and 88% stated that they exercise and sweat at least ½ hour per activity session. 16% out of women reported that they are not physical active while 13% out men reported the same. 81% of the participants stated that the card has helped them to maintain their health condition and 67% stated that the card has increased their amount of exercise. By far the most popular exercise type was walking or nordic pole walking (53%) while swimming or other water exercise were the second most popular activities (17%).

**Conclusions:** The service has been going on for approximately six years and it seems that it has been found quite well by the aging people in the city of Espoo. Participants experienced that the service had increased their amount of exercise and helped to maintain or improve their health. However, it seems that the service is mainly used by those people who are already physically active and who have a good health condition. Also the youngest age groups are the most active to use the services

Approximately one third of the persons in the city of Espoo who fulfill the criterias for the services has aquired the card for the services. In the future it will be a big challenge to activate those persons who are not so healthy and physically active into this service, but would still benefit a great deal of physical exercise. Future studies are needed to explore the real physical activity levels within these services and the real benefits of these services. Also new studies are urgently needed to understand how to active the more inactive population into these exercise services. Apparently services with no costs are not enough raise the activity.

**Implications:** This study provides valuable information for planning the future exercise services in physiotherapy together with the Department of Sports and Exercise Services to activate aging people.



## SESSION 40

(Platform Presentations)

### **Bringing evidence into practice: linking science and practice in education 6**

Friday, November 9, 2012

ROOM A.-1.03

14:35-15:20hrs

#### 40.001

### **Onsite presentations led by physical therapy students can positively influence clinicians' confidence in aspects of evidence-based practice**

**S. Fruth<sup>1</sup>, L. Havertape<sup>2</sup>, J. Jones<sup>3</sup>, C. Newbury<sup>4</sup>, L. Conn<sup>5</sup>**

1University of Indianapolis, Indianapolis, IN, USA, 2Madison, WI, USA, 3Gahanna, OH, USA, 4Valparaiso, IN, USA, 5Indianapolis, IN, USA

**Purpose:** The purpose of this study was to compare the impact of three different types of onsite, Doctor of Physical Therapy (DPT) student-led presentations on participants' reported confidence in various skills related to Evidence-Based Practice (EBP).

**Relevance:** The World Confederation for Physical Therapy believes that "physical therapists have a responsibility to use evidence to inform practice and ensure that the management of patients/clients, carers and communities is based on the best available evidence." The American Physical Therapy Association has identified EBP as one of the five key elements to achieving the vision of autonomous practice by the year 2020. Despite these admirable goals, numerous barriers to the implementation of EBP continue to exist and few studies have been conducted to examine strategies for overcoming these barriers.

**Participants:** Fifty-two physical therapists from six outpatient orthopaedic clinics participated in this study. Clinics were chosen based on proximity to the University of Indianapolis as well as the number of full-time physical therapists employed (minimum of six) to maximize potential participants. Clinic managers were asked if the clinic was a viable site for study inclusion. All six clinics initially approached agreed to participate in the study. Physical therapists were asked individually about their willingness to participate in the study and were not excluded if participation was declined.

**Methods:** The six clinics were randomly assigned to one of three presentation types: topic-specific presentation (TP; n=20), EBP interactive education session (ED; n=12), and EBP education handout (HO; n=20). Presentations were conducted onsite at each clinic by three DPT students and lasted one hour or less. Data were collected from one pre- and two post-presentation (one- and six-month) surveys.

**Analysis:** Data analysis utilized descriptives, cross-tabulations, frequencies, Friedman ANOVAs and Kruskal-Wallis tests for survey data.

**Results:** Pre-presentation (PRE): Groups were demographically similar and did not differ in survey responses aside from membership in professional organization. Over 95% of all participants agreed that EBP is essential to physical therapy practice. 'Lack of time' was the most frequently identified barrier to the use of EBP (92%). One (POST1) and six (POST6) months post-presentation: Significant improvements were found from PRE to POST1 in the ED group with reported confidence in understanding published research and these improvements were maintained at POST6. The HO group reported significantly improved confidence in ability to locate published research from PRE to POST1 and raw data suggest that these difference were at least partially maintained at POST6. No differences were found in the TP group across time. A large majority of all participants reported that it was helpful to have information provided to them and that the DPT student presenters were knowledgeable and trustworthy regarding the information presented. Nearly two thirds reported gaining new skills or information from the presentation, and most agreed that future student-led EBP-related presentations would be beneficial.

**Conclusions:** Participants in this study consider EBP essential to physical therapy practice, but identified numerous barriers that may prevent EBP implementation. DPT student-led presentations designed to educate clinicians regarding methods of locating and understanding published research (ED and HO) produced several significant pre- to post-presentation differences in participants' reported confidence in these skills. The majority of participants felt the presentations were beneficial and that the students provided useful information.

**Implications:** The academic environment affords physical therapy students with the most up-to-date, evidence-based information and students are required to be proficient in locating, understanding, analyzing, and implementing published research. Because physical therapy education has undergone a recent shift toward teaching skills of EBP, some clinicians may lack these skills which have been identified as barriers to EBP implementation. The results of this study are a positive indication that DPT students may be able to provide clinicians with information and training that may improve their confidence in locating and understanding published research. This may be an early but important step toward to achieve the vision of both the American Physical Therapy Association and the World Confederation for Physical Therapy to improve the profession's implementation of EBP.

## SESSION 40

(Platform Presentations)

**Bringing evidence into practice:**

**linking science and practice in education 6**

Friday, November 9, 2012

ROOM A.-1.03

14:35-15:20hrs

40.002

### Enhancing communication between patients with dementia and physiotherapy professionals – improving patient care through continuing professional development

A. Adamson<sup>1</sup>, D. H. Davis<sup>2</sup>, S. A. Wyer<sup>2</sup>

<sup>1</sup>Barnet and Chase Farm Hospitals NHS Trust, Enfield, Middlesex, United Kingdom, <sup>2</sup>University of Hertfordshire, Hatfield, Hertfordshire, United Kingdom

**Purpose:** A review of patient documentation and carer complaints identified a lack of physiotherapy intervention for patients with dementia in an acute hospital setting, with consent being cited by staff as the main reason for reduced levels of therapy. Therefore, as part of an independent study module within a Masters programme, a review of the literature was undertaken to identify the most appropriate means of communication with patients with dementia. In order to improve physiotherapists' knowledge and understanding in relation to consent issues and enhance the provision of physiotherapy with patients in an acute hospital setting, an education programme was devised.

The findings of the review were disseminated to all levels of physiotherapy staff through a series of in-service training workshops as part of their continuing professional development. This presentation will highlight the findings of the review and the impact of the training programme on the patient experience and physiotherapy intervention.

**Relevance:** There are an estimated 750,000 people with diagnosed dementia in the United Kingdom (UK) (Alzheimer's Society, 2009). It is predicted that by 2051 the figure is expected to reach 1.7 million (Alzheimer's Society, 2010). This estimated increase has resulted in a growing recognition that dementia needs to be a national priority (Department of Health, 2007).

Dementia appears to make people vulnerable to physical illnesses which require acute hospital admission (Sampson, Blanchard, Jones, Tookman & King, 2009). For example pneumonia or urinary tract infections but also conditions which affect gait and balance and lead to an increased risk of falling, and additionally, the likelihood of fractures or the inability to walk (Holmes & House, 2000; Burns, Challis, Dennis & Hughes, 2005). As a consequence it is estimated one quarter of all acute hospital beds are taken up by people with dementia as a result, physiotherapists are referred a high percentage of patients with dementia.

The challenges physiotherapists' encounter whilst attempting to provide physiotherapy to people with dementia in an acute hospital setting resulted in reduced levels of therapy input, low expectations and poor patient outcomes. This group of patients were often documented as refusing physiotherapy which was deemed a consequence of a lack of staff understanding of the most appropriate methods of communication with this patient group.

**Description:** A critical review of the literature pertaining to consent, mental capacity and communication strategies was undertaken and the findings disseminated to the 25 physiotherapy staff across all grades, within an National Health Service Hospital Trust. The resulting two phase education programme was divided into workshops, one relating to the legal and ethical aspects of care, including consent, and the second focussing on strategies for communication with patients who have dementia.

The learning and teaching strategies incorporated within the resulting education programme were designed to take account of all learning styles and included the use of an electronic voting system to evaluate the current levels of understanding and the knowledge and understanding gained and role play.

A poster highlighting the key practical communication strategies for patients who have dementia was produced and formed the basis of the second workshop. This allowed a more permanent record of the findings to be displayed within the therapy setting for on-going reference.

