

Abstracts

SAAHE

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KEYNOTE

Crises, Competencies, and the End of Time: Convergence and Divergence in Health Professions Education

[Jason Frank](#)

Category: Keynote

Despite the enormous progress in health professions education in the 20th century, how we train these advanced professions faces many contemporary criticisms. In the 21st century, how can we address challenge some fundamental problems in our training models? Can we withstand scrutiny in an era of societal accountability, or will the health professions lose control of the curriculum? This provocative presentation will review some of the criticisms and evidence challenging the 20th century order in medical education. Professor Frank proposes that Competency-based education, with a focus on outcomes, may be the way forward.

Change – is the key developing staff and student resilience?

[Deborah Murdoch-Eaton](#)

Category: Keynote

Expanding higher education systems, student diversity and expectations of health care graduates pose significant challenges. Health care educators recognise the stress of university reflected in higher proportion of mental health difficulties amongst our students. Literature suggests that socio- cultural factors rather than disciplinary association may play the strong role in academics views about belonging to a teaching community. So how can we think differently about meeting the challenges posed by our profession's needs, whilst addressing requirements to ensure robust graduates fit to work in the changing workplace? Convergence or divergence – are well defined competencies or professional identities crucial at the undergraduate stage, or should we be focussing more on generic skills, including capacity, resilience and mindfulness? Or is this a waste of time with no evidence for impact on practice in the workplace?

The Education of Health Professionals for the National Health Insurance

[Steve Reid](#)

Category: Keynote

Health professionals need to be prepared for the advent of the National Health Insurance plan in South Africa, which aims to provide universal coverage of a basic package of services at an acceptable quality to all South Africans. The full implementation of the NHI is envisaged by about 2025, so planning and piloting is already underway. The NHI implementation in general will be reviewed, as well as the progress in the pilot sites to date. As educators of future health professionals, what should we be considering and debating, or even implementing now in the light of these impending changes in the health system?

In this address, the implications of the NHI for health sciences education will be developed. The components of Primary Health Care re-engineering, key health services standards, health systems strengthening, and the use of health information will be considered. The role of health professionals in the health system in addition to their clinical role will also be discussed, and a number of principles appropriate to these roles will be proposed. Educators will be challenged to consider how their curricula and teaching practices may need to evolve to anticipate the new system.

ORAL

The influence of different instructional approaches on skill acquisition and retention: A randomised controlled trial

[Elize Archer](#), [Adele de Villiers](#), [Niel van Hoving](#)

Category: Oral

Background/Context: Although overloaded curricula, the increasing educator: student ratio, limited resources, insufficient curriculum alignment and the unpredictable clinical learning environment contribute to the decay of clinical skill competency, the problem of poor skill retention often lies in inadequate skill acquisition which is associated with the quality of the instruction.

Aim / Purpose: The aim of the study was to investigate the influence of three different instructional approaches on the acquisition and retention of skills in order to determine which method would be best suited for a Clinical Skills Centre (CSC) in a resource constrained environment.

Methods: A randomised controlled trial design was used to compare the efficacy of the Traditional - Peyton's 4-stage - and a modified 5-step method. Regarding the latter, George and Doto's five step method was altered to include peer teaching and feedback with the tutor in a supervisory role. Groups of first year students were taught 'manual defibrillation' in the CSC. Subsequent to the teaching session as well as two months later, students' skills were tested in an OSCE. Additional qualitative data regarding students' perceptions of the different teaching strategies they were exposed to was obtained from questionnaires.

Results and discussion: None of the three instructional approaches proved to be superior in acquisition or retention of a moderately difficult skill. Previous studies reported similar findings with simple/easy skills. The lack of differentiation between the three teaching methods might be attributed to the fact that all three methods included practice with feedback in one form or another. Numerous studies have identified these as critical components leading to effective learning in a simulation-based learning environment.

Conclusion/Take home message: Therefore, considering that the three instructional approaches were similar in terms of skill acquisition and retention, incorporating peer teaching and feedback, is a feasible strategy in a resource limited environment.

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Service-learning in Pharmacy: Introducing an on-campus practical to fulfill a health service need

Angeni Bheekie, Mea Van Huyssteen, Merle Alexander, Deidre Titus

Category: Oral

Introduction: Service-learning is embedded across undergraduate pharmacy courses at the University of the Western Cape. The Environmental and Child health service-learning programme forms part of the first year Pharmacology and Clinical Pharmacy introductory module (PHC 123, 2013). Learning focuses on environmental and nutritional pathology, specifically diarrhoeal disease. In Cape Town, diarrhoeal disease peaks during summer, and with poor access and frequent stock-outs of oral rehydration sachets in health facilities, the primary treatment for diarrhea-related dehydration in children is limited.

Methods: Students were tasked to assess environmental and nutritional risk factors that may contribute to diarrhoeal disease either in an informal settlement or home for chronically ill children. Environmental health officers conducted facilitation in informal settlements, while nurses guided students in the home. In addition, a campus-based service learning practical was piloted as part of their academic credit. Students pre-packed and labelled dry ingredients (sugar and salt) for oral rehydration. They received pre-practical instructions and were required to follow standard operating procedures for compounding of the dry mixture, assisted by senior students. Two academic staff members who are registered pharmacists did the final quality assurance check. If the product did not pass the quality check, the student had to redo the exercise.

Results: A total of 140 rehydration pre-packs were distributed to 4 clinics for patient use. Calls for more pre-packs were made from clinic staff. Students developed skills in interdisciplinary communication, environmental and nutritional risk assessment and good pharmacy practice.

Conclusion: Distribution of the oral rehydration pre-packs illustrated relevance of how service-learning can connect theory and practice. It also consolidated the partnership with City Health clinics and contributed towards addressing a community health need. This team-based initiative underpins an initial attempt towards social accountability.

Clinical teaching of undergraduate medical students: how do clinicians do it?

Julia Blitz, Elize Archer, Hilary Rhode, Susan van Schalkwyk

Category: Oral

Background / Context: Much clinical teaching is conducted by clinicians primarily employed for patient care. Many of these clinicians have not been formally prepared for their teaching role.

A situational analysis of clinical teaching could serve as a starting point for designing faculty development activities to support clinicians in strengthening their role as teachers in the clinical context.

Aim / Purpose: To understand current pedagogical strategies used by clinical teachers in the clinical teaching environment in order to increase the effectiveness of the students' clinical learning experience.

Methods: Ethics approval was obtained for audio recording of bedside clinical teaching encounters of undergraduate medical students at an academic teaching hospital. Clinicians gave consent to be recorded over a period of time, but were not informed of exactly when the recording might occur.

The recordings were transcribed and the data then plotted against Nilsson's framework of pedagogical strategies.

Results and discussion: The predominant strategies employed were 'question and reply', 'prompting' and 'lecturing'. Occasionally 'demonstration' was used as a teaching strategy.

The data revealed rich information about the nature of clinical teaching. This included teaching opportunities unrecognized by the teachers; limited involvement and recognition of the student role; infrequent deconstruction of clinical reasoning.

Conclusion / Take home message: The practice of teaching in the clinical area is not yet well understood. There seems to be a wide variation in teaching skills and approaches. The information provided by this research has enriched our understanding of the current status of clinical teaching. This will be used to inform the design of more specific faculty development activities directed towards teaching skills.

Clinical Learning Environment and Supervision: Student Nurses' experiences within private health care settings in the Western Cape.

Filomena Borrageiro, Elize Archer

Category: Oral

A significant component of nurses training takes place within the clinical environment. This lends itself to the integration of the theoretical and clinical components at the patient's bedside, with clinical supervision.

Background: Student nurses within the private health care settings in the Western Cape Province indicated that the clinical environment was not conducive to learning. This was attributed to the student role in patient care in the ward setting and inadequate supervision was an additional suggested factor. After an initial observation and student feedback session a study was planned to identify the clinical experiences.

Aims / purpose: To determine the experiences of student nurses of their clinical learning environment and to identify the support and clinical supervision provided by the ward staff, clinical facilitators and lecturers.

Methods and analysis: A quantitative, descriptive cross-sectional survey was conducted by making use of the CLES+T evaluation scale which consists of three main sections: Learning environment, Supervisory relationship and the Role of the nurse teacher (lecturer). A total of 234 student nurses participated in the study. The responses were analysed using the descriptive statistics and the internal reliability was determined by the Cronbach Alpha coefficient.

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Results: The results obtained for the Learning environment indicated a mean value from 2.89 to 3.71. The Supervisory relationship with the clinical facilitator had mean values from 3.39 to 3.96. Group and individualized clinical supervision occurred, however, the occurrences and frequency of clinical supervision varied. The Role of the nurse teacher (lecturer) had mean values from 3.68 to 4.25.

Conclusion: The student nurses experienced the clinical learning environment as mostly positive; however the format and type of clinical accompaniment and supervision students received varied.

Furthermore, this study gave valuable insights into the status of the clinical learning environment, clinical accompaniment, and supervision of student nurses, which is useful to nursing schools.

Social Auxiliary Work Learnerships do not guarantee employment in public sector health care services

Alet Bosman

Category: Oral

Background: Declining donor funding and the shift from direct service delivery to technical assistance by implementing partners supporting the South African Government threatens on-going employment of semi-skilled staff. Enrolling such employees on a learnership that result in a formal qualification facilitates task shifting from scarce highly qualified professionals to mid-level workers and this strengthens integrated public sector health care services.

Methods: FPD enrolled staff, previously employed as counsellors, clerks and data capturers, on social auxiliary worker learnerships from 2011. These learnerships were to result in formal qualifications, facilitate task shifting and strengthen health care services. Staff was screened to determine who met the admission criteria and offered the opportunity to enrol on the learnerships. Applicants were registered with the relevant Sector Education and Training Authority and accredited training providers. Intakes were staggered based on accreditation of facilities and supervisors. FPD elected to retain the learners as employees to ensure that benefits remain unchanged. FPD provided mentoring to ensure learners' compliance with academic requirements. FPD followed up twelve months after completion of the learnership programme to determine career development and the success of the strategy in improving service delivery and selected health outcomes.

Results: All 129 social auxiliary worker learners completed their learnership in mid-January 2013. FPD followed up on the learners' career development twelve months later. The follow up survey revealed that 69% of respondents are unemployed and another 30% are employed in jobs unrelated to their qualification.

Conclusions: FPD's social auxiliary worker strategy did not guarantee learners jobs as anticipated and therefore did not facilitate task shifting or strengthened integrated public sector health care services. FPD will do a follow up survey to determine why the learners are not employed as social auxiliary workers. The results of the survey will be available by May 2014.

General Practitioner's preferences for CPD: Family Medicine Refresher Courses

Johannes Petrus Botes, WJ Steinberg

Category: Oral

Introduction and aim: The HPCSA requires all Health Practitioners to complete accredited learning opportunities, and provide proof thereof. Continuing Professional Development is the chosen model, which focuses on holistic development of the professional. Family Medicine presents refresher courses for GPs, covering all relevant fields of interest. The aim of this study was to find reasons and possible solutions for the perceived lack of interest in Refresher Courses.

Methodology: A cross-sectional study design was chosen, by which GPs currently working in the Free State were asked to complete a questionnaire. Needs and preferences were queried and factors influencing their usage of these learning opportunities were assessed.

Results: The responses of 60 participants revealed that GPs still prefer the lecture form of presentations in large or small groups. Results showed a slight interest in training via computers. Topics which ranked highly were Infective Diseases, Dermatology, Cardiology and Respiratory Diseases. The main factor which respondents stated was that GPs prefer not to leave their practices unattended.

Conclusion: Although the current format should not change much, the Department of Family Medicine should consider strategies to accommodate those who find it difficult to attend.

Student views on early clinical learning

Farah Bray, Elize Archer, Aziza Bawoodien

Category: Oral

Aim: The aim of this study was to explore second year medical students' perceptions of their early clinical experiences with a view to improving curriculum development so as to enhance early clinical learning.

Methodology: A qualitative, interpretive study, based on semi-structured focus group discussions with second year medical students was conducted in order to capture data that would provide information about their attitudes, feelings, beliefs and views on their early clinical learning experiences during their first year. After a process of selection using purposive sampling methods and stratification criteria a research sample was obtained comprising of thirty seven students who participated in four focus group discussions. The interviews were moderated by an external facilitator, audiotaped and transcribed verbatim. The data transcripts were analysed and manually coded. Four broad categories with subthemes illustrated the findings of the study as identified by the researcher and verified by the supervisor.

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Results: Early clinical exposure was positively perceived by students fostering a sense of vocation, motivation, and enhanced their learning interest. Early clinical skills training facilitated students' professional development, acquisition of technical skills, familiarisation with basic clinical terminology, and normal clinical findings as preparation for later clinical studies. Practical learning in a simulated environment shaped new learning styles and study skills. Some challenges that students encountered during clinical learning understood the new subject of clinical medicine, engaging with student clinical demonstrations and related ethical issues. Acting as simulated patients had positive and negative outcomes on students' skills acquisition. Limited practice opportunities and the variability of teaching content and practical techniques had a negative outcome on clinical skills learning. The OSCE was a positive, but stressful learning experience.

Conclusion: Early clinical exposure has a great impact on junior medical students' academic growth with positive learning outcomes. Further development in the area of didactic skills, addressing ethical issues and supporting students to enable a smooth transition to clinical learning will enhance and optimise their early clinical training.

Crafting a curriculum using innovative transdisciplinary resources: lessons learnt from the Rehabilitation Care Worker pilot project

[Anthea Brinkman](#), [Fadia Gamielidien](#), [Sumaya Gabriels](#)

Category: Oral

In August 2012, the Disability Studies Programme in the Department of Health and Rehabilitation Sciences, Faculty of Health Sciences, University of Cape Town was awarded a tender from the Western Cape Department of Health to train 33 community care workers recruited from five non-governmental organisations in the Cape Metropole, in rehabilitation support and care. The pilot ran over 18 months and consisted of five courses. This paper describes the transdisciplinary collaboration in the design and delivery of the course called Health, Wellness and Functional Ability (HWFA). The intended learning outcome of HWFA in this pilot was to train Rehabilitation Care Workers (RCW) to understand human development across the lifespan and the common health conditions which might affect them. RCWs must screen clients for health impairments and provide basic interventions to improve their participation in the life areas of living, learning, working and socialising. An adult learning approach was adopted and framed against the action "reflection cycle so that RCWs are equipped to identify clients with a range of health problems, provide counselling and support, identify care pathways and refer appropriately. The curriculum design and training was tailored to address the needs of this group of mature learners and involved a multi-professional approach which included the contributions from audiologists, speech language pathologists, occupational therapists and physiotherapists. The course consisted of teaching blocks, tutorials, learner support groups and work integrated practice learning opportunities to afford participants the opportunity of linking theory to practice. This paper intends to share the lessons learnt during this process.

Have changes in secondary education affected the generic learning skills profile of South African medical school entrants?

[Vanessa Burch](#), [Cynthia Sikakana](#), [Geney Gunston](#), [Sue Whittle](#), [Deborah Murdoch-Eaton](#)

Category: Oral

Background: Generic learning skills are essential for academic success in higher education. Changes in pre-university education curricula, such as undertaken in South Africa over the past decade, may have significantly influenced the generic learning skills profiles of university entrants and may require university curricula to respond to such changes and adapt accordingly.

Aims: This study investigated the impact of primary and secondary school curriculum changes on the generic learning skills of South African medical school entrants.

Methods: This prospective study surveyed entrants to four SA medical schools (2008-2011) to determine their practice of, and confidence in six categories of generic learning skills, namely, information handling, managing own learning, technical and numeracy skills, computer, organisational and presentation skills. 2008 entrants were the final cohort of the old secondary school curriculum.

Results: A total of 668 students participated in the study. Between 2008 and 2011 medical school entrants did not demonstrate a consistent or sustained difference in the practice of, or confidence in, each of the six skills categories. Entrants to one medical school, however, were consistently less confident of their skills, despite more practice, over the study period.

Conclusions: Primary and secondary school curriculum changes have not changed the generic skills profiles of entrants to four SA medical schools. However, persisting inequalities in pre-university education may explain why SA school leavers have variable levels of confidence in their generic learning skills on entry to medical school.

Widening access to medical school and ensuring success: 22-year experience in South Africa

[Vanessa Burch](#), [Geney Gunston](#), [Elmi Badenhorst](#), [Cynthia Sikakana](#)

Category: Oral

Objectives: Widening access and ensuring success for medical students from diverse backgrounds is a global challenge. Little is known about strategies to achieve this for medical students from under-represented majority populations in low- to middle-income countries. This study determined the outcome of three strategies used to provide academic support to students from under-resourced schools entering a South African medical school over a 22-year period as part of a widening access strategy to increase student diversity. The strategies are the Academic Development Programme (ADP), Intervention Programme (IP), and Extra Support Programme (ESP).

Methods: This retrospective study analysed academic records of medical students admitted in 1992-2013. Academic progression, student graduation and time to graduation were evaluated for academic support and conventional stream students.

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Results: The ADP and IP admitted and supported 631 students entering in 1992-2013. In the subgroup entering in 1992-2006, 70% of ADP and IP students graduated (269 of 386) compared to 91% (2223 of 2436) of conventional stream students.

The proportion of graduates, among all students entering in 1992-2006, remained constant at 88% while student enrolment and diversity increased significantly. Introduction of the IP significantly reduced time to graduation for the 2002-2006 cohorts compared to 1992-2001 cohorts – 6.19 years (95% CI 6.16-6.23) versus 6.35 years (95% CI 6.32-6.38).

More recently, addition of the ESP (2012-2013), which supported an additional 79 students, significantly decreased the proportion of Year 1 students requiring the IP.

Conclusions: Structured academic support, accompanying widening of access to under-represented majority students, promoted student retention and gave all a fair chance to succeed. Introduction of the IP ensured equitable access to limited and resource-intensive support based on need determined by early university performance rather than pre-university educational experience. Addition of the ESP, which provided a further cognitive level of support, reduced the number of IP students.

Attitudes of medical students to undergraduate research

Richard Burman, D Nel, R Hoffman, S Randerer Rees

Category: Oral

Background: The workforce of 'physician-scientists' is ageing and decreasing in numbers. The responsibility to combat this trend rests on future generations of healthcare professionals and it is therefore valuable to evaluate medical students' attitudes towards research. Objective. To establish the attitudes of University of Cape Town (UCT) medical students towards research and to investigate the factors influencing these attitudes.

Methods: An anonymous, cross-sectional, self-administered questionnaire was administered to medical students from years 1 to 6 studying medicine at UCT in 2011. Questions were primarily closed-ended and consisted of Likert scales.

Results: Out of a population of 1 195 medical students, 733 were sampled (63%); 65% were female, 53% were preclinical students (years 1-3) and 47% were in their clinical years (year 4-6). Overall, 61% of students had a positive attitude towards research and 74% felt that participation in research was important to their medical school education; 22% had been involved in voluntarily extracurricular research, 4% had presented at a scientific meeting and 3% had published in peer-reviewed journals. A number of perceived barriers to student research were identified including a lack of adequate training, time and research opportunities.

Conclusion: Students believed that research was important and had a positive attitude towards it. However, few had been involved in voluntary research and produced work worthy of presentation and/or publication. Addressing identified barriers and improving students' attitudes may begin to reverse the trend in declining numbers of physician-scientists.

Students' experiences on integration of learning in an undergraduate medical programme: a phenomenographic study

Shalote Rudo Chipamaunga

Category: Oral

Background / Context: The past hundred years have seen many reforms in programme and curriculum development in medical education. Many of these reforms have suggested innovative approaches to expressing beliefs and orientations that shape the curriculum. One of the key concepts underpinning the reformed curricula has therefore been to apply the principles of integration as a strategy to enhance learning. Both horizontal and vertical integration have proved beneficial to student learning in modern curricula.

Aim / Purpose: To reveal the qualitatively different ways in which students experience integration of learning in an undergraduate medical programme.

Methods: From 2012 to 2014, the researcher used phenomenographic methodology to conduct in depth interviews and focus group discussions to collect data from a sample of students pursuing a six year medical degree programme. Data were analysed using MAXQDA computer software. The data were coded and categories emerged describing the student experiences.

Results and discussion: Four categories emerged from the expressions of the students' experiences of integration: conceptualisation of integration in learning; ability to integrate learning; opportunities that facilitate integration of learning; and obstacles to integration of learning. Students express difficulty in conceptualizing 'integration' and the meaning of this concept is discerned from students' accounts of their ability to integrate. High achievers discern their ability to integrate more easily than the other students who needed more probing to elucidate their awareness of integration.

Conclusion / Take home message: The use of phenomenography has facilitated the analysis of students' experiences in health education. Students experience integration in varied ways and this may have impact on curricular planning and delivery of instruction in health education.

Nursing and midwifery students' perceptions of primary health care clinical placements in Lesotho

Alice Christensen, Johannah Butle, Semakaleng Phafoli, Laura Skolnik, Maleshoane Monethi-Seeiso, Stacie Stender, Anita Hettema

Category: Oral

Background / Context: Although more than 60% of Basotho people live in the rural areas, retention of nurses at these primary health care settings remains a challenge. Placement of nursing and midwifery students at primary health care settings during their training to acquire the needed clinical competencies and confidence is most likely to improve graduates' perceptions and acceptability for deployment at these settings. The article presents the Lesotho nursing and midwifery students' perception of primary health care clinical placements during their pre-service education.

Aim / Purpose: To improve nurses and midwives attitudes towards working at primary health care settings during their pre-service education period.

Methods: Review of annual clinical placement evaluation forms for nursing and midwifery students in the four training institutions for the Christian Health Association of Lesotho. Both qualitative and quantitative data was gathered.

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Results and discussion: Over 500 nursing and midwifery students were placed in more than 35 health centres between June 2011 and May 2014. Majority (n= 171; 87%) of student responses agreed or strongly agreed that the clinical placement was a pleasant learning experience and the placement enhanced their clinical skills. Most of the students perceived health centres as facilities they would like to work especially if issues like transportation and other resources could be improved.

Conclusion / Take home message: The students perceive primary health care settings as most influential contexts enabling them to acquire the necessary nursing and midwifery skills. Primary health care clinical rotations are also noted by WHO as interventions that improve attraction, recruitment and retention of health workers in rural areas.

Introducing an interactive online clinical skills database for Emergency Care Work Integrated Learning

[Lloyd Christopher](#), [Benjamin de Waal](#)

Category: Oral

During work integrated learning (WIL) emergency care students are required to document both attendance and clinical skills in relation to practice. In the past, learners have mainly used a manual log book to document and record their experiences, however this has made auditing and analysis both cumbersome and labour intensive.

In 2012 the Department of Emergency Medical Sciences at CPUT implemented an online web-based database system called FISDAP (Field Internship Student Data Acquisition Project) to replace the antiquated manual logbook system. FISDAP allows learners to enter information about their field and clinical placement experience to an online web database via various mobile devices including smartphone's (Baker and Dubose, 2009). FISDAP has numerous built in reports that allow the student and the lecturer to track student attendance, the student's reflective reports, number of skills completed as well as provide statistical analysis for particular skills (Baker and Dubose, 2009). The reflective reporting and skills tracking allows for development of integrated learning opportunities related to WIL experiences. In addition course facilitators receive live updates, which include information such as a platform or student activity. This has proven exceptionally valuable in light of student placement and platform access management, particularly in light of the limited size of the emergency care WIL platform, and the limited exposure students have to certain skills and patient subgroups (Salzman et al., 2007) (Stein, 2009).

FISDAP has also allowed for more flexible facilitation of WIL students roster placements, as the system can allow students to participate in placement scheduling (Baker and Dubose, 2009), and aid them in tracking their own progress (Page, 2004) in relation to requirements for professional registration (Salzman et al., 2007) (HPCSA 2011). This creates a more participative learning environment where students are no longer passive participants, but can self direct in relation to their learning needs. In this presentation we discuss the value and experience of using a system such as FISDAP in emergency care and the possibilities for future development and integration with other health sciences.

Preventing lecturalgia by using mixed learning strategies when teaching undergraduate medical students

[Hannes Coetser](#)

Category: Oral

Background: Lecturalgia, a term coined by McLaughlin & Mandin from the University of Calgary, Canada, refers to a painful lecture experience. Earlier feedback from junior medical students at the University of the Free State, South Africa, regarding an introductory clinical skills module, stated lack of organization, lengthy lectures and unnecessary detail as the sources of their painful experiences. In an attempt to prevent lecturalgia, recommendations from Calgary were combined with innovative active learning strategies, including games, audio-visual aids and role-play, to develop a teaching session on cardiovascular history-taking skills.

Methods: In 2013, 3rd year students (n=115) received an introductory tutorial on cardiovascular history-taking. They were then allocated to six groups, each group attending the newly developed three-hour practical teaching session. Students evaluated this intervention using a questionnaire containing a Likert rating scale and open-ended questions.

Results: The questionnaire response rate was 94%. Students agreed that the purpose of the session was made clear (99%), the content was appropriate for the length of the session (100%), material was organized well (100%), the lecturer had a good relationship with the group (100%), interest was stimulated and maintained (99%), participation was stimulated (99%), and that the session's main points were summarized effectively (95%). Suggestions to improve the session included incorporating additional visual aids, i.e. pictures, videos and real patients.

Conclusion: Students' acceptability of a teaching format with mixed learning strategies was high.

Take home message: The approach by McLaughlin & Mandin to retrospectively diagnose and resolve lecturalgia is useful in the prospective planning of pain-free teaching sessions.

Perceptions and attitudes of Stellenbosch University's medical students with regard to Rural Clinical School placement

[Danielle Daniels-Felix](#), [Hoffie Conradie](#), [Miranda Voss](#)

Category: Oral

Background: Stellenbosch University established a Rural Clinical School (RCS) in 2011 whereby fifth year MBChB students could choose to spend their final year on a rural platform in the Cape Winelands/Overberg districts, either in traditional, speciality-based rotations or in an integrated programme under the supervision of the district hospital family physician. The present study aims to gain a deeper understanding of the factors influencing medical students' choice of placement.

Methods: A survey questionnaire was designed to assess demographics, clinical practice choices and the factors regarded as important in choice of site, together with open-ended questions concerning choice and ways to make the RCS more attractive. All participants were enrolled as fifth year medical students in 2013 and had chosen to stay at Tygerberg campus.

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Results: 168 fifth-year students were registered and 109 responded (65% response rate). The factors considered by students to be most important in determining choice of site were subspecialist tutorials, clinical skills, procedural skills, and tutoring, social opportunities, examining patients, social support and extracurricular activities and travel costs. Students considered that 13 of the 15 needs would be better met in the urban environment, these included: subspecialist tutorials, clinical skills, social opportunities, examining patients, social support and extra-curricular activities. The 2 needs felt to be better met at the RCS were procedural skills and tutoring. Academic factors were regarded as more important than social and family factors. Other concerns emerged from open-ended questions, these included: a higher standard of education at the metropolitan hospital, fear of the demands of the RCS, comfortable lifestyle and uncertainty about the RCS program.

Conclusion: Many students still feel they will be placed at an academic disadvantage by choosing the RCS, despite evidence to the contrary. More needs to be done to communicate the preserved academic standards at the RCS.

Effect of improving the usability of an e-learning resource: a randomized trial

[Razeen Davids](#), [UME Chikte](#), [ML Halperin](#)

Category: Oral

Background: Optimizing the usability of e-learning materials is necessary to reduce extraneous cognitive load and maximize their potential educational impact. This is often neglected, especially when time and other resources are limited. We investigated whether a usability evaluation of our e-learning resource, followed by fixing of usability problems identified, would translate into measurable improvements in usability parameters and into improved learning by medical residents.

Methods: Two iterations of our e-learning resource (V1 and V2) were compared in a randomized trial. V1 was the original version and V2 the revised version with usability problems addressed. Residents in medicine and anesthesiology were randomly assigned to one of the versions. Usability was evaluated by user satisfaction questionnaire and by recording and analyzing the interaction of participants with the application. Learning was assessed by questions designed to test retention and transfer of knowledge.

Results: Participants reported high levels of satisfaction with both versions, with good ratings on the System Usability Scale. In contrast, there was a large difference in the occurrence of serious usability problems between the two versions, in particular in the interactive HandsOn case where there was a median of 5 (range 0-50) serious problem instances recorded per participant for V1 and 0 instances (range 0-1) for V2 ($P < .001$). There was no difference in learning measures between the two versions.

Conclusions: Usability evaluation followed by a redesign of our e-learning resource resulted in measurable improvements in usability. While this was not accompanied by increases in learning in our study population of high-knowledge learners it may translate into improved motivation and willingness to engage with the learning material.

Ethical issues experienced by Occupational Therapy students – The reality

[Jo-Celene De Jongh](#), [N Nortje](#)

Category: Oral

Background: Occupational therapy students are expected to work in a variety of contexts and experience many sources of conflict in their fieldwork practice on a daily basis while at the same time, upholding professional values, responsibilities and duties. OT students are mostly aware of the right course of action, but often feel constrained to act otherwise as a result of the institutional and/or societal rules.

Objective: The objective is to determine what ethical issues students are facing.

Methods: A qualitative methodology.

Results: Three major themes relevant to ethical issues were identified in this study.

Discussion: Most conflict for the students arose when there was a difference of opinion which contributes to moral differences.

Conclusion: This article highlighted the complex ethical dynamics that students experienced in fieldwork practice. Educators should realise the importance of listening to the voices of the students and learn from their experiences as they inform where there is a need to address. Collaboratively, this could contribute to the quality of ethics education and services rendered by health professionals.

Medical students' perceptions about a newly implemented Clinical Skills module

[Carina De Kock](#)

Category: Oral

Background: A Clinical Skills module was implemented by the Faculty of Health Sciences, Stellenbosch University, in the undergraduate medical curriculum since 2010. This module runs longitudinally with other clinical rotations and the main aim is to facilitate learning of procedural skills in a safe, non-threatening and low-anxiety environment in order to prepare students for the clinical environment.