**Evaluation:** Following the educational programme, a review of the patient documentation was undertaken to elicit the impact of the education programme on therapy intervention. In addition, qualitative feedback from staff involved in the programme was obtained to evaluate the levels of understanding and identify gaps in previous levels of knowledge. Feedback from participants in the education programme also evaluated the effectiveness of the learning and teaching strategies utilised.

**Conclusions:** From a comparative review of patient documentation, it is concluded that the delivery of an evidenced based, educational programme relating to consent, mental capacity and communication strategies enhanced communication between patients with dementia and physiotherapy professionals. A reduction in the number of carer complaints, informal feedback from patients and acknowledgement from staff of their increased confidence in communication with this patient group, demonstrated the effectiveness of the educational programme developed.

**Implications:** The ability to study an area of professional practice as part of a formal academic qualification afforded the presenter the opportunity to improve the standard of patient care with an NHS Hospital Trust. Disseminating the evidence of the literature review undertaken to physiotherapy clinical staff, enhanced their awareness, knowledge and understanding of the implications of poor communication on the patient experience and, as a consequence, their professional practice.

## SESSION 40

(Platform Presentations)

### **Bringing evidence into practice: linking science and practice in education 6**

Friday, November 9, 2012

ROOM A.-1.03

14:35-15:20hrs

**40.003**

### **Child physiotherapy and family quality of life: implications for education and practice in early intervention program**

**C. A. C. Araujo, B. Paz-Lourido, S. Verger-Gelabert**

University of the Balearic Islands, Palma de Mallorca, Spain

**Purpose:** The aim of this presentation is to show the literature review carried out with the purpose of identifying in which way child physiotherapy in early intervention programs may contribute in promoting better family quality of life in families of children with disabilities.

**Relevance:** Physiotherapy intervention in children requires the adaptation of education and practice to current knowledge on biomedical, behavioural and kinesiological fields, but it seems that an ecological focus on the treatment may contribute for improving health outcomes at the child and family level.

**Participants:** None.

**Methods:** The review was developed from September 2009 to June 2010 and searched original and review articles published in databases as SCOPUS, EBSCO, PubMed, CSIC-CINDOC and others, in English, Spanish, Portuguese. Different combinations of the following key words were used: quality of life, families, family quality of life, pediatrics physiotherapy, family-centered approach, physiotherapy, ecology of development, early intervention, children with disabilities.

**Analysis:** Literature review.

**Results:** The focus on families in early intervention with children is established already in its definition, in which early intervention is the set of interventions that may be undertaken aimed at children of 0-6 years old, their family and the environment in which they develop in order to prevent or treat possible developmental disorders. Currently, emphasis is being placed on actions of early intervention that consider the totality of the child's universe and are planned by an inter or trans-disciplinary team. Physiotherapists are part of the early intervention team, which seems to be passing through a process of change from child-centered action and the disability to a family-centered approach, consistent with current theoretical trends and practices. Nevertheless, when attempting to deepen the contribution of early intervention physiotherapy in family quality of life for families with children with disabilities, it was highlighted that the family is generally considered as a resource for child-centered care and not as part of the overall objective of the intervention.

#### **Conclusions:**

Findings in this study suggest that there is a need for a development of child physiotherapy that clearly states the perspective of family quality of life from a theoretical but also practical point of view. It was highlighted that this area represents an open field for quantitative and qualitative research because family quality of life is a construct composed by multiple variables.

**Implications:** There is a need for studies regarding the aspects that could be taken into account to organize services in early intervention physiotherapy with a family-centered approach, enabling an adaptation of the curriculum of universities to account for current theoretical trends and to deepen their contextualized applicability in services.

## SESSION 41

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 1**

Friday, November 9, 2012

ROOM C.E.20

14:35-15:20hrs

#### **41.001**

### **Championing CPD through a workplace role and targeted resources**

**P. Askew**

London, United Kingdom

**Purpose:** There were two main objectives. The first was to design, develop and deploy a workplace based learning champion role to support colleagues CPD. The second was to develop bespoke on-line CPD resources to meet the specific needs of key groups of members at different stages in their professional career. These were (a) newly qualified graduates (b) support workers and (c) advanced practitioners. The project sought to integrate the use of these new on-line resources, with the face to face support and leadership from the learning champions, and to explore the extent that these approaches could become mostly self-motivating and hence improve sustainability

**Relevance:** With changing and challenging workplace contexts, the development of CPD approaches, the new Physiotherapy framework, and the continued professional and regulatory CPD requirements, this project sought to support physiotherapists CPD at very different and specific points in their career, and in the context of the current workplace. The project implementation was very specific and practical, with on-line guidance, tools and examples, enhanced by peer support. This was within the broader context of helping individuals to identify and address their learning needs and demonstrate the service and practice value of their learning achievements. This also demonstrated the national leadership role of the professional body, and the way that this was very practically based.

**Description:** The role was designed to provide choice and flexibility in how it was deployed by self-selecting individuals, so that it could be broadly be self-motivating and hence have potentially greater sustainability. To strengthen this, the role was also closely and explicitly aligned to the newly developed national Physiotherapy Framework, specifically to the focus on »helping others learn and develop«. To support the role a range of resources were developed, including a self-evaluation framework, guidance, tools and a range of practical exercises. The suite of products developed for Physiotherapist members followed a common framework built around guidance, tools and examples. These were developed as on-line resources, made available alongside the broader more generic suite of CPD resources.

**Evaluation:** The Learning Champion role was piloted in two of the nine national regions. The evaluation framework focussed on discrete evaluation of the resource content, and also the mechanisms by which the resources were delivered. The take up of the learning champion role and the broader resources grew steadily and significantly. This was supported by specific targeted marketing activity, and also monitored through levels of on-line traffic and the access to specific resources.

**Conclusions:** The Learning Champion role has provided a new structured opportunity to support learning through the workplace and alongside peers. The flexibility and choice in terms of how the role is deployed was important, reflecting both individual skills and preferences, and also the workplace context. The development of substantive bespoke resources targeted at specific career stages has proved significant, as has the ability to explicitly relate these to the broader suite of CPD resources, and to be able to apply those new resources in changing workplace contexts. The online approach has meant that relevant resources – particularly CPD case studies – can be added over time to keep interest and currency, and was enhanced by the simple use of social media (twitter, facebook).

**Implications:** This project brings together the use of bespoke and targeted on-line CPD resources, aligning with the opportunity for structured workplace based support by peers. This highlights the importance of self-motivation, both for learners and those supporting learners, and how that has a positive impact on sustainability for local CPD activities. It also highlights how sufficient and manageable choice allows learners to progress their learning in the way that best meets their needs. This points to extending the role and resources to other regions through a potential follow on project.

## SESSION 41

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 1**

Friday, November 9, 2012

ROOM C.E.20

14:35-15:20hrs

**41.002**

### **Developing a code of professional values and behaviour to promote professionalism and continuing professional development**

**S. C. Gosling**

Chartered Society of Physiotherapy, London, United Kingdom

**Purpose:** The Chartered Society of Physiotherapy (UK) initiated the development of a new code of professional values and behaviour to produce a positive assertion of the professionalism expected of all its members and to provide a structure for their continuing professional development [CPD].

**Relevance:** There is an increasing imperative for members of the physiotherapy workforce, and those preparing for entry to the profession, to demonstrate their fulfilment of professional responsibilities and their accountability for their decisions and actions. All this exists within a context of strengthened arrangements for professional regulation, including CPD requirements.

In strengthening CSP expectations of members, there was a concern to give pre-eminence to the ethical principles and values that underpin a patient-centred approach to service delivery and professional activity, and to focus on the responsibilities (rather than privileges) that come with professional autonomy, all in ways that are supportive of individual and collective development.

**Description:** The CSP undertook desk-based activity to ground its Code in contemporary thinking on health care ethics and professionalism. A range of equivalent documents were considered, across disciplines and internationally. The Code was developed and refined, with open processes for member involvement at all stages. This occurred formally through the Society's member representative (committee) structure, provision of an on-line questionnaire, and opportunities for broad debate, including at the CSP's annual national conference. The views of patient representative groups were also sought. Member consultation was repeated during a pilot phase.

**Evaluation:** Feedback was analysed and informed how the Code was written. It has since formally been launched, with its use due for review in 2013. While direct member responses to the open invitations to provide feedback were relatively small, they were overwhelmingly positive. Members recognised the Code's merits for supporting their CPD, both individually and to structure group learning, and to underpin appraisal and supervision. The intentionally generic nature of the Code was found useful for highlighting the common values that underpin physiotherapy roles, career stages and practice settings, with these and the Code's underpinning principles providing a basis for reflection on professional behaviours, ethical dilemmas and development opportunities.

**Conclusions:** Engagement with the Code indicates members and wider audiences have responded well to its positive assertion of professional values and behaviour, its grounding in contemporary ethics, and its provision of broad principles to guide and support members' development across diverse roles and practice levels. This can be seen to reflect an increasing maturity and confidence in expressing professionalism in outward-facing, service-oriented ways.

**Implications:** The CSP is developing a programme of activity to embed the Code in its support to members, including helping them to engage with regulatory requirements and to derive learning from complex situations in daily practice.

Planned activities include using the Code to support students' self-assessment of their engagement with professional values and grounding the CSP's advice service to members in the Code's broad concepts of professional responsibility (for example, on issues to do with scope of practice, developing and maintaining professional competence, and exercising professional autonomy). In each area, specific CPD tools will be developed to support particular learning needs.

## SESSION 41

(Platform Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 1

Friday, November 9, 2012

ROOM C.E.20

14:35-15:20hrs

41.003

### Counting down to Christmas to support CPD

G. Owen

Chartered Society of Physiotherapy, London, United Kingdom

**Purpose:** This paper presents an evaluation of using an ePortfolio system to introduce a seasonal online calendar of learning activities to enhance access to continuing professional development (CPD).

This project was designed to:

- support Chartered Society of Physiotherapy (CSP) members' engagement with CPD;
- challenge members' perceptions about access to CPD;
- explore the potential of using an activity calendar for changing members' engagement with the CSP's ePortfolio system;
- design and pilot a series of bite-sized CPD activities for embedding into the CSP's CPD resources during 2012.

**Relevance:** CSP adopts an outcomes-based approach to CPD; members are expected to demonstrate how the outcomes of CPD inform their practice (CSP, 2011). Mindful of the regulatory and employment changes and a desire to support members' CPD, the CSP launched Pebble ePortfolio during 2008.

Research conducted by the Society during 2010 highlighted a number of issues about members' CPD practice and their expectations of the ePortfolio system. Members reported concerns about their access to and time available for CPD in the workplace. Feedback on the CSP's ePortfolio highlighted issues around ease of use, the need for support (technical and pedagogical), choice and incentivisation. A new CPD webfolio (a website that members access through their ePortfolio account) was developed with a group of members to address these issues. The webfolio was formally launched in October 2011, but its uptake by members was slow.

The calendar's design was informed by theories of motivation and principles of learning and development. Its content would support members' access to CPD by incentivizing their engagement with the ePortfolio system, which would be rewarded by evidence of engagement with CPD and a better awareness of the resources available via the CPD webfolio. The calendar was hosted within the ePortfolio system, but could be accessed and used through the CSP's website. A new CPD activity was added to the calendar daily from 1 – 25 December 2011. The calendar was available for members to use until 6 January 2012. The CPD activities were aligned with the behaviours, knowledge and skills from the CSP's (2011) Physiotherapy Framework and offered members a variety of learning experiences.

**Description:** The calendar was developed with support from a self-selecting online group of 35 members who had worked to develop the CPD webfolio. The calendar was available to over 50000 CSP members via the CSP's website.

**Evaluation:** Data about members' engagement with the calendar was inferred by careful monitoring of usage of the ePortfolio system and subscription to the CPD webfolio gateway between 30 November 2011 – 7 January 2012. Members were also invited to provide feedback about their experience of the calendar via email, iCSP or the ePortfolio system.

**Conclusions:** The number of members subscribing to the CPD webfolio increased between 30 November and 6 January by 20% to 352. This increase is greater than had been achieved during previous months (July – November 2011). There was a growth in the total number of ePortfolio accounts, and the number of members with assets in their accounts. While these increases were small, the gap between active and total ePortfolio accounts reduced during December 2011 which is evidence of members' starting to use their ePortfolio account differently.

Feedback from members of the online group who informed the development of the calendar was positive – both in terms of their own CPD and the use of the resource to support their peers' access to CPD. Feedback from calendar users was extremely limited, but those who did find time to send an email spoke warmly of the calendar's novelty value and how its content supported their access to CPD.

Reflection on the process as a whole highlights the need for a planned co-ordinated approach to communicating the availability of the resource through a variety of channels – online, hard-copy media and physical networks.

**Implications:** This very short project has shown how an online calendar of CPD activities can be used to support members' access to CPD and change their engagement with an ePortfolio system. The CPD activities created through this project have been refined and embedded into the CPD webfolio, and the learning gained from this project used to create a weekly activity calendar to support members' CPD.

## SESSION 42

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 2**

Friday, November 9, 2012

ROOM C.E.21

14:35-15:20hrs

#### **42.001**

### **Educating the educator: The training of clinical educators in Israel**

**G. Shahar**

Tel Aviv University, Tel-Aviv, Israel

**Purpose:** Rationale: Clinical education is a major and integral part of the overall education of physical therapists in Israel. The students are sent to various clinical entities where they are educated (rather than supervised) by expert clinicians who have been specially trained in clinical education and instruction.

**Objectives:**

1. To describe the overall training of clinical educators in Israel - the initial course and the various educational activities which follow - as an example of continuous professional development (CPD)
2. To evaluate the results of the last ten years that the program was implemented at the Tel-Aviv University

**Relevance:** The Program: For the past twenty years, the Department of Physical Therapy at the Tel-Aviv University has designed and implemented a special training program to prepare expert clinicians to be clinical educators. The graduates of this program provide clinical education to students of all physical therapy training programs in the country.

**Description:** The target populations are competent clinicians recommended by their superiors who have at least three years of clinical experience, and have participated in a number of post graduate courses in their specific field.

The program consists of an initial 60 hour course followed by periodic workshops on various subjects pertaining to clinical education. These include teaching methods and their application to the clinical field, planning the clinical affiliation as a learning experience, the role of the clinical educator, the characteristics and needs of the students as adult learners, how to give supportive feedback and student evaluation in the clinical environment. Teaching methods include frontal lectures, group discussions, role-playing sessions, analysis of critical incidents, feedback from colleagues, reflective thinking and self evaluation. The learning process of the future clinical educators is analogous to that of the students in their clinical affiliation. In recent years other health professions such as occupational therapy, have adopted this training program and adapted it to their needs.

**Evaluation:** Methods and Results: The clinical instructor's course has been in existence since 1989. Between the years 2000-2010, 375 physical therapists from various clinical fields have participated in this program. Questionnaires were sent to all the participants. The response rate was 43.5%. The collected data shows that most clinical educators are highly motivated and driven by the highest professional values. Most of them, over 90%, have worked as clinical instructors for at least 2 years, the median for retirement from clinical education being 7 years. At the time the questionnaire was filled in, 63% were active clinical educators. It seems that clinical education serves as a means for professional advancement. About half of those who left clinical education have moved on to positions in management, teaching or research, 28% have progressed to furthering their academic studies.

**Conclusions:** In conclusion, clinical education leads to personal growth as a professional, improves the professional level of the workplace and contributes to the enhancement of the physical therapy profession.

**Implications:** The program can be adapted to other Physical Therapy departments as a CPD program.

## SESSION 42

(Platform Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 2

Friday, November 9, 2012

ROOM C.E.21

14:35-15:20hrs

42.002

### Academic CPD: Teaching as »guide at the side« instead of »sage on the stage«

O. E. Huber, A. Schaemann

Institute of Physiotherapy, Winterthur, Switzerland

**Purpose:** Shortly after the academization of physiotherapy education in Switzerland in 2006, academic Continuous Professional Development (CPD) was established. Why was this necessary and what are the concepts for its implementation? Patient-centred care in a changing health system necessitates a move towards more multi-professional and interdisciplinary approaches and demands physiotherapists who are able to cooperate in these settings. Furthermore, the increasing importance of evidence based physiotherapy demands also clinical experts, if referring doctors and patients are to recognise the competences of the physiotherapists and the significance of the profession to the health care system. Therefore, academic teaching has to take all these challenges into consideration in order to provide its students with the optimal training to become competent and attractive care providers and / or employees. This presentation describes a current model of teaching and learning in CPD at the Zurich University of Applied Sciences (ZHAW) in Switzerland.

**Relevance:** One of the core points of the Bologna reform concerns the new orientation of universities towards current and expected future developments in a globalized and knowledge-based economy. Lifelong learning, employability and mobility are keywords in this context. Many reform processes at universities are focusing mainly on the harmonization of their programmes and the awareness of the new pedagogical orientation is commonly not a major issue.