Primary research objective: To determine what components of the Clinical Skills module students would like to see improved to enhance the teaching and learning experience for future students rotating through the CSC.

Secondary research objectives: To determine the relevance of the Clinical Skills module outcomes with regards to the clinical environment. To determine whether the medical students perceive the skills learned as valuable and useful to prepare them for the clinical environment.

Methods: A qualitative study was done to determine the perceptions of the students. Semi-structured focus group discussions were conducted with 24 ($n = 598$) medical students in their fourth, fifth and sixth year by making use of convenience sampling. Ethical approval was granted by the Health Research Ethics Committee. Participation was voluntary and anonymity was guaranteed. The audio-recorded data was transcribed and coded by making use of inductive data analysis to identify themes.

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Results: Students reported that they mostly found the Clinical Skills module relevant and valuable. They gave feedback with regard to potential improvements to the module. These included suggestions regarding the logbook, sessions on the interactive website (Web-CT) as well as the summative examination.

Conclusion: The newly implemented Clinical Skills module was evaluated by asking students what their perceptions were. On the basis of their suggestions, important changes can be made to the curriculum to improve the teaching and learning experience for other students who will rotate through the CSC at Stellenbosch University.

A fresh way of learning -how podcasting enhances students' learning

[Marietjie De Villiers, Steve Walsh](#)

Category: Oral

Introduction: The Faculty of Medicine and Health Sciences at Stellenbosch University instituted a pilot programme of podcasting second year medical lectures in 2012, as a way to assist students with learning and information overload. The success of the programme was evident in students requesting that the podcasting continued and be extended across all years of study. By the end of 2013 about 2500 MB,ChB lectures were podcasted, and placed on a custom made content management system.

Aim: We wanted to understand why the podcasts were so popular amongst the students, how it changed or improved their learning, and how the project could be further optimized.

Method: As part of a bigger project surveying the student body and eliciting lecturers' opinion, we conducted six focus groups interviews, one each with students from MB,ChB I VI. A total of 38 students participated in the semi-structured focus groups interviews. The interviews were audiotaped and transcribed. The transcriptions were analysed using ATLAS-ti software, initially coding the prescriptions, thereafter identifying categories and finally performing a thematic analysis.

Results: Five overarching themes were identified from the data namely a fresh way of learning; supporting class room learning; providing ease of mind; the role of the lecturer; and ideas on what more can be done to optimize the podcast project. Students said that the podcasts provided them with new and fun learning opportunities. They used the podcasts to understand difficult concepts and to prepare for assessments. The students felt that the podcasts supported classroom learning, but not replacing attending classes.

Discussion: The podcast project injected a new energy into students' learning and at the same time providing them with reassurance for successfully completing assessments and catching-up with lectures. What started out as a pilot project has now become an indispensable tool in complementing students' learning and facilitating their academic success.

The intern landscape in South Africa - transition from student to doctor

[Marietjie De Villiers, Ben van Heerden](#)

Category: Oral

Introduction: Internship for medical graduates in South Africa involves a two-year period of supervised clinical clerkships in accredited sites. Extensive work has been done in terms of competencies needed to be a successful intern.

A five-year longitudinal study at the Stellenbosch University Ukwanda Rural Clinical School (RCS) explores the impact of rural training on graduates' preparedness for internship. We report on initial findings from this study, describing the intern landscape facing graduates' entering the system, attributes that assist them in dealing with the transition and factors facilitating the development of these attributes.

Method: A total of 26 semi-structured individual interviews were held on-site with 13 interns (8 from the first (2012) RCS cohort and 5 who followed the traditional curriculum) and their 13 intern supervisors. The students and supervisors were purposefully sampled. Interviews were audiotaped and transcribed. Transcriptions were analysed using ATLAS-ti software. The data were coded, and thematic analysis was done.

Results: Four main themes emerged: challenges facing interns during internship; attributes of a good intern; transition from student to intern and enabling learning opportunities facilitating this transition. Challenges faced included moving to an unknown health system, working long hours on your own with little support. Supervisors valued attributes such as work ethic, team work and willingness to go the extra mile as more important than clinical skills.

Discussion: There was remarkable corroboration between the interns' and supervisors' description of challenges facing first-years interns in South Africa, related more to adapting to change than clinical work. Much has been written in the literature about knowledge and clinical skills needed by a medical graduate in internship. It was, therefore, interesting that supervisors valued professionalism more than clinical competency. Students exposed to role models and a curriculum that emphasizes the development of such attributes are in a better position to smoothly make the transition from student to intern.

Scenario scripting future intersections between Degrees, Curriculums and Professionalization in Prehospital Emergency Care

[Benjamin de Waal](#)

Category: Oral

Prehospital emergency care in South Africa has advanced significantly in the last 20 years (MacFarlane, van Loggerenberg & Kloeck, 2004:145). From humble beginnings with various short courses this vocation has turned its focus to professionalization with the development of undergraduate and postgraduate qualifications (Castle & Owena, 2003:29). These changes have had a significant impact on the prehospital emergency care environment, with implications for scopes of practice, career progression and human resources management. Most notably, South African paramedics have become more employable in the international market, which offers the promise of improved wages and working conditions, and subsequently a similar trend in skills migration has been seen as compared to other allied health professions (Binks, 2011).

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Scenario scripting provides a potentially useful method to evaluate the path, or paths which Emergency Care may take in its quest to become a profession with an appropriately qualified workforce. It also presents a useful way to consider the possible tensions between industry, educators, curriculum and the needs of patients. The scenario approach first identifies important trends and issues, and then selects, or in a sense constructs, situations in which these play out in a particular way, and can be explored as to repercussions and possible eventual outcomes.

Using a number of examples this paper explores how the upward pressure to have degrees rather than diplomas or other lower-level certificates can improve qualifications but also create distance to what is actually required in the proto-professional practices of EMS. The upgrading of proto-professionals, so that their own knowledge becomes more imperative and medical oversight is not always necessary is further explored to consider the implications for practitioner agency and patient safety.

Factors that contribute to a positive experience of tutor supported skills learning

[Rhena Delport](#)

Category: Oral

Background: Student numbers in Medicine have increased with the results that group sizes for skills training sessions in third year of the curriculum appeared to impact negatively on acquisition of skills. Furthermore, voluntary practice sessions could no longer be supervised, which could potentially result in erroneous performance of procedures. We investigated whether guidance by peers during the voluntary practice sessions was perceived as a positive experience that contributed to their skills proficiency.

Methods: Seven third year students were appointed to provide guidance during voluntary practice sessions. Their knowledge base and practical proficiency was increased by more in depth training and they were taught the basic principles of facilitating active learning. After the OSCE, students were requested to complete a standardised questionnaire that evaluated how students experienced the tutor and the tutor-guided learning sessions. A response rate of 92% was observed.

The chi-square test was used to assess the relationship between a positive experience of the tutor support and various aspects relating to finding the tutor sessions worthwhile, stimulating, and contributing towards skills acquisition.

Results: The students felt that the tutors' teaching approach stimulated them to think and work independently. They perceived the tutor sessions as worthwhile because the tutors were thoroughly prepared and organised, because they made the students feel comfortable, and because they tried to understand the nature of the students' needs/problems. Skills improvement was mainly attributed to the tutors trying to understand the nature of their needs/problems and allowing time for questions and discussions.

Take home message: Peer-guided learning appears to be acceptable to students and it provides opportunities for interaction, feedback and remediation. Guidance by peers could be extended to establish mentorship as a model for academic leadership.

Embracing technology as a teaching tool - The use of videos to teach communication skills, a second language and cultural sensitivity

[Paula Diab](#)

Category: Oral

Introduction: The role of communicator has been included as a key competency for health science students in South Africa. With the population's diverse language and cultural backgrounds, communication between patients and healthcare professionals is challenging. Many South African universities have introduced courses into health science degrees in an attempt to overcome language and cultural barriers. In this study, the AGES neurocognitive model (Attention, Generation, Emotion & Spacing) of learning was used as a framework to create videos in teaching language for the vocational needs of students.

Methodology: Videos were developed using first and second language isiZulu speakers. Scripts were based on authentic clinical settings. The language was verified by the UKZN Language Board and the scenarios were filmed by a videographer. Videos were shown to a target group of students who were then interviewed in focus group discussions. Audio-recordings from the discussions were transcribed and analysed thematically, specifically looking at the value of the use of the videos as a language teaching tool. Ethical permission was granted by UKZN, and consent obtained from all participants.

Results: Students expressed three main benefits of the videos: communication skills, language skills and cultural awareness. Students also commented on the use of videos specifically with respect to their accessibility, availability and relevance, and made recommendations for further uses.

Discussion: The learning benefits described by the students relate well to the AGES model of learning. The videos provided an innovative platform that drew students' attention and helped them generate new knowledge. An emotional response was useful to enhance retention of knowledge, and the videos allowed spacing of learning.

Conclusion: The videos represent an innovative teaching method for the resource-constrained environment in which we work. They are relevant to the 21st century learner and aim to unify patients and health professionals across language and cultural divides.

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A web-based Learning Opportunities, Objectives and Outcome platform (LOOOP) for Curriculum Development

Martin Dittmar, Felix Balzer, Lars Lehmann, Firman Sugiharto, Simon Drees, David Paul Weber, Ina Treadwell, Olaf Ahlers

Category: Oral

Background: To meet the requirements of the increasing complexity and modular structures of all five undergraduate curricula, a web-based 'Learning Opportunities, Objectives and Outcome platform' (LOOOP) was developed and implemented at Charité-Universitätsmedizin Berlin since 2006. This platform is currently used for curriculum development including curriculum mapping and for communication of all timetables, competencies, content and objectives to students and teachers. Aim of this study was to investigate usage behavior and acceptance of LOOOP as well as effects of usage on quality of lessons, on alignment of teaching/ assessment and on assessment results.

Summary of work: Anonymised logfile and registration data were analysed to get an overview over usage and acceptance of LOOOP. In addition, questionnaires were filled in by students and results of MCQ-tests were analysed.

Summary of results: Curriculum structure, usefulness of objectives, coordination of disciplines and MCQ-results improved significantly after implementation of LOOOP. About 3,000 members of faculty and 2000 students were registered in February 2014. About 85,000 lessons have been planned in 2013, number of LOOOP visits increased from 180,000 in 2011 to 380,000 in 2013 (visited pages in 2013: 5,500,000).

Conclusions and Perspective: LOOOP is well accepted by curriculum developers, teachers and students at Charité and usage of LOOOP has a significant impact on quality of teaching and assessment. These data support the theses of increasing awareness that a web-based curriculum mapping is an effective tool to improve medical education. Currently, cooperations with other Universities in Europe and in South Africa are starting to make LOOOP usable for curriculum development in these Universities.

Convergence or Divergence: the use of critical readers in promoting scholarship among novice authors

Abigail Dreyer, Jose Frantz, Lianne Keiller, Liz Wolvaardt

Category: Oral

Introduction: The academic landscape in South Africa places demands on academic staff with the increasing intake of students and institutional expectations of publications. Novice academic staff members are not exempt from these pressures and are encouraged to rely on critical readers to hone their skill in writing scholarly articles. The use of critical readers is beneficial but in resource-poor higher education environments experienced and published academic staff are in short supply. The question is whether the use of critical readers results in convergence or divergence of meaning for the author.

Methods: A single case study using a qualitative approach was used for this study. The participant drafted and circulated the article to three independent critical readers who had varied backgrounds in terms of professional qualifications, writing experience, content knowledge and position within higher education institutions. Each reader gave independent written comments. The less experienced readers also gave one-on-one verbal feedback that was audio recorded. None of the feedback was shared with the others. After each verbal feedback session, the author recorded personal reflections on the process as well as a final overall reflection. The audio recordings were transcribed and together with the written comments were coded using a deductive approach. Emergent themes were described and shared with the critical readers for comments and feedback.

Results: Findings highlight that irrespective of academic experience or content knowledge, key aspects that were expected to be covered in a scientific article were questioned and the questions focused on promoting clarity of the message the article was advocating and enhancing the scientific style of writing.

Conclusion: The characteristics of critical readers and the nature of the relationship are relevant to engagement with the scholarly activity of critical reading and the benefit to the author is the opportunity to have insight from varying perspectives.

DREEM on Bachelors in Clinical Medicine Practice (BCMP)

Abigail Dreyer, Himani Pandya, Audrey Gibbs, Scott Smalley, Ian Couper

Category: Oral

Background: An important determinant of a student's behaviour and performance is the school's teaching and learning environment. Evaluation of such an environment can explore methods to improve educational curricula and academic atmosphere for giving a better learning experience to students, improving the quality of teaching and developing a student centred learning.

Objective: This study was conducted to evaluate the educational environment of Bachelors of Clinical Medicine Practice (BCMP) programme, as perceived by students from two cohorts in 2011 at the University of Witwatersrand, Johannesburg, South Africa.

Methodology: We used a quantitative design to evaluate the educational environment of Bachelors in Clinical Medicine Practise (BCMP) through the Dundee Ready Educational Environmental Measure (DREEM) questionnaire which was completed by all students enrolled in Gauteng and North West cohorts. Total and mean scores for all the questions were calculated for both the cohorts.

Results: BCMP learning environment was given an average score of 130.3/196 by the students. Scores for five subscales were calculated for both the cohorts and mean scores of individual questions indicated the strengths and weaknesses of the programme.

Conclusion: It was concluded that students perceived BCMP as a 'More positive than Negative' learning environment. 'Academic perception' was rated the highest while the lowest score was given to 'Social Self Perception'. The study identified certain aspects of academic climate which were positively perceived while a few need to be improved on. Results from this study will be utilized for further evaluation as the BCMP programme develops and shall be utilized to make the academic experience better for students to make the programme a success.

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Perceptions of final year Medical Students About Their Service Learning Activities During a Primary Care rotation

Rainy Dube, Alwyn Louw

Category: Oral

Background: The Integrated primary care block (IPC) was introduced in the final year of the medical degree in the Department of Family Medicine at WITS to provide students with a primary care experience. This is also in keeping with primary care re-engineering by the Department of Health.

Aim: To determine the perceptions of final year medical students about service learning activities during their primary care rotation.

Methods: A quantitative survey design was employed for this study amongst 279 final year medical students. During the rotation, 27 service-learning activities are done over a period of six weeks which required three levels of interactions from students namely: direct interactions with patients; filling in of paperwork; and observation of other health professionals. Students were asked to rate activities on a Likert scale from 1-5 in relation to its value and enjoyment. Data was captured in a database, analysed and reported as means and frequencies.

Results: The average response rate was 90% for the majority of the activities across the three domains. Students reported lowest levels of enjoyment and value for activities that had limited or no patient interaction with a range from 40% to 55% and enjoyed/valued activities that emphasized patient interaction with a range of 55% to 84%.

Conclusion and take home message: The study showed that there is correlation between students' enjoyment of an activity and what they rate as valuable. The overall impression is that the students are happy with a lot of the activities they get to do during the IPC block. The value ratings of activities by students are more important to us as a department as it has been linked to better learning outcomes.

Factors that influence the academic performance of medical students with prior tertiary education.