**Description:** The CPD concept at the ZHAW in Switzerland consists of the following 3 dimensions:

- 1) Roles and competencies: ZHAW uses the CanMEDS framework, which has been established nationwide in the BSc and MSc programmes. The framework describes 7 roles: medical (physiotherapeutic) expert, communicator, collaborator, manager, health advocate, scholar and professional. The aim is to develop the physiotherapist's role from clinical expertise towards extended expertise. CPD on the Master level offers learning situations where students can improve their competences in all of these roles. CPD on Certificate and Diploma levels focus on competences for 4 roles only. The learning situations are described in the following dimension.
- 2) Didactic and pedagogic: ZHAW has implemented blended learning, as recommended by the national conference of the Universities of Applied Sciences in Switzerland. Blended learning is defined as a form of mixed and integrated learning, where classroom teaching is supplemented by guided and autonomous self-study. The latter two teaching forms are supported by E-technology, such as E-Learning platforms and personal learning environments. This fragmentation demands a shift from teaching to learning, thus requiring a new understanding by students and teachers and a change in learning and teaching behaviour.
- 3) Professional and inter-professional: The ZHAW emphasises physiotherapeutic professional development. A Master programme in musculoskeletal physiotherapy, which started for the first time in 2010, has already been developed and a Master programme in paediatric physiotherapy is in planning. A course at Certificate level started in 2011. However, we are also offering inter-professional courses at Certificate level, e.g. in pain, and these inter-professional courses can also be taken in combination with the professional Master.

**Evaluation:** Evaluation is made on an individual course and on the Master programme level. In general, we have found that our students and teachers cope very well with our concept and have been willing to adjust their learning/teaching habits.

**Conclusions:** Since academization in 2006, physiotherapists in Switzerland increasingly understand and accept the need for academic CPD and evidence based physiotherapy, as well as the need for extended skills.

**Implications:** The academic CPD contributes to the physiotherapy profession in Switzerland by training lifelong competent and attractive care providers, who take into consideration both clinical and economic aspects, as well as being communicative team workers, managers and health advocates for their patients and the health care system.



## SESSION 42

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 2**

Friday, November 9, 2012

ROOM C.E.21

14:35-15:20hrs

**42.003**

### **Fostering continuing professional development for clinical educators: An innovative university-clinic collaboration in the world of lifelong learning to advance physiotherapy**

**A. N. Chaudry**

Langston University, Langston, OK, USA

**Purpose:** The need to instill significance of lifelong learning in clinical physiotherapists serving as clinical instructors for students enrolled in a Doctor of Physical Therapy [DPT] program at Langston University [LU], Langston, OK, U.S.A., led the DPT Program to investigate how best to educate clinical instructors about current developments in physiotherapy practice so as to bridge the gap between academia and clinic and generate a pool of quality clinical instructors for its DPT students.

**Relevance:** In order to advance the profession of physiotherapy anywhere in the world it is important to provide quality didactic and clinical instruction to students enrolled in physiotherapy educational programs. Typically, clinical instruction is provided by physiotherapists with diverse educational backgrounds and experience levels in remote off-site clinical settings. Therefore, it is imperative for a physiotherapy academic program to take concrete steps to not only monitor learning needs of clinical instructors but also provide a consistent mechanism of meeting those needs through collaboration with clinical facilities.

**Description:** Physiotherapy education has evolved from a certification to a first professional master [MPT] or doctorate [DPT] degree. However, MPT and DPT degrees are still relatively new and there are insufficient MPT/DPT prepared clinical instructors for students currently enrolled in MPT/DPT programs. This places a heavy burden on MPT/DPT programs to ensure that affiliating clinical instructors are as current in knowledge as their students to avoid a disconnect between didactic teaching and clinical practice. Consequently, the LU-DPT program designed an innovative approach to bridging this gap between classroom and clinic through its "Annual Clinical Educator's Workshop" (Workshop) designed specifically for all clinical instructors affiliating with LU-DPT program. All affiliating clinical instructors are invited to attend.

**Evaluation:** Each year LU-DPT program solicits input from its clinical instructors regarding areas of interest for future continuing education. To maximize input, LU-DPT program employs several avenues such as personal inquiries by Director of Clinical Education [DCE] during meetings with clinical instructors, DCE meetings with Center Coordinators of Clinical Education [CCCE] when setting up new clinical sites, and DCE meetings bi-annually with clinical faculty appointed to the program's clinical education advisory committee [Advisory Committee]. The Advisory Committee is charged with responsibility of final topic selection for Workshop based on addressing additions/changes in physiotherapy teaching, current advances in professional practice, legal/ethical concerns pertaining to physiotherapy, legislative/advocacy issues, and broad appeal/relevance for clinician generalist practice. Specific examples of courses taught will be shared with audience at conference. As an incentive to make Workshop more appealing to employers and clinicians, LU-DPT program secures approval from Oklahoma Board of Medical Licensure & Supervision [OBMLS] annually for continuing education credit which is required for licensure renewal by physiotherapists in the State of Oklahoma, USA. LU-DPT program also offers Workshop at no cost to attending clinicians at approximately same time each year thereby making it easy for employers to plan ahead. Location of the Workshop was also strategically selected to be in close proximity to a significant group of affiliating clinical facilities. Physiotherapist attendees completed a post workshop evaluation after each Workshop on which they identified value/significance of Workshop and affirmed contributions made by the Workshop towards their continuing professional development along with a request to LU-DPT program to continue to offer the Workshop.

**Conclusions:** The Workshop has accomplished a twofold purpose for LU-DPT program i) generated a pool of clinical instructors engaged in continuing professional development to keep abreast of the changes/additions to physiotherapy education as a result of its advancement to the MPT/DPT level, and b) helped to build collaborative networks with its affiliating clinical sites by offering approved continuing professional education for its employees at no cost and within commuting distance. Due to the perceived value of this Workshop within the Physical Therapy community, the LU-DPT program has successfully offered this Workshop each year since the inception of the program in 2002. The 2012 Workshop is scheduled for April 18, 2012. Additionally, practitioners have requested possibility of telecasting the Workshop for remote clinical sites.

**Implications:** The core concept of physiotherapists needing to engage in continuing professional development to keep abreast of the changing needs of their profession together with a desire to be assisted in this process is universal. Therefore, this Workshop can be modified through use of alternate incentives such as low cost versus no cost and adapted for use in educating physiotherapists regarding any topic of interest to any given population of physiotherapists in any state or country of origin.

## SESSION 43

(Platform Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 3

Friday, November 9, 2012

ROOM C.E.02

14:35-15:20hrs

#### 43.001

### How to develop sustainable processes in colleague counselling

E. Solvoll1, S. Sellæg2

1Faculty of Health Education and Social Work, Trondheim, Norway, 2Department of Physiotherapy, Trondheim Municipality, Trondheim, Norway

**Purpose:** The purpose was to create sustainable processes in counselling Physiotherapist Colleagues in community based practice. Competent physiotherapists need professional craft knowledge, propositional and personal knowledge. In physiotherapy there is little tradition in systematic counselling. Strengthening these competences could make it easier to cope with complex situations. Counselling is to develop the reflective and critical thinking more than giving advice. The secondary objective was to make the student counselling more structured and focused.

The goals to develop were:

- sustainable processes in colleaguecounselling
- skills to cope with difficult situations and manage to change accordingly to complex and different contexts
- consciousness in coping with interpersonal aspects the professional situations demand

**Relevance:** The physiotherapist must cope with individual patients and relatives, challenges in group sessions or in cooperation with professionals from other fields. Safety and comfort in own practice is essential. A physiotherapy counsellor has the responsibility to be aware and help bringing up different aspects and needs when counselling. A safe atmosphere gives more space to bring up uncertainty. As Counsellor it is important to develop micro skills i.e listening, attending, paraphrasing, create silence and let the other person be in focus.

**Description:** The project started autumn 2008. 50 physiotherapists in four districts in Trondheim were participating. The leader of the Physiotherapy Unit had a group with four physiotherapists who have had responsibility for practical follow-up: to ensure that each therapist counselled and was counselled during six month. The physiotherapists are working with either elderly or children. They were counselling individually or in groups in their own group or in the opposite group i.e therapists working with children also counselled colleagues working with elderly. The therapists have videotaped a colleague in action with a patient, or only observed and made the analyses afterwards.

**Evaluation:** This is an Action Research Study. As project leader, I have worked close with a Project assistant and leader of the Unit and. I have been responsible for the summery meetings in all districts each 1/2 year from spring 2009 to december 2011 and the meeting with the promoters and leader. Themes were how to develop the process. I have counselled groups in the districts with focus on videos. As project leader I have conducted and analyzed two Focus Group Interviews with physiotherapists from all districts, one focus group interview with the promoters and one interview with the leader. There was workshops with a P.hD in Counselling, to practice different counsellingmethods.

**Conclusions:** The interviews showed:

- It is nessecary with promoters in each district.
- The therapists now feel more safety in student counselling and in bringing up difficult challenges among colleagues.
- It is easier to ask a colleague to participate when there are challenges in the profession.
- The therapists are more aware of own behavior in patient meeting and analyses own behavior if the exercise is not sucessfull.
- Individual counselling brings attention on personal behaviour, how to express oneself in the interaction, how to assess situations, patient reactions. In group counselling there is more attention to treatment according to medical status and disease.

Suggestions for future work:

- to continue the frequency both counselling and be counselled
- to continue the work of the promoter in each district
- a close contact between the leader of the Unit and the Promoters to secure the further development of the counselling, analyse and react if there is special challenges in the developing of counselling in the Unit.
- Counselling is an important theme when the Leader of the Unit participate in the meeting with the physiotherapist in the district.
- The Unit has a Profession team with one participant from each district where Counselling a theme in the team.
- to create arenas for all four districts together to share experiences in counselling.
- Leader and promoter must find out the needs to develop further formal competence

**Implications:** Practice: the understanding of different competencies in being a counsellor and the possibility to counsel in many different kinds of situations. For practice and education: by strengthening the colleaguecounselling these competences can be transferred to studentcounselling.

To develop all these competences in physio therapy practice, it's important to focus on learning oriented self reflection and reflection through participation together with colleagues. Learning oriented reflection includes awareness and attention to earlier thinking.

## SESSION 43

(Platform Presentations)

### CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 3

Friday, November 9, 2012

ROOM C.E.02

14:35-15:20hrs

43.002

### Further training/postgraduate studies to a better development of physiotherapists »competences«

J. A. Armenta Peinado<sup>1</sup>, M. T. Labajos Manzanares<sup>2</sup>, E. Sánchez Guerrero<sup>1</sup>, F. J. Barón López<sup>2</sup>, I. Luque Vázquez<sup>1</sup>

<sup>1</sup>University of Málaga, Málaga, Spain, <sup>2</sup>Málaga, Spain

**Purpose:** According to studies carried out among students and graduates in Physiotherapy, it seems essential the need for a continuous further training after the qualification obtained in the Degree, thus updating knowledge and competences with the aim of facilitating the entry into working life

**Relevance:** The importance of learning has been highlighted across all Europe from the Standing Liaison Committee of Physiotherapists of the EU (1990), Sorbonne Declaration (1996) and Bologna Declaration (1999) to Budapest-Vienna (2010). In Spain this importance was highlighted by the White Paper of Physiotherapy (2004).

**Participants:** 406 out of the 1956 Physiotherapy graduates who studied their degrees at Universities in Andalusia (Southern Spain) between the years 2003 and 2009 were selected to carry out this research.

**Methods:** The main line for this study is observational, transversal, descriptive and inferential, having been conducted over four stages:

- Questionnaire design and validation by external experts in the discipline field of Physiotherapy.
- Preparation of the questionnaire (16 items on further training /postgraduate studies) besides a pilot study with 20 graduates.
- The link to the survey is sent through the Professional Association of Physiotherapists of Andalusia.
- Data collection and analysis.

**Analysis:** Most of the questionnaire items have been described by qualitative variables. To study the homogeneity between different sub-samples, we used the chi-squared test, with a value of  $p < 0.001$ .

**Results:** The highest percentage (51%) of the surveyed students were counseled in the third year of the degree. Physiotherapy Professional Associations and the University became as the main source of information and turned out to be responsible entities of the organization with an assessment of very high satisfaction (87.1%). 21.6% obtained the University expert title and 12.2% the Master's Degree. Participation rates of women in this formation were much higher than those of males; while the first (47%) had more difficulty, the latter (32.3%) were willingly allowed to do it by their employers. Among the fields or specialties, we notice, not only in our study but in others, it mainly happens with graduates in Physiotherapy, Osteopathic Manual Therapy, followed by Neurological Physiotherapy, in Trauma / Orthopedics and Sports Physiotherapy. We should also mention as potential fields the Pelvic Floor Physiotherapy, Teaching and Research, which seem to arouse greater need for training, hitherto undetected with such intensity. Both in our study as in others, the satisfaction and the perceived need to pursue postgraduate training were considered very high (93.4%), whose motivation is the improvement in knowledge and promotion in their professional career, focusing on a better job.

**Conclusions:** - Almost all physiotherapists believe it is essential to continue with postgraduate training after graduating.

- Regarding the issue of postgraduate training, Manual Therapy becomes the field which needs more attention.
- Overall satisfaction with postgraduate education/ training is very high.
- Women find more trouble to do postgraduate training than men.

**Implications:** It becomes necessary to continue training more specifically, in a process of continuing education or training throughout life (Lifelong Learning), viewed as an investment rather than a rapid consumption, according to the Human Capital Theory. Continuing education must be conceived and harmonized with the basic training for the physiotherapist to help respond to the changing needs of the patient/user.

## SESSION 43

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 3**

Friday, November 9, 2012

ROOM C.E.02

14:35-15:20hrs

#### **43.003**

### **Simulated patients in postgraduate education – what can they offer?**

**J. Waterfield**

Keele University, Newcastle Under Lyme, United Kingdom

**Purpose:** To explore the role of simulated patients in a postgraduate module

**Relevance:** With the changing nature and cost of healthcare and of professional education maximizing learning resources is important.

**Description:** Simulation in health education is well documented but its use in physiotherapy less so. This may be partly due to terminology. Simulation encapsulates any imitation experience from a virtual environment (e.g. 'Second Life') to the use of equipment (e.g. 'Resusci Annie'). The term 'simulated' is often used interchangeably with 'standardized' but they differ as the latter suggests no variability at all, for example the same physiological response to a prescribed action. Standardized patients are commonly used in assessments such as OSCEs, but simulation may benefit learning more broadly through opportunities to practise and improve skills in a safe but realistic environment, reducing the risks to 'live' patients.

Practice, especially at postgraduate level, involves the ability to deal with the more challenging and unpredictable patient. This report looks at the use of patient simulator actors (PSAs) in a postgraduate module within a multidisciplinary masters in pain management, recruiting 8-16 students a year, predominantly physiotherapists. One aspect of pain management is the recognition of various psychosocial factors, or 'Flags', that act as obstacles to an individual's recovery; identifying these is integral to decision making in often complex and challenging patients. Before the session theoretical reading is given and time is spent preparing the students to 'work' with PSAs. The session aims to develop communication skills and an ability to identify relevant Flags. A group of about eight students take turns to 'interview' the patient in a rolling process in front of their peers. The interaction may be from the beginning of the interview, in the middle or in its closing stages. While the PSAs have a script they can create different personas and are responsive to the students' style and questions. Guided by Pendleton's rules, feedback is given on the students' questioning and manner from peers, the tutor and importantly the PSA. Additionally what Flags were identified, how, and their bearing on the interview and possible clinical decisions are discussed. At the end of the session a 'debrief' is held for all participants.

**Evaluation:** The module is evaluated with a questionnaire and the students blog anonymously on the PSA session. Students report that 'doing stuff' makes for better learning than lectures and the value of the session is realized in practice with their own patients. Some would like smaller groups. Overwhelmingly they report that the best part is the interaction with the PSA and the feedback they give. The PSAs find the sessions interesting and very worthwhile. For tutors, preparation is reduced compared to other forms of teaching and the contact time is more interactive and practice focused.

**Conclusions:** One objection to simulated patients is that they can never offer the real patient experience but perhaps PSAs can populate the middle ground between paper patients and virtual patients.

**Implications:** Integrated PSAs can maximize learning and link theory to practice while using both tutors' and students' time effectively.

## SESSION 44

(Platform Presentations)

**CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 4**

Friday, November 9, 2012

ROOM A.-1.04

14:35-15:20hrs

**44.001**

### **Negotiated Work Based Learning (NWBL):bespoke training for Extended Scope Physiotherapy Practitioners (ESPP) to develop and demonstrate competence in patient management strategies post low energy foot and ankle trauma in the emergency department (ED)**

**J. M. Walton<sup>1</sup>, M. Troedel<sup>2</sup>, F. Cowell<sup>2</sup>, L. Jaffey<sup>2</sup>, B. Narayan<sup>2</sup>**

<sup>1</sup>The University of Liverpool, England, UK, Liverpool, United Kingdom, <sup>2</sup>Royal Liverpool and Broadgreen University NHS Hospitals Trust, Liverpool, United Kingdom

**Purpose:** Health service resources in the UK are limited and recent changes in role boundaries to maintain patient services has required ESPPs to migrate into roles previously undertaken by doctors. In the ED, senior medical staff often require deployment to serious cases, extending waiting times for less serious injuries. This limited medical resource provided an opportunity for ESPP to evolve into more advanced practice roles to maintain adequate service provision. In this ED, an ESPP had successfully achieved competence to request and interpret plain film radiographs (PFR) of the foot/ankle post LET. The natural role progression from this position was for the ESPP to develop their clinical skills into a more holistic approach to patient management from initial clinical assessment/diagnosis, through immobilisation strategies to rehabilitation and return to function.