Esther Fraser-Berghout, PPC Nel

Category: Oral

Background / Context: To enhance Evidence-based practice in Medical Education, universities aim to understand the academic performance of its students. Many studies have been done to identify factors that influence the performance of students. This study was undertaken to contribute to the knowledge on this subject. The study focused on the academic performance of medical students with prior tertiary education.

Aim / Purpose: This study aimed to determine factors influencing performance of medical students at the University of the Free State with prior tertiary education (senior students).

Methods: A mixed-methods design was used. Qualitative data were gathered of 200 senior students who enrolled between 2000 until 2012. The data were analysed for trends and relationships between academic performance and academic background and demographics using Chi-square, Fischer's exact test, t-tests and ANOVA's. Semi-structured interviews were conducted with 31 senior students and offered qualitative data about the experiences and opinions of senior students on factors that influence their academic performance. The methods were mixed during the interpretation phase.

Results and discussion: A range of factors was found to have an influence on academic performance of senior medical students. Students from a Health Professional background perform above the class and senior student average in every year and students from a Non-Science background were found to struggle in the clinical years. Other factors that might have a negative impact on academic performance in medical studies are: age, family commitments, financial struggle, study in a language that is not the home language and social division in the class. Students were of the opinion that knowing your learning style has a positive influence on academic performance. These results can have a valuable input in decision making with regard to student selection processes and student support and development structures.

Aligning modules to the curriculum: Using a modified Delphi technique as a participatory approach to developing a rural health module in an undergraduate medical curriculum

Bernhard Gaede, John Tumbo

Category: Oral

Introduction: The alignment of individual modules with the competency outcomes of the curriculum is vital. Achieving such alignment in detailed module development remains challenging particularly if multiple academic disciplines participate in the module. A new rural block module was developed by family medicine and rural health disciplines in a six year medical curriculum.

Aim: The aim of the study was to explore the degree of consensus regarding the outcome competencies of the new rural block module.

Methods: A modified Delphi technique was used as a participatory approach to curriculum alignment for a 7 week rural block module. Ten academics from the two disciplines were invited to become co-investigators for the study. The medical curriculum outcome competencies were compiled into a list comprising of 85 competencies divided into 7 domains (entry-level practitioner, communicator, collaborator, manager, health advocate, scholar and professional) with between 8 and 17 competencies per domain. Through an email-based Delphi technique with 2 rounds of distribution, the competencies were scored on their relevance to a new 7 week rural block. The results were shared among all participants after each round and discussed at inter-disciplinary level to identify the outcome competencies of the module.

Results: The degree of consensus achieved through the Delphi technique regarding the importance on including competencies from each of the 7 domains varied from 0% to 90% across domains. Greater consensus was achieved for competencies relating to collaborator and communicator. However particularly scholar- and professional-related competencies achieved low consensus levels (0% and 18%) on relevance for inclusion in the module.

Conclusion: The variability on consensus reflects a wide range of expectations by the participating academics of the module's role in the curriculum. The rigorous exploration of the outcome competencies assisted in articulating alignment of the module outcomes with the larger curriculum.

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Impact of Bedside teaching activities on the patients' hospital experience at Mekele University hospital, Ethiopia

[Fasika Amdeslasie Gebrekirkos](#), [Jacqueline Van Wyk](#)

Category: Oral

Context: Clinical bedside teaching is effective if done at the bedside. The number of medical schools in Ethiopia has increased from 3 to 32 in 8 years to reach the millennium development goals, which led to an increased student to patient ratio in the teaching hospitals. This has been met with mixed feeling by patients.

Purpose: This study was conducted to determine the patients' perceptions about Bed side teaching.

Methods: This quantitative study used a 32 item questionnaire to collect data from patients in the Medical and Surgical wards in 2013. Patients responded on a five point Likert scale about the impact on bedside teaching activities, students' clerkships and physical examinations on the quality of their hospital stay. Questions were analyzed using SPSS ver. 16.

Result: One hundred twenty seven (84.7%) questionnaires were returned (N=150). Sixty percent (60.6%) of the patients were not in favour of the bedside teaching. No association was found with age, sex, occupation, literacy, length of hospital stay, and ward. Eighty seven percent did not understand the discussion during teaching, 84.2 % were not aware of being admitted to a teaching hospital; 81% did not regard treatment at the teaching hospital as beneficial; 82.7 % were not aware that students would spend time with them and they did not understand the role of students in the ward. Patients (81.1%) felt anxious when left alone with students to be examined and clerked.

Conclusion: Patients should give informed consent for teaching to occur at the bedside on admission. Patients can benefit from being educated about the advantages of being treated in a teaching hospital which include being a participant in training future doctors for their community. Instructors should include patients in discussions about them. Policy regulations may help to limit the number of students at the bedside teaching.

Bachelor of Clinical Medical Practice (Clinical Associate) student reflections during clinical rotations.

[Audrey Gibbs](#)

Category: Oral

Background: The BCMP degree was introduced in South Africa in 2008 and at the University of the Witwatersrand in 2009. This first cohort of students produced challenges and questions around teaching and the learning environment. The clinical experience was mainly in district and regional hospitals, not tertiary academic hospitals, with clinical learning supervised by staff at these hospitals. Faculty therefore relied on student portfolios including reflective journals to ascertain learning and experiences in the clinical setting.

Aim: To identify the issues that third year BCMP students in the clinical areas choose to write about in their reflective journals.

Methods: The journals of 24 BCMP students written during the first two clinical rotations of their final year were included in a retrospective study. Thematic content analysis of these journals was employed to identify specific reflections in the journal entries and these were placed in emerging themes and subthemes. Each student's narrative pieces were further analysed in detail.

Results: The reflections show that students focused on staff and health care systems issues, especially resources, attitudes and work ethic. The majority of these staff and health care related reflections were negative but positive experiences and role models were also identified. There were differences noted between hospitals and rotations.

Conclusion: The students identified lapses in the health services and health providers which affected patient care. They also recognised positive experiences and role models. This reveals a mismatch between teaching and their clinical experience. These experiences will be used to advise future teaching and research, as well as to provide feedback to the hospitals used for clinical training. Discussions should be held as to ways of reporting these incidents and improving professional standards in the clinical teaching settings.

Termination of prejudice: Helping students 'live' societal and healthcare factors underlying women's reasons for terminating their pregnancies.

[Chivaugn Gordon](#)

Category: Oral

Background: Termination of Pregnancy (TOP) is a controversial and emotive topic, often causing discomfort amongst medical staff and students. Since TOPs are legal in South Africa, all health care workers (HCW) could be faced with an initial consultation with women presenting for TOPs, irrespective of their personal views and feelings about the issue; and whether or not they elect to part of the procedure.

Aim: The aim is to assist students in their gynaecology rotation to appreciate the broader societal context of unwanted pregnancy and women's decisions to terminate their pregnancies; as well as give a space where students can confront and process their own feelings and thoughts about TOPs. Further, practical steps are suggested to guide students through consultations with women presenting for TOPs.

Method: A once-off, one hour mini-workshop is held for a group of five 5th year Gynaecology students. Students are each given one of the following questions to answer: 1) why do women have sex; 2) why do women fall pregnant; 3) why do women have TOPs. Students must classify their answers into 'voluntary'; 'involuntary' and 'grey area' columns. A group discussion is then held, where students offer their answers to the question. Using students' answers, the disempowerment of women in South Africa in decisions regarding sex, pregnancy and TOPs is emphasised; as well as the indirect role HCPs themselves can play in unplanned pregnancies. Anecdotes are offered by the tutor as examples. Students are advised on a practical approach to counselling in future TOP consultations. Students must then hand in a compulsory, anonymous reflection on the tutorial. Students are not asked to disclose their own views, thus creating a safe space; and the facilitator also does not disclose their views on the issue.

Results: Most students find the experience transformative in that, even if they are pro-life, they would be able to reserve judgement of such patients, due to their broader understanding of societal factors affecting women's reproductive choices. Many said they felt more equipped to counsel and manage women presenting for TOPs.

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Understanding the learning styles of undergraduate physiotherapy students

Danelle Hess, J Frantz

Category: Oral

Background: Students enter universities with different learning styles and in order for them to perform optimally, both the student and the educator should be aware of various learning styles and problem solving abilities. Research shows that students have different backgrounds, levels of motivation and approaches to studying. In the interests of enhancing undergraduate physiotherapy education, educators should aim to become more aware of these diverse approaches to learning.

Objective: To identify the learning styles and problem solving abilities of the physiotherapy students at a university in South Africa.

Methods: A quantitative, cross sectional research design was used and 246 physiotherapy undergraduate students registered for the 2012 academic year were invited to participate in the study. Three valid and reliable questionnaires including the Index of Learning Styles (LSI), the problem solving style questionnaire (PSQ) and the Learning Style Questionnaire (LSQ) were used to collect data. Descriptive and inferential statistics was employed to summarize the frequencies of students in each learning style category. Inferential statistics using the Independent sample "t" test was employed to compare learning styles scores across the four years of the programme and to analyse the association between learning styles and the associations between problem solving ability.

Results: A response rate of 72% was reported (n=177). Based on the questionnaires, the prominent learning styles were feeling (PSQ), Kinaesthetic (LSQ) and Visual-Verbal (LSI). Males were prone to the kinaesthetic learning style and females had a more visual learning style. The feeling group constituted 47% of the sample, with the majority being female.

Conclusion: It is worthwhile to know that various learning styles do exist, so that we can adequately attempt to our adapt our teaching style to suit the needs of the students.

Exploring new graduates' conceptualisations of occupational justice in practice: Towards OT education for transformation

Lucia Hess-April

Category: Oral

Health reform in South Africa, alongside the global reorientation of the occupational therapy (OT) profession, gave momentum to the inclusion of occupational justice as a key tenet of the UWC OT curriculum and a revised mission statement that embraces socially responsive education. Occupational justice was derived from a social justice perspective and is defined as actions directed at having the occupational needs of individuals, groups and communities met as part of a fair and empowering society (Wilcock & Townsend, 2000). This paper will present a qualitative descriptive study that explored how occupational justice was conceptualised by UWC OT graduates who underwent compulsory community service in three provinces of South Africa. The aim of the study was to explore how UWC OT graduates' conceptualisations of occupational justice, as instilled by the UWC OT curriculum, manifest in their practice. Underpinning this study was the assumption that uncovering new graduates' practice experiences can inform the development of the UWC OT curriculum to support its graduates to enact occupational justice in practice. While the findings highlighted several contextual facilitators of practice, it also revealed contextual constraints that impeded the participants' attempts at working towards occupational justice, highlighting various gaps in teaching and learning strategies within the curriculum. In relation to this, I will explicate important implications derived from the findings for the development of the curriculum to ensure that students develop competence to deal with complexities of practice. These implications revolve around the need for the curriculum to address critical reflexivity, possibilities-based practice skills and the advancement of interdisciplinary education. Recommendations for the development of the curriculum in respect of structure, content and approach; interdisciplinary education and practice; and support for community service graduates will be addressed.

The perceptions of a cohort of final year medical students on culture and the practice of medicine

Susan B. Higgins-Opitz, Jacqueline van Wyk, Kogie Moodley, Soomrain S Naidoo

Category: Oral

Background: Student admission policies are increasingly being changed in order to improve equity and social transformation. Research into diversity is thus becoming increasingly the subject of current medical literature. In this context, it is important too to understand the experiences and challenges of students from diverse backgrounds of the practice of medicine during their training.

Methods: Final year medical students at the University of KwaZulu-Natal and shared with us the influence of gender, language and religion on their experiences, opportunities and obstacles in medicine. The study was conducted during 2008 at the Nelson R. Mandela School of Medicine. Data was collected through semi-structured interviews with students from diverse cultural, religious and language groups. Excel was used for quantitative data analysis while qualitative data was coded using QSR Nvivo 8 software.

Results: Of the 94 students interviewed, 65% were female and 35% were male. In terms of race, 65% were African, 26% were Indian; while Coloured and White students represented only 6% and 3%, respectively. The majority (78%) followed the Christian faith, with Hindu and Muslim students being only 12% and 9%, respectively. 42/61 (69%) of female and 24/33 (73%) of male students, felt that their religious beliefs would influence their practice of medicine. Language was seen as the single most advantageous and greatest obstacle for communication purposes, whether with patients, peers or consultants. Stereotyping was notable problem, especially amongst non-isiZulu speakers, while minority groups felt isolated.

Conclusion: The interviews have provided rich data on the experiences, difficulties and aspirations of students of the different cultures, which have given us valuable insights into their lived curriculum.

Take-home message: Our results suggest that in classes with diverse cultural backgrounds, cognizance must be taken of issues which are likely to influence how students ultimately practice medicine.

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Advanced Health Management Programme Training: Outcomes from Namibia and Botswana

Sunet Jordaan, Veena Pillay, Gustaaf Wolvaardt

Category: Oral

Background: The African Health Sector faces many challenges. One of the main challenges is that health managers take on strategic leadership roles without formal training in either management or leadership. FPD, in collaboration with SIDA, addressed this with a Regional Leadership Capacity Development Programme. One of the objectives of this was to enhance the management and leadership skills of 204 health care managers in six countries.

Objective: The objective of this study is to report on the self-reported and peer-reviewed management and leadership skills improvement of 48 of the 204 delegates after completion of an Advanced Health Management Programme presented by FPD and co-certified by Yale University.

Methods: To assess the outcomes of the training of health care managers on the AHMP, the researcher used a mixed method approach. Before the commencement of all courses, FPD collected baseline data on participants' attitudes, knowledge and skills on the targeted topic. A quantitative approach was used to determine the demographics and number of individuals successfully trained as well; and a qualitative approach was used with pre- and post-course assessments to determine the effects and outcomes of the course at outcome level. This was followed up with a post-course outcome assessment that was completed by both the trained delegates and their supervisors.

Findings: All participants self-rated as improved in various managerial and leadership competencies. The supervisors had even higher acclaim for the outcomes of the training results as the delegates. The course proved to have organisational as personal benefits.

Conclusion: Training in management leads to improvement of both leadership and managerial skills in health professionals.

Strength in numbers: Peer led tutorials as an effective strategy for physiotherapy practical skills training

Lianne Keiller, Gakeemah Inglis-Jassiem, Marianne Unger, Susan Hanekom

Category: Oral

Background: Near-peer teachers have the ability to explain difficult concepts at an appropriate level for students. The Physiotherapy Division at Stellenbosch University implemented a structured near-peer tutorial system to address the growing student numbers within the undergraduate physiotherapy programme.

Aim: The aim of this study was to determine the effect that near-peer tutorials would have on student performance. In addition, the students' perceptions of these tutorials on their skills were explored.

Methods: Ethics approval was granted. A quasi experimental design with purposive sampling was used. The average score of the two assessment opportunities pre and post implementation was analysed. A questionnaire using a five-point likert scale measured students' perceptions of the organization of the tutorials, tutor competencies and perceptions on the impact of the tutorials on their own learning and development. Consenting tutees completed the questionnaire after completion of the module.