**Relevance:** Setting: ED, large, teaching hospital. Prior to the development of the NWBL model, patients attending the ED with LET to the foot/ankle were assessed at presentation and treated post PFR using a variety of methods of immobilisation by medics. Subsequent referral to the physiotherapy team for future rehabilitation occurred with review in trauma clinic. However, this disjointed approach was found to impact negatively on the patient experience and final outcome in some cases. A multi-disciplinary team review identified an opportunity for the ESPP to evolve into a holistic advanced clinical role.

**Pedagogy:** Currently there is a limited number of such ESPP undertaking such patient assessment and management in the UK. Their unique requirement for professional development could only be addressed by a NWBL approach, tailored to their specific needs. A partnership arrangement between the hospital and university provided a robust framework in which this could be operationalised and for which academic credit could be gained (20 credits/Masters level).

**Description:** One ESPP was selected to undergo this role development, following their successful completion of a NWBL programme to develop advanced clinical skills/competence in PFR interpretation of the foot/ankle post LET. The ESPP was a senior physiotherapist in the ED. Work based education, support and competence based assessment was provided by a senior ED medical consultant and an advanced practitioner in physiotherapy. Academic support was provided by the university director of postgraduate studies. All had the requisite academic and clinical skills to support this role development. Over 70% patients attending were 'elderly fallers'.

**Evaluation:** NWBL requires the production of a bespoke module specification (BMS) which is negotiated between the trainee (ESPP), their employer and the university. This sets out educational aims, learning outcomes, syllabus, resources, learning/teaching and assessment strategies. Active 1-1 teaching was executed in the work place and subsequent work based assessment of the ESPP was undertaken in the ED using medical models of competence based assessment – Direct Observation of Procedures (DOPS) and mini clinical examinations (MCEX). These methods of assessment were selected to ensure that the ESPP was being assessed against the same competence criteria as a doctor undertaking a similar case load.

DOPS and MCEX forms were completed for each case seen by the ESPP by the senior staff. The ESPP was confirmed as competent when there was consistent achievement of an acceptable standard or above across a range of cases of varying complexity. Once this was achieved, the ESPP then took on their own case load, subject to regular audit.

**Conclusions:** ESPP can achieve medical equivalence in competence to provide a holistic approach to patient care for LET of the foot/ankle in the ED, supporting patients from presentation through to discharge post rehabilitation. This approach is resource efficient and importantly promotes the best patient experience/outcome. It also affords excellent patient satisfaction and primary contact physiotherapy in the ED can reduce the length of time in the ED and expedite patient journeys. It promotes personal, innovative development for ESPP whilst providing a patient centred approach. Critical self reflection is an important attribute for an ESPP undertaking such roles, so that he/she can appreciate their own limitations and will seek appropriate help from medical staff if required to ensure safe guarding of patients.

**Implications:** NWBL is a resource intensive pedagogy which requires excellent work based support and an effective partnership with a university. It is successful in evidencing competence for ESPP developing into unique clinical roles.

## SESSION 44

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 4**

Friday, November 9, 2012

ROOM A.-1.04

14:35-15:20hrs

**44.002**

### **Does reflection improve physiotherapy practice?**

**J. Dalley-Hewer**

Coventry University, Coventry, United Kingdom

**Purpose:** This study explores physiotherapists' perceptions regarding whether the use of reflection benefits their practice, and if so, how and whether the benefits may be evident.

**Relevance:** The practice of reflection has been an important part of physiotherapy education programmes in the UK since the mid 1990s (CSP 1996). However, reflection has been criticised for the lack of evidence that it contributes to practice (Burton 2000). No previous studies have been found which explore practitioners' views regarding whether reflection benefits practice.

**Participants:** A purposive sample of practice colleagues, who had expressed an interest in the research subject, were invited to participate; using email to extend formal invitations and research information. Six participants were interviewed whose clinical experience ranged from 4 to 30 years and included different clinical specialities.

**Methods:** This study is the first stage of a grounded theory approach to exploring the evidence for the benefits of reflections to practice. Individual interviews were conducted, recorded and transcribed. The interview transcripts were returned to the participants for checking. Any views of participants received after the interviews, as a response to the interview transcripts or otherwise, were also collected as data; this is consistent with a grounded theory approach.

**Analysis:** The interview transcripts were analysed initially with the use of line by line coding and emergent themes were identified. Early themes were explored in interviews with subsequent participants and were also presented to the participants for discussion and collegiate development of provisional theory.

**Results:** Participants were firm believers in the benefits of reflection to their practice, and perceived themselves to 'be reflectors'. The strongest theme to emerge was that of their conviction that reflection had resulted in changes made to their practice for the better. This was balanced by the difficulties of making this visible to others, either because the changes made to practice were subjectively perceived, or because the objectively measurable outcomes could not be conclusively attributed to the changed approach of the practitioner.

The link between reflection and improved practice was integral to their understanding of reflection; reflection without change was not reflection (unless it was affirmative reflection) and change was for improving practice. They reported constantly reflecting and continually refining their practice. They reported reflecting on practice, rather than in practice, with the actual reflecting being carried out at home, rather than at work.

There was a strong belief that the extent to which they constantly reflected on and improved their practice was related to receiving education about reflection, either as an undergraduate student or later in their career. They mentally used either published models of reflection, or personally constructed models to help their thinking.

**Conclusions:** The lived experience of those practitioners who consciously adopt the practice of reflection, is that reflection improves their practice. The evidence of their experience is presented and objective changes in practice or in outcomes were reported, although causal links could not be presented retrospectively. The suggestion was made that their written accounts of their reflections might enable the benefits of reflection to be made visible to others rather than only to themselves.

There was evidence that the continuous engagement in reflection was linked to continuous professional development, although there was not on-going recording of this through reflective writing or other media.

Further research is planned to explore the connection between reflection and practice, in order to inform future education strategies.

**Implications:** The link between participants' practice of reflection, the perceived benefit, and education in reflection suggests that reflection should continue to be included in physiotherapy curricula.

## SESSION 44

(Platform Presentations)

### **CPD – A range of opportunities, a range of new solutions in the world of lifelong learning 4**

Friday, November 9, 2012

ROOM A.-1.04

14:35-15:20hrs

#### **44.003**

### **The role of professional associations in supporting lifelong career pathways - from new graduate to specialist**

**V. L. Smith**

Australian Physiotherapy Association, Camberwell, VIC, Australia

**Purpose:** At the Australian Physiotherapy Association, the Learning and Development Division has created a Member Lifelong Learning Pathway (MLLP) to support members with more opportunities and a direction in their professional development and career pathway. This initiative was developed to support physiotherapists in their career progression from graduate entry through to specialist. This pathway provides members and non-members a range of professional development programs that meets their current practice needs as well as a pathway to specialisation. This pathway has also been developed to provide physiotherapists with the opportunity to broaden their skills in other areas of specialisation by moving through the pathway selecting areas of practice of other interest or relevance.

**Relevance:** In Australia, a physiotherapist has a requirement to undertake 20 hours of Continuous Professional Development (CPD) per annum as part of their national registration. To support physiotherapists in obtaining these hours and to demonstrate to external bodies the physiotherapy profession's genuine commitment to quality CPD and high standards in an increasingly competitive marketplace, the pathway was developed. This also involves the accreditation of courses from internal (group members) and external providers to ensure that learning objectives and outcomes are of the highest quality and meets the physiotherapy professional practice standards and that the entry level for experience and expertise is identified.

**Description:** The pathway supports entry from new graduates through to specialist with multiple entry points based on current knowledge and expertise. There are also directions for those wanting to pursue milestones such as Titling and Specialisation. The pathway has also been developed to support members with their national registration requirements of CPD. The MLLP has ongoing development with new courses and activities added with relevant entry levels indicated. Core CPD has been developed for each entry level with other relevant CPD activities aimed at that entry level included. The APA offers to members and non-members professional development in many formats; courses, webinars, online resources, lectures and workshops and the Australian College of Physiotherapists training program. This pathway gives direction for all members; the student, pt assistant, new graduate, experienced through to the specialist physiotherapist. Members are also encouraged, where prerequisites are met, to access CPD across other disciplines, to support their learning and increase their expertise in other areas of interest. The MLLP indicates at what level you are expected to have as a prerequisite, which supports the member in choosing activities that are relevant and of benefit. For example an alternative pathway at a particular experience level could be from musculoskeletal to gerontology to neurology - selecting those courses of interest and those indicating their experience entry point. This presentation will outline, with examples, the MLLP and the flexibility it gives physiotherapist's in planning and maximising their CPD opportunities and development of their skills and career opportunities.

**Evaluation:** The APA have convened the Education Advisory Committee to support and oversee the development of the MLLP and evaluate new courses seeking accreditation to be included in the pathway. The members of this committee are qualified physiotherapists and work in the university sector. Accreditation is only granted after successful auditing of the course and approval by this committee. The National Groups (special interest groups) oversee the relevance of the material, the learning objectives and outcomes of courses as well as determining the entry level for participants. This evaluation of CPD activities ensures that the pathway maintains its currency and level of expectations from those physiotherapists accessing the CPD activities. Ongoing and regular evaluations are conducted at the end of each CPD activity and entry level and relevance is captured from the data.

**Conclusions:** The APA has developed the pathway to ensure that there are relevant and current CPD activities available to members that meet their immediate knowledge requirements. The feedback from the members is that having a Member Lifelong Learning Pathway gives them direction in their CPD choices and that it has streamlined their ability to plan their career pathway and skill development.

**Implications:** The APA is aware of the continuous development of the pathway to ensure that the CPD activities retain currency, meet the requirements of the members and that there is adequate CPD activities at each entry point to meet the needs of physiotherapists wherever they may be in their career path.

## SESSION 45

(Platform Presentations)

### Education and employment policies: Challenges in Europe 2

Friday, November 9, 2012

ROOM C.E.18

14:35-15:20hrs

#### 45.001

### Direct access to physiotherapy in Switzerland: which qualifications are necessary?

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**Purpose:** The aim of this study was to evaluate the current attitude of physiotherapists in Switzerland towards direct access and to ascertain which competences they see as preconditions for its introduction.

**Relevance:** The direct access to physiotherapy has the potential to save costs and meet the future health care demands resulting from demographic developments. Since the academisation of physiotherapy education in Switzerland in 2006, the possible introduction of direct access has been increasingly discussed.

**Participants:** All members (7,874 persons) of the Swiss Association of Physiotherapy (physioswiss) were invited to take part in the study. A cohort of 2,137 physiotherapists (response rate: 27 %) participated in the investigation.

**Methods:** A questionnaire survey was used, based on a previous survey carried out by Jette et al (2006). The instrument was translated and adapted to the Swiss Health Care system and underwent cultural and linguistic validation.

**Analysis:** Descriptive data were analysed with SPSS 19.

**Results:** The majority (86 %) of respondents were favourable to the introduction of direct access in Switzerland. Furthermore, 84% reported that they also had the confidence to practice direct access. However, 61 % of the participants mentioned that additional qualifications would be essential. From a list of eight competences, participants were asked to choose the three most important from their perspective. Most important were deemed to be a comprehensive knowledge of pathology ("red flags") (90 %), differential diagnostics (75 %), as well as participation in continuing education (65 %). The majority of the participants stated that they based their own clinical decision process on their professional experience with patients (93%), on the contents of continuing education (92%) and on their competences developed in education (84%).

**Conclusions:** Although generally in favour of direct access, Swiss physiotherapists postulated increased knowledge of pathology and differential diagnostics as prerequisites for direct access. Participation in continuing education is also seen to play an important role in the implementation of direct access. For Swiss physiotherapists, professional experience with patients is the most important factor in their clinical decision process. Continuing education and competences developed in education are highly relevant.

**Implications:** Physiotherapists in Switzerland have a positive attitude towards direct access and have been shown to have the motivation to invest in the further development of the competences in order to gain the possibility of direct access. The development of competences in the areas of pathology (red flags) and differential diagnostics should play a role in both basic and continuing education. However, prior to the full adoption of these competences in educational programmes, further investigations are needed, which will be under the responsibility of physioswiss, the Swiss Association of Physiotherapy.



## SESSION 45

(Platform Presentations)

### **Education and employment policies: Challenges in Europe 2**

Friday, November 9, 2012

ROOM C.E.18

14:35-15:20hrs

#### 45.002

### **The wish for autonomy: Motivation inside the physiotherapy profession in Australia back in the seventies**

**M. Richter**

Rückenzentrum Am Michel, Hamburg, Germany

**Purpose:** Knowledge of the motivating factors inside the profession leading to increased autonomy in Australia in the mid seventies.

**Relevance:** Knowledge of the true and historical idea behind First-contact Practice will increase understanding for professional autonomy.

**Participants:** Experts in the field of physiotherapy at the time in the late sixties and early seventies.

**Methods:** Literature review and expert interviews.

**Analysis:** Qualitative analysis of the interviews.

Review of literature.

**Results:** The profession seemed to be blocked by its ethical constraint »not to treat patients without a medical or dental practitioners referral« and therefore physiotherapists were convinced that the society would benefit from easier access to physiotherapeutic services.

Knowledge and skill within the profession had been growing, plenty of physiotherapists had been working overseas and brought back new ideas, physiotherapy was a Degree course and opportunities for post-graduate qualifications were available.

**Conclusions:** The time for embracing First-contact Practice for physiotherapist had come back in the mid seventies in Australia. The profession was convinced that society will benefit from this decision and that physiotherapists were ready to accept this challenge and responsibility.

**Implications:** Acting as First-contact Practitioners involves excellent screening skills and knowledge of differential diagnosis. The skills have to be integrated into the curriculum of physiotherapy education and post graduate courses.

## SESSION 45

(Platform Presentations)

### Education and employment policies: Challenges in Europe 2

Friday, November 9, 2012

ROOM C.E.18

14:35-15:20hrs

45.003

### The practical perception of beneficence and nonmaleficence – from the perspective of physiotherapists in private practice

J. Praestegaard<sup>1</sup>, G. Gard<sup>2</sup>, S. Glasdam<sup>2</sup>

<sup>1</sup>Metropolitan University College, Copenhagen, Denmark, <sup>2</sup>Lunds University, Lund, Sweden

**Purpose:** To describe how beneficence and nonmaleficence are perceived by physiotherapists in private practice in Denmark and to discuss this in relation to the social context within which the physiotherapists act.

**Relevance:** In physiotherapy, as in other relational practices, ethical issues, understood as when one has to weigh alternative actions to a moral problem, are embedded in every clinical encounter, reasoning process and practice. For the last decades, there has been published explicit descriptions of professional ethics, and textbook publications which seek to describe and bring forth normative frameworks for how to identify and handle ethical issues in healthcare practice in general and in specific physiotherapeutic practice. An increasing number of research articles on the topic relating specifically to physiotherapy have been published. Empirical research shows that Danish physiotherapists are aware of ethical issues in daily practice, and also in private practice but the ethics in practice differ from the theoretical ethics in being more implicit in the practical actions and tacit. It has been shown that beneficence towards the patient is considered the moral drive for daily practice. It is on the basis of this research that the aim of the present study has developed.

**Participants:** The sampling strategy aimed at obtaining a sample of physiotherapists in private practice with a wide range of experiences due to our assumption that ethical issues can emerge in any clinical meeting. An invitation letter introducing the subject of the study and asking for interested participants was sent out to 31 clinics across all regions in Denmark. Thereafter, the clinics were contacted by telephone and asked if they wanted to participate. Nine clinics found the study important but lacked time for participation. 21 physiotherapists were accordingly selected.

**Methods:** This is an empirical study which consists of interviews with twenty-one physiotherapists performed twice within a hermeneutic frame. The theoretical framework used in the study emanates from Beauchamp and Childress's 'the four principle approach' (Beauchamp and Childress 1979; 2009). The four principles are beneficence, nonmaleficence, respect for autonomy and justice. Beauchamp and Childress state that the four principles function as a normative analytical framework intended to express general norms of the common morality that are a suitable starting point when health care professionals face ethically situations. The approach has proved widely influential in both teaching and writing about medical ethics, particularly amongst medical clinicians and nurses with little or no philosophical knowledge. For pragmatic reasons, we restrict our perspective in this study to focus on the principles of beneficence and nonmaleficence.

**Analysis:** The analysis arises from a hermeneutic approach for interpreting interviews which originates from Ricoeur's textual interpretation of distanciation. The analyses follow three phases: naïve reading, structural analysis and comprehensive analysis.

**Results:** The analysis resulted in the two constructed themes and their subthemes. Beneficence: The driving force for choosing a career in healthcare; Shaping the patient through education; Balancing between professionalism and personality; Balancing between considerations for the patient and doing business; and Postgraduate education as a lifeline. Nonmaleficence: The necessity of a professional argument; The expedient harm – in the long run; Visions for future organisation of physiotherapeutic private practice.