Results: There was a statistically significant difference in the number of students who passed the assessment post-implementation of the tutorial system ($p=0.001$). A 93% response rate was achieved for the questionnaire. Students perceived the tutorials to add value to the presentation of the module and that these sessions facilitated their practical test preparation (86% $n=48$). Students perceived the tutorials to be essential to their academic success (73% $n=41$); is important for promoting confidence (71% $n=40$) and contributes to the development of their competence (60% $n=33$). While the majority of students agreed that their participation in the tutorials improved their handling (manual) skills (71% $n=40$).

Conclusion: When faced with larger classes near-peer lead tutorials is an effective strategy to improve the pass rate in the practical component of a module. Innovative strategies to ensure student throughput in spite of increasing student-lecturer ratios need to be explored.

A Paradigm Shift: Medical Schools in Africa Form In-Country Consortia to Improve Medical Education and Health Workforce Planning

Elsie Kiguli-Malwadde

Category: Oral

African medical schools have historically turned to northern partners to provide technical assistance and resources to strengthen their education and research programs. In 2010, this paradigm shifted when the United States government brought forward unprecedented resources to support African medical schools. The grant, entitled the Medical Education Partnership Initiative (MEPI) triggered a number of south-south collaborations between medical schools in Africa. This paper examines the goals of these partnerships and their impact on medical education and health workforce planning. All of the consortia have prioritized efforts to increase the quality of medical education, support new schools in-country and strengthen relations with government. These in-country partnerships have enabled schools to pool and mobilize limited resources creatively and generate locally-relevant curricula based on best-practices. The established schools are helping new schools by training future faculty and using grant funds to purchase learning materials for their students. The consortia have strengthened the dialogue between academia and policy-makers enabling evidence-based health workforce planning. All of the partnerships are expected to last well beyond the MEPI grant as a result of local ownership and institutionalization of collaborative activities. Given the excellent prospects of sustainability, the creative use of limited resources, and the positive impact on national health workforce training and standards, future funding for global health education should prioritize south-south collaborations.

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Gamification in surgical education

Juan Klopper

Category: Oral

What problem was addressed?

Getting undergraduate medical students to make optimal use of available learning opportunities in the busy surgical workplace is a challenge. Clinical workloads are high and in acute care settings, patient care is a priority.

What was tried?

Greater use of technology was combined with elements of gameplay in an acute care surgery unit at an academic hospital. A pilot program of gamification was implemented during a six-week period during which three groups of NN final year medical students rotated through the unit. The strategy aimed at improving three key elements of clinical teaching, namely active participation in patient consultation and presentation on ward rounds, assistance during surgical procedures, and learning by consulting published literature. Participation was voluntary and managed by subscription to a closed online forum allowing monitoring of participation. Rewards were structured around a points based leaderboard, published daily on the forum.

What lessons were learned?

The use of elements of gameplay and reward in a non-game context proved workable. Twenty-one students took part in the program, generating 211 posts. Post categories included short descriptions of case presentations and findings during surgical procedures. A total of 24 online reports were submitted after literature searches, all directed towards clinical questions posed to students during patient presentation. The remainder of posts constituted direct discussions amongst students about the content of the aforementioned categorical posts. Direct verbal feedback from students was positive and participation by students in operative cases was subjectively reported as greatly improved by surgeons involved.

Gamification involves the implementation of game-play and its inherent psychological motivators to encourage participants in reaching set goals. The pilot program showed that such a strategy can be implemented in the clinical teaching setting augmenting the aims of such teaching.

Developing scholarship in undergraduate medical students at the University of KwaZulu-Natal: teaching research

Stephen Knight, Saajida Mahomed

Category: Oral

Background: Understanding the role of research and critical appraisal of published evidence in providing quality clinical practice have been identified as a core competency for health professionals by the Health Professions Council of South Africa.

Objective: In this study we describe how undergraduate medical students at the University of KwaZulu-Natal learn about and are capacitated to conduct community-based epidemiological research and to improve their scholarship.

Methods: The Selectives Programme which runs longitudinally over three years is modeled on the community-oriented primary care (COPC) approach which responds to the social determinants of health, based on community needs, and using epidemiological principles.

During Selectives 02, third year students who have already performed a community diagnosis and identified a research question undergo a series interactive lectures and small group tutorial sessions to develop their knowledge about research methods and practice. Working in groups of 2 to 4 students they prepare a research protocol on the research question identified in 2nd year. Their research involves surveying 100 participants to find out more about their research question. Resources are available on the university's Learning Management System (Moodle).

Protocols (including questionnaires, participant information sheet and consent forms) are submitted to the College of Health Sciences Biomedical Research Ethics Committee for expedited review.

Results: The field work is conducted in a primary care setting near their home before the mid-year vacation, Data are collated, summarised and the results presented in a scientific research poster for peer and academic assessment. Each year between about 60 groups present their results at a Research Day. The findings are used to develop a community-based health promotion intervention in their 4th year to complete the COPC cycle.

Conclusion: The Selectives Programme enables students to engage with local communities, measure real health needs with appropriate research tools. They improve their health systems knowledge and develop a range of research competencies.

Reflections on their year-long rural clinical training: junior doctors look back

Norma Kok, Susan van Schalkwyk, HOFFIE Conradie, Marietjie de Villiers

Category: Oral

Background: In 2011 the first cohort of eight medical students completed a year-long, comprehensive rural placement at Stellenbosch University's Rural Clinical School (RCS). In 2013, having completed their two year internship, seven of these students, now junior doctors, returned to rural and underserved areas to complete their Community Service (COMSERVE) year.

Aim/Purpose: The cohort of eight junior doctors was followed up to determine their attitudes towards rural placements and retrospective perceptions of their RCS experience.

Methods: This study forms part of a larger, longitudinal study currently underway to evaluate the first five years of implementation of the RCS and draws on individual semi-structured telephonic interviews conducted with the eight junior doctors. The interviews were audio-recorded, transcribed and analysed using the analytic software, Atlas ti.

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Results and discussion: This study offers insight into two specific issues. Firstly, in looking back having now completed their internships, the respondents still spoke appreciatively of their RCS experience specifically highlighting teamwork, clinical exposure and exposure to good quality specialists. They still attributed their confidence, ability to think critically and holistic approach to patients to their RCS experience and described these as important, particularly in rural settings.

Another crucial factor, however, related to the reasons why most of them opted for a rural and underserved COMSERVE placement which were directly linked back to the time that they spent at the RCS. They felt that the RCS not only prepared them for internship and COMSERVE, but for rural placements which would round them off as doctors.

Conclusions/ Take home message: It is evident that for these junior doctors, the RCS provided a clinical learning platform that ensured their preparedness for internship and influenced their location choices for COMSERVE. It can be argued that an extended rural experience can lead to the retention of healthcare workers in rural areas.

Dietetics training: from the urban facilities to rural communities

Liesbet Koornhof, R Blaauw, ML Marais, LM du Plessis, L Daniels

Category: Oral

Background: The burden of disease, re-direction of Primary health care (PHC) and strengthening of the District health system in South Africa required paradigm shifts for training and re-designing of undergraduate curricula for students of health care professions.

Development and design: Dietetic students from the Division of Human Nutrition, Stellenbosch University have utilised rural training platforms for the past 10 years. However, the need arose to broaden the scope of training activities utilizing the extended rural platforms of the university. Selected outcomes from the three core modules in the BSc Dietetics programme were transferred from the traditional training platforms. Overarching Service-Learning (SL) outcomes were developed to enhance integration of knowledge and competencies in an inter-professional setting.

Implementation: Student activities were formulated according to the needs identified by the role players in the communities. Final year Dietetic students now provide services at various facilities in Witzenberg, Overberg and Overstrand communities through experiential SL.

Evaluation: Students reflected on their perceptions using reflective journals as well as structured reflections. A deeper understanding of the need for service delivery in diverse settings to vulnerable groups was fostered. Students developed compassion and sensitivity towards cultural diversity which is beneficial for professional growth. Coordinators continuously monitored students' activities and progress to ensure that missed opportunities were intercepted. Feedback obtained thus provided invaluable information to optimise future SL-opportunities. The rural experience enhanced students' practical application of their evidence-based knowledge and competencies. During summative assessments it was observed that students demonstrated the ability to integrate the three core components of dietetics in a holistic way. The SL experience strengthened the development of their social responsibility and a deeper understanding of the role of dietetics in PHC.

Conclusion: Dietetic students' involvement in community-based service delivery illustrates the value and benefits of a reciprocal relationship between the university and the community.

Health Sciences students' perceptions of Community-Based Education (CBE) and Service Learning (SL)

Sonet Kruger, Marietjie Nel, Gert van Zyl

Category: Oral

Background / Context: One of the challenges of medical education is to prepare graduates to address the health needs of families and communities and to assist in improving access to health services in places and under conditions that advance general well-being. The Faculty of Health Sciences at the University of the Free State (UFS) has adopted a CBE and SL teaching approach for undergraduate Health Sciences students in order to prepare them for future professional work in rural and underserved communities. CBE and SL are compulsory components of the curriculum of undergraduate students, however the attitudes to and perceptions of CBE and SL vary significantly among these students.

Aim / Purpose: The aim of the study was to explore the experiences of health sciences students, including views, attitudes and perceptions regarding CBE and SL at the UFS.

Methods: A Nominal Group Technique was used to explore the experiences of Health Sciences students, regarding CBE and SL at the UFS. The class leaders from all the different year groups of undergraduate students registered for degree courses offered in the Schools of Medicine, Allied Health Professions and Nursing at the FHS, UFS participated in the study.

Results and discussion: Different aspects that had an influence on the students' experience of CBE and/or SL were identified and divided into 17 factors that made CBE and/or SL a positive experience and 16 factors that had a negative influence on the way students perceive CBE and/or SL. Information about preconceived ideas gained by exploring the attitudes and perceptions students have about CBE and SL shed some light on how best to integrate it into learning programmes so as to ensure successful integration.

Conclusion / Take home message: Perceptions have a very definite influence on the outcomes of any learning programme or activities intended to take place in a social environment and aimed at effecting personal growth or social change.

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Exploring the barriers that affect the preparedness of dietetic students from UWC for clinical practice

Candice Lombardo

Category: Oral

Background: The cumulative knowledge gained during the three years prior to the internship is expected to be applied during the 4th year to prepare students to meet the competencies for professional practice. The aim of this study was to explore the barriers that influence the preparedness of dietetic students for their internship.

Method: This was a qualitative descriptive study utilizing focus group discussions. The study population consisted of all 4th year dietetic students from the University of the Western Cape (UWC) who were willing to participate and provide written informed consent. A total of 18 students agreed to participate and 3 focus group discussions were conducted as tool for data collection. The data was coded and analysed using a thematic approach.

Results: In terms of barriers to student preparedness, three major themes emerged: the role of the preceptor, insufficient opportunities to develop practical skills prior to commencement of the internship and inadequate access to resources.

Conclusions: Dietetic interns generally felt unprepared for the clinical environment which affected their confidence during the clinical blocks. A strong recommendation was made for earlier exposure and practice in the clinical arena, which could possibly start in the second and third year of studies. Current teaching practice will need to be evaluated and changed in order to address this 'gap' that students appear to be experiencing.

Pharmacy Students' Perceptions of the Teaching Methods used in the Problem-Based Learning Programme at the University of Limpopo, Medunsa Campus/Tshwane University of Technology

Lindi A. Mabope, BA Masuku, MP Mogotsi, MEC Molefe, Tshabangu, OC Meyer

Category: Oral

Introduction: Pharmacy is one of the scarce skills in South Africa (NSDS, 2008). Thus there is a need of institutions to train and make sure that they produce quality graduates with the required skills and knowledge. The University of Limpopo, Medunsa Campus in partnership with the Tshwane University of Technology, BPharm programme uses the Problem based learning (PBL) method of teaching, where scenarios are the core method used. Including; tutorials, workshops, practical work, role play, student oral presentations, site visits and assignments.

Objectives: To find out the preferences of BPharm students in different years, on the teaching methods used in the programme. The information acquired will then be used to suggest changes in the way that the BPharm students are being taught, where need be, to suit the students' needs.

Materials and Methods: Design used was, quantitative and cross-sectional. The target population included 241 Pharmacy students enrolled at the University of Limpopo, Medunsa Campus/Tshwane University of Technology in the year 2013, of which 182 students responded. A self-administered structured questionnaire used included; close and open-ended questions. Cross sectional data was used to find consensus between the preferences of the different BPharm study levels.

Conclusions and recommendations: The results of this study showed that the Scenarios were the most preferred teaching method by 51% of the students. Reasons given by most students were that the discussion in the report-back session helped them to understand the work better and that the facilitator helped to correct their mistakes. The least preferred method according to students (23%), was the Tutorial. Reasons given by most students were that tutorials were boring and that there was not enough interaction between presenters and the students. This showed that students prefer more interactive methods of learning.

Key words: Problem-based learning (PBL), Teaching method.

Parallels and Divergences in Decentralised Training Approaches: Rural Placement of Wits Medical and Education Students in Mpumalanga Province, South Africa

Nontsikelelo Mapukata-Sondzaba, Alfred Masinire, Rainy Dube, Thabisile Nkambule, Ian Couper, Felix Maringe

Category: Oral

Decentralisation, as a strategic approach to education reform, is becoming an emergent issue in South Africa. Presented as a form of devolution, it facilitates students to learn from and experience local variance and relevant community structures. Twenty years post-apartheid, the persistent mal-distribution of resources and inequitable provision of services that tends to marginalise rural communities is a growing concern for policy makers and educators alike. The schools of clinical medicine and education at the University of the Witwatersrand have considered some of these disparities in the training of their students and are seeking to incorporate a decentralised training approach to achieve transformation.

This paper reflects on the parallels and divergences in the rural placement of education and health science students in rural schools and in a rural hospital respectively in Mpumalanga province. In reviewing programme approaches to training, there were notable similarities in the rationale, student preparation and assessment of learning. The divergence was in the student placement, in terms of both the actual experience and the duration. Pedagogically, the collective experiences of the students reflected disparities in the conceptualisation of teaching and learning as a collaborative learning methodology.

Rural placement of students as an outcome of a decentralised training approach is one initiative that seeks to address issues of access and equity for rural communities. However, this has implications for curriculum planning as it is the students themselves who must appreciate the inherent benefits of social learning and construct their own experiences in a community setting. Similarly, supervisors must be trained to be objective assessors. Based on this comparative review, decentralisation is proposed as a collaborative training approach that will assist students not only to graduate as astute professionals but also to respond in future as socially responsive citizens.

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The NOMA Track Module - Fostering Competency Attributes Important to Health and Nutrition Professionals

Maritha Marais, Wenche Bart Eide, Milla McLachlan

Category: Oral

Background: Innovation in teaching and education is globally required of academic institutions to respond in an adequate manner to the health needs of the 21st century. In response to this challenge, and specifically to integrate a human rights-based approach into graduate education in nutrition, four academic institutions in Norway, South Africa and Uganda developed the NOMA Track module on 'Nutrition, Human Rights and Governance'.

Objectives: The aim of this paper was to capture students' perceptions about the NOMA Track module, focussing on the development of professional attributes.