**Conclusions:** The principles of beneficence and nonmaleficence are perceived and unfold themselves in various ways in Danish physiotherapeutic private practice. Danish physiotherapists in private practice have an individualised and common sense focus on beneficence and an understanding that beneficence can conflict with businesslike imperatives in private practice. The physiotherapists' perception of sociological and cultural aspects of the two principles needs to be explicitly addressed in order to catch a more comprehensive understanding of beneficence and nonmaleficence.

**Implications:** The conclusion show that an explicit focus on ethical issues within the education is needed in order to strengthen physiotherapists consciously ethical reasoning about the ethical concepts of beneficence and nonmaleficence.

## SESSION 46

(Platform Presentations)

### Education and employment policies: Challenges in Europe 3

Friday, November 9, 2012

ROOM C.E.19

14:35-15:20hrs

46.001

### The transition into physiotherapy for students with disabilities

J. Opie

Coventry University, Coventry, United Kingdom

**Purpose:** This research was conducted to evaluate the experiences of students with disabilities when applying for admission onto a physiotherapy course. Building on their experiences suggestions are made on how their transition into physiotherapy as a profession might be encouraged.

**Relevance:** British law requires that the education system allows access to all students, including those students with a disability (Equalities Act 2010). Professional bodies, such as the Chartered Society for Physiotherapy (CSP), and their qualification courses are also encompassed by this law. In 2010 the CSP produced a resource to facilitate students with disabilities to 'join and contribute to our profession' (CSP 2010:9). The resource offers advice to both academic and clinical staff for supporting students with disabilities. However, one key group has been omitted: prospective students.

**Participants:** Narrative interviews were conducted with disabled physiotherapy students attending universities in England (10 in total). Recruitment of these students was achieved through sending information packs to course directors to be distributed to students with disabilities. Messages were also posted on the CSP interactive website (iCSP). Of the ten students interviewed seven knew about their disability when applying to university and their data provided the foundation for this paper.

**Methods:** The study adopted a qualitative phenomenological methodological approach, using a narrative inquiry method. The students were encouraged to tell their 'story' in their own words and these were recorded using a digital audio recorder.

**Analysis:** The interviews were transcribed and the data was collated and analysed by an inductive approach; using cross comparison of the responses from all of the participants for common or divergent categories and themes. This resulted in numerous categories that were grouped into three main themes: researching physiotherapy; negotiating the admission process, and finally the students' self perceptions.

**Results:** Most of the students reported that they had to be self reliant in seeking information on physiotherapy as a profession and the courses available. They found work observation useful, but finding information, particularly in respect to disability and physiotherapy, was difficult and time consuming. Three students reported that teachers or parents had expressed limiting or negative comments about their career choice and many of the students stated that they felt they needed to be very determined during the application process. Only two students considered that they had factored their disability into their selection of universities. Most of the students selected universities by convenient location or structure and reputation of the course. During the admission process only half of the students chose to disclose their disability. The reluctance to disclose was associated with the students' self perception of disability, embarrassment of having a condition or a perceived potential negative response to disclosure.

**Conclusions:** These findings are supported by research about the transition into higher education for students with disabilities in general. Difficulties in finding information, decisions to disclose and feelings of needing to work harder and be more determined are common within this student population. This indicates that although there is a legal requirement to allow access for students with disabilities there are still more ways in which universities could facilitate this transition. Physiotherapy courses, in particular, need to make information available to give a more positive impression to prospective students.

**Implications:** The students made a number of recommendations to improve the admissions process. Universities and physiotherapy courses are encouraged to improve the access and quality of information for students with disabilities. It was felt that this information would be better coming from existing students with disabilities, either by existing students contributing to open days or by recording podcasts that could be posted on course websites. More accessible information will encourage more students to disclose their disabilities, enabling prospective students to be more proactive and start to consider their transition to university earlier than non-disabled students. These recommendations are not onerous and would support the widening participation of the profession.

## SESSION 46

(Platform Presentations)

### Education and employment policies: Challenges in Europe 3

Friday, November 9, 2012

ROOM C.E.19

14:35-15:20hrs

46.002

### Promoting cultural competence in physiotherapy students using virtual technology and interprofessional learning

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**Purpose:** The aims of the programme were to:

- engender cultural competence in physiotherapy students;
- engage students in interprofessional learning;
- engender and understanding of global health issues;
- promote global citizenship.

**Relevance:** Context and background

Globalisation is a key feature of the modern world a significant outcome of which has been a greater movement of peoples. For example the relatively recent expansion of the EU, in May 2004, to include 10 New Member States has made it possible for workers in some Central and Eastern European countries to take up work in the EU bringing immigration to the UK and across Europe to new heights. In addition there has been immigration from a host of other countries, particularly Africa and Asia. The changing demographics and economics of a growing multicultural world and long standing disparities in the health status of people from diverse ethnic groups and cultural backgrounds has led to cultural awareness (also referred to as cultural competence, cultural sensitivity and multiculturalism) in health care curricula receiving renewed emphasis. This is because the implications of mass immigration extend to all aspects of health care, with host nations needing to ensure that their front line health care practitioners, such as physiotherapists are equipped to cater for people from different cultural backgrounds and their different disease profiles, cultural beliefs and health values. In other words there is an increasing need for health systems and professionals to become much more culturally responsive. It is, therefore, incumbent on health care faculty to engender this ability within their students. At the University Of Nottingham School Of Nursing, Midwifery & Physiotherapy we have been working with Universitas 21 to develop an on line programme aimed at addressing this important aspect of health care. The programme uses a case study tool which has been developed in Adobe Flex and modelled on the case studies used in the award winning Breaking Barriers CD. The tool uses authentic visual and auditory stimuli to engage inter-professional groups of health care students, from a range of different countries and cultures, in a cultural dialogue which will enable them to develop the knowledge and attitudes that help in preventing and treating illness in cultures other than their own. The pedagogy adopted for the programme is a problem based, case study approach within which students are confronted with scenarios that require them to engage far more than with more static, text based, instructivist informational material.

**Description:** Students were self selecting from across Universitas 21 Health Sciences Group.

**Evaluation:** Evaluation research will determine whether this approach does develop cultural awareness and whether learning is more meaningful and enduring. This paper will present the virtual mobility programmes we are delivering, highlighting the benefits and challenges as well as reporting on research findings.

**Conclusions:** The process of developing cultural competence is complex and needs to explore personal and professional values.

**Implications:** Not applicable

## SESSION 46

(Platform Presentations)

### Education and employment policies: Challenges in Europe 3

Friday, November 9, 2012

ROOM C.E.19

14:35-15:20hrs

46.003

### Moving from an education- to a knowledge Physiotherapy Institute – a management perspective

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**Purpose:** The purpose of this study was to explore which factors in knowledge management, strategy, structure and management style can facilitate the transition from an education-oriented physiotherapy institute to knowledge physiotherapy institute.

**Relevance:** The Utrecht University of Applied Sciences (UAS) is the third largest university in the Netherlands with over 38,000 students and 3,200 employees. Through the introduction of the bachelor-master system and research groups doing applied research, the Utrecht UAS is growing from an educational institution to a broad-based knowledge institution. This growth produced an urgent need for an organizational transition, especially in the physiotherapy institute.

**Description:** The research question was: »Which factors in knowledge-management, strategy, structure and management style facilitate the transition from an education-oriented physiotherapy institute to a knowledge physiotherapy institute«. Based on evidence-based-management practice, a literature review, a questionnaire and semi-structured interviews were conducted to answer the research question.

**Evaluation:** After analyzing the information and data collected by the research-project, several alternative solutions were formulated. These solutions were tested against a programme of organizational requirements. According to the requirements of the programme the most appropriate solutions were summarized in three scenarios. Next to the optimal scenario, the most feasible scenario and the 'zero' scenario were described. Zero indicates that no change/transition is made.

**Conclusions:** The optimal scenario includes the following elements:

- Consider knowledge management as the management of knowledge workers;
- Knowledge management should focus on evidence-based knowledge 'and' good clinical practice 'and' communities of practice';
- Education and research as core processes are integrated in a 'fuzzy structure' or a functional network;
- Use an explicit collective ambition as a guideline and sustainable framework for the knowledge organization;
- The focus should be on implementation of scientific evidence in the workplace;
- Commitment statements provide the framework for the professional autonomy with the collective ambition as a guideline;
- 'Blamefree' managementstyle;
- The introduction of periodic, structured dialogue between management and employees in order to find the most effective leadership-style to facilitate and monitor optimal professional autonomy,
- The development towards a knowledge-based organization can be characterized as a continuous and iterative process of moving forwards one step at the time.

**Implications:** Adopting the optimal scenario has implications for competences of management and employees, human resource management, the structure of the Utrecht UAS in general and more specific the physiotherapy institute. Risks in implementation lie in the area of support, loss of sense of urgency and insufficient time available.