Methods: Employing a qualitative approach, 20 (90,9% response rate) in-depth telephonic interviews were conducted, voice recorded and transcribed. Through an inductive process, emerging themes were used to compile a code list and for content analysis of the transcribed text. Relevant themes were reported according to a set of professional attributes established for competent health and nutrition professionals.

Results: Participation in the module enhanced the professional attributes; for example, communication skills and adopting a holistic approach to client/community interaction. Their role as collaborator was enhanced by learning to embrace diversity and cultural differences and similarities. Incorporation of activities to develop teamwork could be advantageous.

Students had to adapt to different cultures and educational systems and students were inspired to contribute in diverse contexts; to act as agents for change in the organisations in which they may work or act as leaders or co-ordinators during interaction with community groups and policy makers. Higher education institutions offering transnational modules should support lecturers to manage the resultant diversity in the classroom to enhance student performance.

Conclusion: After completion of the NOMA Track module, this group of nutrition professionals felt better equipped to deal with relevant nutrition-related issues in a holistic manner. The development of future transdisciplinary modules will benefit from the inclusion of professional attributes as part of the module outcome, and the incorporation of relevant activities in the programme.

E-tasks on a clinical communication platform: Redesign, implementation and future considerations

Nontsikelelo (Ntsiki) Masiba, Philip Lewis

Category: Oral

Background/ Content: E-learning was designed and implemented onto the isiXhosa and Afrikaans clinical communication platform in 2012 at Stellenbosch University Faculty of Medicine and Health Sciences (SUFMHS). Its primary purpose is to complement students' lectures and to furthermore optimise students' isiXhosa and Afrikaans communicative competency for the clinical consultation. Integral to each undergraduate programme's contextualised online learning is the inclusion of assessment procedures designed to continuously assess students' application and understanding of the target language. Recent adaptations to this online assessment were necessitated by its migration from the former learning management system Blackboard to the open sourced e-learning system Moodle.

Aim/ Purpose: This presentation provides an overview of past practices that have led to the implementation of current as well as future anticipated online assessment innovations. Furthermore, to encourage on-going inter-professional participation and collaboration towards the design and development of such online assessment instruments

Methods: A comparison of past and current in-house logistical and technological challenges experienced with the facilitation of students' clinical communication WebCT tests and e-tasks is discussed and demonstrated.

Results and discussion: Numerous strengths and challenges from the current initiative are highlighted which can be used to guide institutions wanting to pursue similar online assessment initiatives. Informal feedback from students, who are familiar with both the previous WebCT tests and the current e-tasks, are also provided to guide and improve future developments.

Conclusion / Take home message: Faculties of Medicine and Health Sciences are encouraged to be more involved with the development of innovative online initiatives that will become integral to the complete training of a health professional in a multilingual society. The importance of sharing teaching and learning innovations among peers interested in implementing similar assessment initiatives beyond the lecture room is therefore expressed.

An exploration into the awareness and perceptions of medical students of the psychosociocultural determinants of health in the consultation

Margaret Matthews, Paula Diab, R Nelson

Category: Oral

Background: South African society is undergoing rapid changes and includes people from divergent cultures, beliefs and social backgrounds. Research suggests that these contextual influences have an important bearing on how patients present to health care providers. Medical students, too, have a lifeworld based on their own backgrounds and cultures, and may find relating to a patient with a different lifeworld challenging. This paper references traditional sociological theory, in which interpretivism sees society as the product of interactions of its members, with subjective meaning being created from a shared reality.

Objectives: The paper aims to explore students' awareness and perceptions of how psychosociocultural factors in a multicultural society influence their practice as future medical practitioners, and to suggest adaptations for teaching.

Methods: Focus group discussions were conducted with three groups of fifth year medical students in the Family Medicine rotation. Some of the students had viewed a video of a consultation with an isiZulu-speaking patient, and completed a self-reflection learning task. Audio-recordings of the FGDs were transcribed and analysed thematically.

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Discussion: Exposure to patients in the clinical years had made students highly aware of the challenges of cultural diversity, with several expressing the opinion that they felt under-prepared to address these challenges. Themes identified related to self-awareness; reflection on the interactions between different groups of students, and between doctors and patients in cross-cultural consultations; awareness of dealing with the patient as an individual (patient-centredness); the need for cultural sensitivity and perceptions of cultural similarities as well as differences.

Conclusion: Students demonstrated that introspection was taking place and that critical incidents in their rotations were providing opportunities for reflexive practice and transformative learning. Educators should be encouraged to utilise opportunities in teaching to address learning objectives relating to cultural competence.

Factors in flipping the pharmacology classroom

Shirra Moch

Category: Oral

Purpose: Students require a firm informational base to enable them to make rational clinical treatment decisions, but older pedagogic methods such as lecture based learning no longer equip them to build firm conceptual pharmacology foundations.

Methods: Course material in a sub-section of the third-year pharmacology curriculum was subjected to the pedagogic device of 'inverting the classroom' where content information was provided on an online learning management system (LMS) prior to facilitated classroom activities. Students' perceptions of the utility of this method as a learning strategy for pharmacology knowledge building were interrogated by an online anonymous questionnaire. In addition, eight tutors participated in a focus group. Qualitative data were evaluated by thematic content analysis to determine categories and themes, which were viewed in relation to quantitative data acquired from three tests.

Results: Three main themes emerged from the qualitative data: Facilitation of learning; Barriers to Learning; and Labour Intensity of the sub-course. In the first theme, students appreciated their agency over sequencing and pacing of their pharmacology learning. They also enjoyed the variety of activities and information sources. In the theme of barriers to learning, the categories included the limitations of restricted bandwidth and restricted access to devices; the uncertainty felt by students in ascertaining the boundaries of the required pharmacology knowledge; the lack of time to engage with all the offered material (which also related to volume of supplied material); fear of engagement with critical thinking; and deficient English language capability. In the final theme the tutors commented on the labour-intensive nature of the exercise since preparation time for class activities and tutorials was extended (compared with the didactic system). With respect to the quantitative test information, students' scores improved as the block progressed.

Conclusions: Whilst this learning methodology appealed to some students, the majority resented the continuous formative assessment element of class interactions and expressed a preference for didactic lectures.

Kaleidoscope competency framework for community and public health physiotherapy in the undergraduate curriculum in South Africa

Karien Mostert-Wentzel, Jose Frantz, Tania (AJ) van Rooijen

Category: Oral

Background: Education in health sciences must address the health profile of the country and be aligned with health policy. Curricula must therefore be continuously revised. In New Zealand and Australia standards of practice still focus on the individual patient: assessment, treatment, outcome measures of interventions. Canada adopted the CanMEDS model that had been developed by the Royal College of Physicians. Specific international frameworks for physiotherapy curriculum found are not explicit with regards to physiotherapy in public health or in community development.

Aim: The study identified core competencies for relevant physiotherapy services in community and public health settings in South Africa.

Methods: Members of the South African Society of Physiotherapy (SASP) (n=70) participated in the first round of a modified Delphi technique. Second-round participants (n=100) were purposively selected from different areas including clinicians from rural areas and those doing compulsory community service, rehabilitation managers, clinical supervisors and academics.

The first round asked about the ideal roles for physiotherapy in community-based and public health settings. The second round tested the level of agreement with competencies and assessment criteria developed from first-round findings and community-placement study guides (n=8). The Clinical Prevention and Population Health Curriculum Framework was used as provisional coding framework, followed by open coding. Descriptive statistics were applied to quantitative data.

Results: Consensus was reached in eight competency domains (average level of agreement): clinical skills (97%), professionalism (92%), collaboration and communication (91%), evidence-based physiotherapy (85%), clinical prevention and health promotion (82%), health systems and policy (77%), population and community aspects of health care (71% and 77%).

Take home message: Clinical competencies remain the cornerstone of the undergraduate physiotherapy curriculum. Four other domains agreed with the roles of CanMedS, with clinical prevention and health promotion and public health as additional domains. Community aspects of health care featured strongly.

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Mapping LGBT health teaching within a tertiary health sciences curricula

Alexandra Muller

Category: Oral

Background: Lesbian, gay, bisexual and transgender (LGBT) people have specific health needs. As homophobia and heteronormativity persist, LGBT patients often experience discrimination and prejudice from health professionals. Recent South African policies recognise the need for providing LGBT-specific health care, but there are no curricula for teaching about LGBT health-related issues in South African health sciences faculties. This study aimed to determine how LGBT health-related content is taught at the University of Cape Town's health sciences faculty.

Methodology: The LGBT-related content of the various curricula within the health sciences was identified and mapped through an online survey of all academic staff at the UCT health sciences faculty, determining content, pedagogical methodology and assessment.

Results: Of 127 academics who responded to the survey, 93 completed the questionnaire. Ten taught some content related to LGBT health in the MBChB curriculum. No LGBT health-related content was taught in the allied health sciences curricula. The MBChB curriculum did not address key LGBT health topics such as safer sex, mental health, substance use and adolescent health, and did not provide students with any opportunities to challenge their own attitudes, misperceptions or homophobia.

Conclusion: At present, UCT's health sciences curricula do not adequately address LGBT-specific health issues. Coordinated initiatives to integrate LGBT health-related content into all health sciences curricula should follow an approach that challenges students to develop professional attitudes and skills regarding care for LGBT patients, and provide them with specific LGBT health knowledge. Educating health professions students on the health needs of LGBT people is essential to improving this population's health by providing competent and non-judgmental care. As a first step toward developing a comprehensive curriculum, online curriculum mapping can be used to identify existing LGBT-health related content in existing curricula.

A situational analysis towards a reflective community of practice (CoP) for postgraduate research supervision

Joanne Naidoo, Sindisiwe Mthembu

Category: Oral

Introduction: Changes in the Higher Education landscape, has resulted in programmes doubling the intake of graduates aligned to the call of increasing the human resource capacity in nursing. Empirical discourses on research supervision argue that the high non-completion rates are of a global concern within an expanding health care context and strategies of monitoring research supervision and improving the quality of research supervision is needed.

Aim: The aim was to conduct a situational analysis on the practices and experiences of postgraduate (PG) research supervision among nursing academics at a selected Higher Education Institution.

Methods: A descriptive exploratory design using in-depth individual interviews and a survey underpinned this study in the discipline of Nursing at the University of KwaZulu-Natal. Content analysis was used to interpret the qualitative data, while frequency distributions were used for the survey data.

Results: Data saturation occurred following in-depth interviews of seven of the eighteen participants. Participants had a mean of six years experience as an academic; four years in PG research supervision; and an average of seven PG students being supervised among the sample. Three emergent themes were identified: (i) Overwhelmed and Blinded: 'Treading without a Buoy insight' (ii) Pressure to Graduate and Produce: 'an overnight success' and (iii) Getting the Balance right 'being comfortable in your own skin'. These themes described a lack of clear guidelines on effective and standardized norms of research supervision; which compounded the pressure to cope with a heavy load of students needing supervision.

Conclusion/ Take Home Message

The study illuminated gaps in research supervision, the shared frustrations such as feelings of isolation and lack of support systems. Further, the need for continual support through systems such as CoPs, that foster ongoing support and learning through peer mentorship and reflective practice was identified.

Developing and validating a questionnaire to determine medical students' perceptions of the essential attributes of a socially accountable doctor.

Claudia Naidu, Steve Reid, Vanessa Burch

Category: Oral

Background: Social accountability in medical education is about producing graduates with the relevant knowledge, skills and values to respond to the needs of the wider community but, it is difficult to quantify.

Aim: The purpose of this study was to develop and validate a tool to observe trends over time in medical students' perceptions of the essential attributes of a socially accountable doctor.

Methods: A survey questionnaire was developed in which each CanMEDS role was constructed as a category y consisting of five items each. These items were adopted as theoretical measures of a particular value and attribute of a socially accountable healthcare practitioner. The questionnaire asked students to rate how important the listed components (behaviours and values) were to being a 'good' doctor. The study cohort included students in their first (n=175; 80%), third (n=193; 92%), fourth (n=170; 83%) and sixth (n=114; 63%) year of study at one South African medical school. Responses were entered into SPSS (v21) and factor analysis was undertaken to explore the relations between variables and factors, and to identify the factor structure.

Results and discussion: The factor analysis produced seven acceptable factors, with a total of 27 items retained. Items which either didn't load suitably on any one factor, loaded on two factors, or whose intra-scale reliability was too low or negative were dropped. Items were found to cluster together meaningfully and could be themed according to six of the seven CanMEDS key roles. The overall Cronbach's alpha consistency estimate was 0.91.

Conclusion / Take home message: There is great value in tracking the development of appropriate and necessary values and attitudes of socially accountable behaviour in medical students as they progress through their training and career. This instrument may offer a means of doing so.

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Introduction of a Master of Medicine Family Medicine training by distance education at Makerere University College of Health Sciences - A needs assessment

[Jane Frances Namatovu](#), [Julia Blitz](#)

Category: Oral

Background: The current Master of Medicine in Family Medicine training in Uganda is a privately sponsored, institution-based and full-time course. Most practicing doctors are not readily released by their employers to enroll for full-time studies which may imply loss of salary and possible replacement. A distance program would however allow practitioners to continue serving their communities while pursuing the Family Medicine training.

Aim: To explore the acceptability, feasibility and sustainability of the Family Medicine distance training program being proposed at Makerere University College of Health Sciences (MakCHS).

Methods: This was a qualitative cross-sectional study using interviews with key stakeholders from academic and administrative sectors at MakCHS, government ministries and the public and health service commissions. Two key informants from each group of stakeholders were interviewed. Transcripts were manually reviewed and analyzed using the deductive approach.

Results: Opportunities and concerns arose as themes from the transcripts. The majority of respondents emphasized that Family Medicine distance training is long overdue and fully aligned with the university's distance learning strategy. Almost all respondents mentioned that it is ideal to train family physicians within their practice environment. However, there were concerns around supervision and continuous assessment.

Conclusions and take home message: A Family Medicine distance training programme at MakCHS is perceived as acceptable, feasible and sustainable to a range of stakeholders. However, their concerns regarding supervision and assessment need to be addressed before implementation in order to ensure the credibility of the programme.

The 'X' factor in ECP academic success: 2013 student perspectives

[Polo-Ma-Abiele Ntsoelinyane](#), [Hesta Friedrich-Nel](#)

Category: Oral

Students who intend to study in the Faculty of Health and Environmental Sciences at the Central University of Technology, Free state but do not meet programmes minimum requirements are provided access to higher education by the Extended Curriculum Programme: Health (ECP) since its inception in 2007. This programme was designed to impart the necessary experience and skills to students for the subsequent year of study in their different programmes within the Faculty. The pass-rates of ECP students at the CUT compares well with mainstream students and thus the question was: what are these amendments which make them do so well?. The objective of this study was to determine factor(s) contributing to these students academic success in ECP on same subjects they underperformed during their matric year. This study used a quantitative design with qualitative elements; 13 former ECP volunteer students completed an open-ended questionnaire. The findings revealed that ECP offers students with more tutorials, discussions, practical demonstrations, support and students are more motivated to engage than in high schools. These factors played a role in ECP student's success as they enhance students to be independent thinkers thus augmenting their understanding and academic performance.

Evaluation of a physics solving strategy in Biophysics and Numeracy

[Mpumelelo Nyathi](#), [RT MacNeil](#), [N Mandiwa](#)

Category: Oral

Biophysics deals with application of physics to biological processes, which requires sound numerical and physics problem-solving skills. A Strategic design is the most important part of problem-solving.

Implementation of a 3-step physics problem- solving strategy is hereby presented. Effectiveness of the strategy was evaluated based on comparison of the performances of Students in Biophysics and Numeracy tutorials and assessments tests between 2010 -2013.

The 2010 class had no strategic intervention, the 2011 cohort had partial intervention whereas the class of 2012 and 2013 were systematically taken through a three- step physics solving strategy. The 2012 Students who were exposed to the strategy had better numeracy skills compared to the 2010 cohort as evidenced by the pass rates for the groups (86% and 71% respectively). In Biophysics tutorial assessments a similar trend of better performance was also found with the 2012 class achieving an average of 92% compared to 82% by the class of 2010. Moreover, the final year class average marks attained from the year 2010 to 2013 (2010, 2011, 2012 and 2013) gradually improved (63% ; 69%; 77% and 77% respectively) which further proved the effectiveness of the strategic intervention.

We therefore concluded that conceptual understanding of physics can only be promoted through developing a sound physics problem- solving skills, based on a well-defined strategy.

Professional nurses perception of their training role at Paray hospital, Lesotho

[Champion Nyoni](#), [Alan Barnard](#)

Category: Oral

Introduction: "Schools of Nursing face increased enrolments due to a high demand for professional nurses. Nurse training institutions in Lesotho have seen student enrolments increase by more than 100% in the last three years without an increase in teaching staff. Pressure has been placed on the professional nurse in the ward to mentor and also teach the clinical elements of nursing while they continue with their day to day clinical duties. The professional nurse in Lesotho is not prepared for this training role.

Aim: This study sought to understand the perception of professional nurses regarding their training role in the development of competent nurses in Lesotho.

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Methods: A qualitative design with a phenomenological approach in the context of Paray Mission Hospital was used in this study. Data was gathered through semi-structured interviews with eight professional nurses at Paray Mission Hospital. Interview transcripts were coded and these codes were clustered and themes identified. Data saturation was reached after eight interview transcripts were analysed.

Results: Five themes emerged after inductive analysis: fitting into the educational process; operational difficulties; why I can't facilitate learning; learners have issues; and probable solutions. These themes represent the perceptions of professional nurses at Paray Hospital, Lesotho.

Conclusion: Professional nurses understand and appreciate their educational role in the development of competent future generations of nurses. These professional nurses practice this training role in difficult circumstances with administrative challenges, limited resources and staff shortages while maintaining their clinical responsibilities. Despite these challenges these nurses have managed to be resilient and solution focused. Schools of nursing should ensure the development of professional nurses in the principles, practices and current trends in nursing education to enhance their training role.

Adopting social accountability at the University of Khartoum Faculty of Medicine: What challenges are there for the faculty?

Anoud Omer, Christina Tan

Category: Oral

Background: Following the 2010 Global Consensus on Social Accountability of Medical Schools, accreditation standards stressing social accountability were introduced to ensure medical schools adopt this principle. During the national accreditation process, the Sudan Medical Council urged medical schools to review their curricula and introduce activities reflecting social accountability. Accordingly the University of Khartoum started updating its medical curriculum. However, the school's leadership expressed concerns about faculty members' acceptance and ability to deliver these activities.

Aim: To explore faculty members' understanding of social accountability, its inclusion in the curriculum, and their needs to deliver activities addressing social accountability

Methods: A cross-sectional survey targeting all full time faculty members in the Faculty of Medicine, University of Khartoum was conducted in December 2013. Data was entered and analyzed quantitatively using Microsoft Office Excel 2007.

Results: More than 85% of respondents had knowledge of the medical school's plan to introduce social accountability into the curriculum, but only 20% could recall being formally notified. More than half agreed this was a much-needed development to the school's policies while around 45% considered the current work load as a major challenge. Two thirds thought this could succeed if given enough support. Almost 50% identified orientation meetings and workshops as the most important means for developing faculty capacity on social accountability.

Conclusion: Faculty members were positive about introducing social accountability into the curriculum. Concerns about increasing work load and lack of support from the medical school leadership need to be addressed. Faculty members from all departments should be involved in the process with social accountability orientation meetings and workshops to enhance their capacity.

Exploring the experiences and perceptions of Speech-Language Therapy students, educators and clinical tutors with regard to transdisciplinary collaboration in the foundation phase classroom

Helena Oosthuizen, Daleen Klop, Monique Visser

Category: Oral

Speech-language therapists (SLTs) working in school settings fulfil increasingly diverse professional roles, including being a collaborator with other professional persons (Harn, Bradshaw & Ogletree, 1999; Justice & Kaderavek, 2004a). Transdisciplinary collaboration requires educators and SLTs to 'share responsibility for student learning by expanding and exchanging knowledge within and between team members' (Prelock, 1995, p.286) and is of particular importance for primary prevention of literacy difficulties, a key role for both groups of professionals. Previous research has identified several challenges with regard to effective collaboration between qualified professionals (Creaghead, 1992), as well as between students and professionals. In order to design more efficient clinical training programmes, it is crucial to consider the perspectives of all role-players in a collaborative partnership. This paper aims to address the existing research gap by describing the experiences and perceptions of educators, undergraduate SLT students at Stellenbosch University, as well as clinical tutors with regard to transdisciplinary collaboration in the foundation phase classroom, according to the Embedded-Explicit (E-E) approach (Justice & Kaderavek, 2004a). In order to get a detailed understanding of the perceptions and experiences of role-players, a qualitative, interpretivist research design was used. Strategic and purposive sampling was used to select participants. The three groups of participants consisted of 23 students in their second year of the programme Speech-Language and Hearing Therapy at Stellenbosch University, five tutors involved in clinical supervision of these students and the six foundation phase educators in the Stellenbosch area in whose classrooms intervention sessions took place. Focus group interviews were conducted with the respective role-players and analysis was done using a modified contextualised content analysis approach. The results are presented according to the main themes and subthemes and the relevance to clinical training is discussed.

Evaluation of the impact of service learning on dental students at the University of Limpopo

Motlalepula Grace Phalwane

Category: Oral

Background / Context: Education is undergoing a state of ramification as service learning progresses over the years since its global inception. Service learning is a form of community-based pedagogy where learners are taught to connect their learning to practical experience through guided reflective processes. By these processes, students develop critical thinking skills.

Aim / Purpose: The aim of this study was to determine the extent of students' preparedness in social responsibility, within the contextual framework of their learning environment in the fifth-year of their dental education.

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Methods: Following service learning activities final year BDS students were provided with a four-paged subject-administered questionnaire with 31 items.

The information on the questionnaire covered topics such as reflective sessions, social responsibility, academic learning and enhancement and personal growth. A follow-up reminder will be sent to all participants who did not respond within the specified time.

A traditional 5-point Likert scale with a Strongly disagree -Strongly agree continuum was used. The response options were strongly disagree (SD)=1, disagree (D)=2, neutral (N)=3, agree (A)=4 and strongly agree (SA)=5. The options SD, D and N were taken as negative responses to a greater or lesser extent whilst A and SA viewed as positive responses to a greater or lesser extent. Questions were all converted into statements.

Results and discussion: Service learning and reflective practices have proved to bring about positive changes towards dental student learning. Students commit to social responsibility and deeper human service.

Conclusion / Take home message: Reflective processes must be incorporated as part of a continuum in the overall curriculum design of the undergraduate education of healthcare professionals.

Guidelines for the facilitation of critical thinking in radiography students

Tracey Pieterse, Heather Lawrence, Hesta Friedrich-Nel

Category: Oral

Background: Developing critical thinking skills in student radiographers is imperative in an era of rapidly advancing technology. The status of the students' ability to demonstrate critical thinking skills needed to be explored for the Department of Radiography to develop a more explicit curriculum to facilitate these skills.

Objectives: The aim of this paper is to present guidelines for the facilitation of critical thinking skills in radiography students.

Method: The study employed a descriptive exploratory design. The participants responses to vignettes (in the form of clinical scenarios) were analyzed using a Likert scale and action verbs developed for evaluating evidence of critical thinking skills, providing quantitative data. Field notes were made whilst analyzing responses to each question, providing qualitative data. Guidelines were developed using an inductive reasoning strategy to combine the results of this study with current literature.

Results: The findings, of this study, indicate that the majority of participants demonstrated minimal ability to think critically.

Multivariate correlates of perceived relevance in a dental curriculum

Corne Postma

Category: Oral

Background: The literature indicates that the learning of adult learners may be affected by the learner's perception of the 'relevance' of what is being taught. Partly based on this premise, a traditional content-based Comprehensive Patient Care curriculum at the School of Dentistry, University of Pretoria, was replaced (in 2009) with a case-based approach, actively pursuing relevance in the pre-clinical teaching and learning process through constructive alignment, and problem-solving exercises in an authentic context.

Objective: This study sought to investigate the multivariate association between the perceptions of third- to fifth-year dental students regarding the relevance of their learning and their perceptions regarding the educational strategies they were exposed to during the teaching and learning process.

Methods: Student feedback was solicited by means of a standard student feedback questionnaire at the end of the third-, fourth- and fifth years of study (n=40-50 per cohort) for the period 2009-2011. Feedback regarding perceived relevance, the alignment of the teaching and learning with the course outcomes (CV1), the assessments' contribution to learning (CV2), the course organisation (CV3) and lecturer competence (CV4) were recorded on a visual analogue scale where only the end-points of the scale were defined. Exposure to the pre-clinical case-based intervention (yes=1; no=0) (CV5) were also taken into account for the fourth- and fifth-year cohorts. The quantification of perceived relevance served as the outcome measure in the multivariate regression models. The remaining variables (CV1-CV5) served as co-variables.

Results: For the third-year cohorts, CV1, CV2 and CV4 were significantly ($P<0.05$) associated with perceived relevance. All five co-variables correlated positively ($P<0.05$) in the fourth-year cohort analysis while only CV4 did not associate significantly with perceived relevance in the fifth-year cohorts.

Conclusion: Higher perceptions of relevance were associated with the pre-clinical case-based teaching and learning approach as well as improvements, such as constructive alignment, in the teaching and learning processes.

Anxiety and Depression in final year medical students

Johan Ras, E Jordaan, Liezi Koen, Dana Niehaus

Category: Oral

Background: The examinations performed by final year medical students in the Department of Psychiatry at the University of Stellenbosch are in an oral format. Research supports that high levels of anxiety may impact on academic performance in an examination setting. Oral examinations may be considered to be especially anxiety provoking for some students. The aim of this study was to assess the baseline anxiety and depression levels in final year medical students during their clinical rotation to psychiatry.

Methods: As part of a larger study, final year medical students completed the State Anxiety Inventory (STAI) for Adults (score range from minimum 20 to maximum of 80) and the State Depression Inventory (SDI) (score range from minimum 26 to maximum 104) self-report rating scales.

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Results: A total of 314 final year medical students participated in this study (38% male, 62% female). Anxiety scores for the group (STAI) ranged from 43 to 61 (mean score 49; SD 4.8) with no significant difference between male (mean score 48.7; SD 4.8) and female (mean score 49.0; SD 4.9) students. Depression scores, as measured by SDI, ranged from 44 to 86 (mean score 56.49; SD 10.95). Female students (mean score 55.9; SD 10.8) scored on average lower than male students (mean score 57.8; SD 11.5). The Pearson correlation between the STAI and SDI was 0.414 ($p < 0.001$).

Conclusion: There was a strong correlation between anxiety and depression scores in this group. The anxiety measured for both the male and female group was higher compared to reported norms for college students (36.47 for male and 38.76 for female students) with a similar gender distribution. However, our students scored lower on the depression rating (SDI) compared to international norms (mean scores are 67.78 for female and 59.86 for male participants). In our study, as expected, the anxiety scores of female students as a group higher than for male students but surprisingly the depression scores for male students were slightly higher than for female students.

Experiences of UP Medical Students during Peer Learning interactions with Community Health Workers in Tshwane Ward Based Outreach Teams.

Angelika Reinbrech-Schutte, Jannie Hugo, Tessa Marcus

Category: Oral

Background / context: Medical students (year 1-4) are linked to primary health care facilities and Ward Based Outreach Teams (WBOTs) in Tshwane District and the City of Tshwane through the Longitudinal Community Attachment programme for Students (L-CAS), providing students with experiential learning opportunities essential to their education as future doctors. In 2014 L-CAS initiated a peer learning programme between medical students and community health workers to support capacity development in the workplace through authentic learning. Students and CHWs are challenged to together identify and address learning needs, drawing on their different knowledge and skill sets.

Aim / purpose: To describe medical student experiences of peer learning with CHWs in WBOTs.

Methods: Post-session evaluation forms completed by students and CHWs, student Reflective Blog entries, and facilitator feedback.

Results and discussion: Preliminary results suggest themes to be fruitfully analysed: Understanding the Approach, Preparation, Learning, Information, Continuity, Language and Relationships. Students and CHWs responded positively and participated actively, making the experience meaningful. Students discovered the importance of preparation and the difficulty of presenting information understandably and clear. Students became aware of the limits of their understanding of subject matter and realised that their knowledge needed deepening. CHWs made students aware of the limits of knowledge of people's contexts and choices. Students acquired the local language and idiom of relevant health issues in context through peer learning. CHWs and students value peer learning as building relationships and friendship.

Conclusion/Take-home message: Peer learning in the COPC context, provides medical students and CHWs with an opportunity to learn in context. Students deepen their understanding and expand knowledge in a manner relevant to their development as professionals and practitioners together with building relationships with the CHWs and members of the WBOTs. Although peer learning is found to be enjoyable and meaningful, students are faced with new learning and practical challenges, forcing them to become proactive agents of their own learning.

Challenges facing the student support system of first year MBChB students at MEDUNSA.

Michelle Roe, Yamin Tin Muang Maung

Category: Oral

Introduction/Background: The University of Limpopo has developed a student support referral system consisting of a multidisciplinary team. This team assists with the identification of students in need of academic, financial and social support with the aim of improving the academic performance of students. The Practice of Medicine (POME) department is responsible for providing this support to the first year MBChB students through screening of students by an appointed academic guardian.

Aim: To identify the challenges faced by MBChB students during the first year of their studies.

Objectives:

1. To identify the perceived vulnerable student population and describe challenges faced by these students in the first year of their studies;
2. To identify the challenges faced by vulnerable students and the first year academic guardian.

Study method: This is an observational, descriptive study. Data was obtained through the analysis of information of departmental data base and during individual interviews with students.

Results: In 2013, 24% of first year MBChB students were identified as vulnerable students who needed intense support. Of these students 60% were facing financial challenge.

Conclusion: In University of Limpopo, 24% of first year MBChB students were identified as perceived vulnerable students. Lack of food and clothing affects their academic performance seriously and the system could not afford to provide supplemental finance. Feedback from referred departments was not always received and remains a challenge. We suggest identifying the vulnerable students as early as possible and providing full financial support to improve academic performance.

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Developing logic models for a systematic review on e-learning to increase evidence-based health care competencies

Anke Rohwer, Eva Rehfuss, Taryn Young

Category: Oral

Background: Logic models can describe components of educational interventions and the relationships between them, making underlying theories of change and assumptions about causal pathways between intervention and outcomes explicit. They can reveal interactions between the intervention and the system within which it is implemented. We developed logic models to inform the protocol development of an ongoing systematic review: E-learning of evidence-based health care (EBHC) to increase EBHC competencies in healthcare professionals.

Methods: We developed logic model templates for systematic reviews, focusing either on the underlying system (system-based logic model) or the processes involved (process-orientated logic model). These templates guided us in the development of our logic models. The content was informed by a review of international literature and consultation with experts in the field.

Results: The system-based logic model describes the system in which the interaction between participants, interventions and context takes place. It contains variables related to the population (type of healthcare worker, level of education), the educational context (setting; learner, institutional and socio-economic context), the intervention design (educational components, duration, intensity, timing) and delivery (e-learning dimensions, delivery agent, organization and structure), various outcomes (cost, satisfaction with learning, attrition; EBHC knowledge and skills; EBHC behavior outcomes; non-health and health outcomes) and healthcare contextual factors that influence evidence-based practice.

The process-orientated logic model aims to explain how the intervention exerts its effect by depicting the pathway from the educational intervention to the direct effects (EBHC knowledge, skills, attitude); the intermediate outcomes (EBHC behavior, implementation of evidence-based guidelines, evidence-based practice) and the ultimate outcomes (improved healthcare delivery, improved health outcomes). It shows interactions and feedback loops between outcomes and interventions.

Conclusion: The logic models informed the search strategy, data extraction form, data synthesis methods, subgroup and sensitivity analysis of the protocol. Logic models are useful tools for authors of educational systematic reviews.

Identification Of Health Needs Of Mother- Baby Pairs In The First 6 Weeks After Birth: Perceptions of Mothers from the Moi Teaching and Referral hospital, Kenya

Everlyne Rotich, Liz Wolvaardt

Category: Oral

Background: Benefits of postnatal care to the mother and newborn cannot be overemphasized as this is the time to provide information and handle complications that might arise from pregnancy and childbirth.

Aim: This study aimed to determine the health needs of mother-baby pairs in the first six weeks after birth.

Methods: An explorative qualitative study using in-depth interviews with 15 women who had their births at a referral hospital in Kenya at three points in time, within 48 hours of birth and follow up telephone interviews at two and six weeks after birth. Data were audio recorded then transcribed verbatim. Transcripts and field notes were analyzed using Colaizzi's framework. One participant lost the baby three days after discharge and therefore only participated in the first interview.

Results: Women would like to be given more information on how to take care of themselves and their infants. There was no major difference in the information that the women needed to know after birth and six weeks later. These information needs emerged in five major themes: (1) getting connected with the baby, (2) encountering something new, (3) birth as a new encounter, (3) interaction with health care providers (4) disconnected information, (5) handling discomfort after birth.

Conclusions: The information that women are provided with after birth was too general to be useful and despite receiving information before discharge there were persistent informational needs and confusion about health messages. This highlighted the need for mothers to receive personalized information and the opportunity to ask questions that specifically apply to them.

Take home message: Women need continuous support especially regarding their concerns that arise post discharge. A review of the content of the information provided to mothers would be greatly enhanced with the use of improved standard material that includes the findings from this study.

Creating and implementing an open, online course in Professional Ethics

Michael Rowe

Category: Oral

Background: Where is the value in university courses? Is it in the content, the engagement with others, or the social spaces that are created? As new technologies find their way into university classrooms, the value of the traditional course is being challenged, especially when content is free and student engagement is moving towards online social spaces. Open online courses, including those with large numbers of participants (MOOCs), have the potential to increase access to higher education and support the development of new teaching practices. While strong evidence for these claims is yet to emerge, online courses do introduce broader social connections, opportunities for enhanced collaboration, and exposure to many different perspectives, all of which change the educational space in ways that may improve student learning.

Method: Students from the physiotherapy department at the University of the Western Cape completed an open, online course in Professional Ethics during 2013. The course was designed and implemented by the author, and qualitative results gathered through interviews and analysis of student work. The course was open to the public, which led to the students working with 28 international physiotherapists.

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Results: Preliminary results confirm that participants were able to interact with each other in ways that would be difficult to achieve in a traditional university course. Different ways of thinking and being emerged as participants explored complex topics related to clinical practice, and identified changing points of view as a result of these interactions.

Conclusion: Open online courses offer innovative teaching and learning opportunities that can enhance the student learning experience. As social media and other online technologies become increasingly embedded in higher education, health care professionals will need to be familiar with the context of learning in open, online spaces.

The use of iPads as assistive devices in the learning of visually impaired students

[Berenice Sauls](#)

Category: Oral

Introduction/ Background: The disabled population continues to be the most disadvantaged and marginalized group within society with limited access to educational opportunities. An education system should ensure that all learners have equal access to education, that they should be supported with the aim of meeting their learning needs and to overcome barriers that hinder their learning. One of the biggest barriers to learning for visually impaired students is the ability to see learning material. But, technology has a role to play in allowing people with impaired sight to participate in their studies by making learning material more accessible to them. The aim of this study was to explore the use of iPads as an assistive device in facilitating learning by helping visually impaired students in the Faculty of Community and Health Sciences (CHS) to overcome their barriers to learning.

Method: The study used a qualitative design that made use of interviews and reflection journals to gather data. All six students with visual impairments within the CHS Faculty were invited. Students were given the devices and were asked to keep a weekly reflective journal on their use of the device in their learning. Data collected was organised into themes which were then presented and supported with quotes from the text.

Preliminary results: The participants reported that their experiences of the use of iPads as part of their learning were generally positive. Positive results related to student well-being, greater accessibility and mobile learning.

Conclusion: It is evident that the use of iPads by students with visual impairments is beneficial for them and plays a role in reducing barriers to their learning. It provided some level of independence as they no longer need their sighted friends to read parts of documents to them.

How do junior medical students identify and utilise resources in a Problem-Based Learning curriculum?

[Enoch Sepako, Francois Cilliers](#)

Category: Oral

Introduction: The University of Botswana PBL medical curriculum seeks to promote self-directed learning (SDL). One aspect of SDL is the ability to identify, select and evaluate learning resources, a core skill for PBL. There is currently a perception that students rely on lecture notes and prescribed textbooks rather than finding and using other resources. This undermines principles fundamental to PBL.

Aim: To investigate how students identify and utilise learning resources to independently research learning issues identified in PBL tutorial sessions.

Methods: A mixed methods study was undertaken with 53 2nd year MBBS students. An open-ended question explored what learning resources students use. This informed the design of a survey questionnaire to determine students' pattern of resource use and each resource's contribution to achieving PBL learning outcomes. 3 focus group discussions (FGD) (6 students each) explored students' approaches to resource identification and selection and reasons for using those resources.

Results: Response rates were good (open-ended question 79%; questionnaire 85%). Resources used most by students included: websites (medical > non-medical), lecture notes, textbooks (prescribed, self-identified, recommended by others). Resources that contributed most to achieving PBL learning outcomes included: textbooks, medical websites, lecture notes. Few students identified only textbooks (9%) or only material provided by faculty (13%) as contributing to achieving outcomes.

FGD revealed plenaries and prescribed textbooks as the first point of reference. Plenaries lay a foundation, gave direction and indicated depth of learning required. Textbooks were considered trustworthy, to have a lot of content, to use simple language and to be understandable at first read. Medical websites were used if textbooks contained no information or time was short. Medical websites were easy to find and access.

Conclusions: Future research should identify students who only use provided resources, determine why they learn this way and develop strategies to help them better their SDL skills.

Exploring fortigenesis in medical students

[Veena Singaram, Shaista Saib](#)

Category: Oral

To increase student throughput and retention a reductionist perspective of understanding the student as a passive receptacle of processing information has to be discarded. Students need to be understood holistically within their dynamic complexities. Fortitude is important in the development of self-regulated individuals who can effectively deal with the demands of university life and achieve academic success. Also, medical students work within a humanistic-oriented care approach, insight and understanding of fortigenic factors will be particularly salient to them as the nature of their work demands that they be responsible for their own well-being in order to effectively manage the wellbeing of their patients. Fostering insight and a positive sense of self as conceptualized by the theory of fortigenesis, could positively facilitate the process of transformative learning thereby contributing to academic performance. This study explores the level of fortigenic factors in medical students.

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Summary of work: Study was conducted at the Nelson R Mandela School of Medicine with first and third year medical students. The Fortitude Questionnaire and The Motivated Strategies for Learning Questionnaire administered, were found to be valid and reliable instruments. Data was analysed with SPSS. Inferential techniques included the use of correlations and chi square test values; which were interpreted using the p-values.

Summary of results: The results revealed significant correlations between fortitude and Critical Thinking, Help Seeking behaviour, Control of Learning Beliefs, Metacognitive Self-regulation and Intrinsic Goal Seeking behaviour. A converse relationship was found between levels of fortitude and test anxiety.

Conclusions: Developing fortitude amongst students may not only foster more resilient and academically stronger students but it may also be critical for the development of therapeutic patient relationships.

Take-home message:

Strengths perspective: Fortigenesis is an import consideration for medical students' academic success

The effect of reflection and feedback on the confidence of medical students to perform an endotracheal intubation.

[Ina Treadwell](#)

Category: Oral

Background: Medical students' self-perceived competence correlates poorly with objectively assessed competence. Biased self-evaluation can inter alia be ascribed to the overconfidence phenomenon, indicating that poor performers lack insight into their shortcomings. People with confident ignorance are often wrong but never in doubt and this may be due to lack of appropriate and clear feedback or failure to incorporate feedback into self-perception. This study aimed to determine the effect of reflection and feedback on the confidence of students to perform an endotracheal intubation.

Summary of work: Compared to their performance grades the pre-assessment confidence measures of all students who underperformed (<80%) were higher while those who obtained >80% were lower. The confidence levels of all students dropped in the post-assessment, with a more pronounced drop in the underachievers who reflected or received feedback.

Discussion: Reflection and feedback on the performance of an endotracheal intubation resulted in feeling less confident, especially the underperforming students, probably due to having obtained insight into their shortcomings.

Take home message: Both feedback and reflection on performance seem to lessen confident ignorance.

Teaching professionalism in the next generation of healthcare professionals: what about using three R's?

[Lynette Van der Merwe](#), [Gina Joubert](#), [LJ Van der Merwe](#), [G Joubert](#)

Category: Oral

Background and aim: Conceptualising professionalism in order to facilitate its incorporation into future healthcare professionals' character and practice should be central to our endeavours in health sciences education. This study aimed to uncover perceptions regarding professionalism amongst the current cohort of students (Generation Y) and lecturers in the Faculty of Health Sciences, University of the Free State, South Africa.

Methods: Students (n=616) and lecturers (n=71) from the Schools of Medicine, Allied Health Professions and Nursing in the Faculty of Health Sciences, voluntarily completed anonymous questionnaires determining their perceptions regarding Generation Y students' values and behaviours, communication and learning styles and environment, and shaping events. In a mixed-methods approach, data analysis was done by methodological triangulation, concurrently using statistical analysis of quantitative data and thematic analysis of qualitative data to provide for confirmation and completeness of results.

Results: Quantitative data revealed that students and lecturers held apparently contrasting views regarding issues related to professionalism, including respect and responsibility as well as interaction with authority. A greater depth of understanding was obtained by corroborating or contrasting quantitative findings by means of qualitative data. Upon thematic analysis, qualitative data also indicated a need for students to develop resilience in a challenging moral environment.

Conclusion: The three R's (reading, writing and arithmetic) were regarded as integral to basic education since the 19th century. From this study, another three R's 'respect, responsibility and resilience' emerged as issues that should be addressed in the educational strategies aimed at developing professionalism in the next generation of healthcare professionals.

Supporting academics in their teaching role: faculty development in context

[Susan Van Schalkwyk](#), [Julia Blitz](#)

Category: Oral

Background: Supporting academics in their teaching role is an accepted function of higher education institutions. Although offerings vary from one university to the next, typically such faculty development is in the form of workshops and related activities that endeavour to serve as proxy for formal teacher training. The teaching function, however, often exists in tension with research and community service commitments. For academics in the health professions this tension can be more taut, particularly for those with clinical obligations. How can meaningful professional learning for teaching occur in this convergent/divergent space? This study looks at enablers and constraints reported by academics in accessing faculty development opportunities for their teaching role.

Methods: In 2012, a national survey of eight Higher Education Institutions (HEIs) was undertaken by a large group of researchers. This presentation reports on the subset of three health science faculties drawn from the larger study. An invitation to participate in an online survey adapted from Slowey's 'The voice of Irish academics: Towards a professional development strategy' was posted to all HEI academics in South Africa. It included closed-ended, Likert scale and open-ended questions.

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Results: The largest proportion of returns (16%; n=145) was from health science faculties. Attendance was described as being prompted by having time, perceiving a need for help (often with assessment) and being able to access a topic of interest. Qualitative data revealed a range of perspectives on how teaching and the development thereof is valued at institutional level. Challenges with regard to fulfilling clinical and teaching commitments were foregrounded.

Conclusions: The need to provide tailored, faculty development that responds to individual, disciplinary and institutional contexts has previously been described. This study, however, offers insight into these specific contexts and can, therefore, directly inform the process of designing interventions that meet this requirement in health sciences faculties.

The Experiences of Academic Staff regarding the Course for Newly-Appointed Lecturers in the Faculty of Health Sciences, University of the Free State.

Chantel van Wyk, Marietjie Nel, Gert van Zyl

Category: Oral

Introduction: An induction course is the first step in staff development to acquaint newly-appointed academic staff members with their new educational environment and the culture of the University and/or their Faculty. At present, the induction course that addresses specific educational matters in Health Sciences is already well-established. In order to better support and develop new academic adult learners, continued improvements of the induction course is suggested.

Aim: This study aims to describe the experiences of newly-appointed academic staff members in the Faculty of Health Sciences, University of the Free State regarding the existing induction course for newly-appointed lecturers.

Methods: Focus Group Interviews were used in this study. Several academic staff members who had completed the Faculty of Health Science's induction course between 2011 and 2013 consented to participate in this study. The data were analysed using constant comparison analysis.

Results: New staff mostly had no prior teaching experience and seemed to lack knowledge of important concepts within medical education prior to the course. Even those who had prior lecturing experience reported gaining value from attending the course. Overall the lecturers' experiences of the course were positive and the participants agreed that the course content offered valuable learning opportunities. The more practical and interactive learning sessions (to learn by doing and/or experiencing) were favoured. The participants further appreciated meeting new staff members from other Departments and Schools in the Faculty. The need for continuing professional development in specific educational areas was suggested.

Conclusion: Although the respondents reflected positive experiences, there is definitely room for improvement in the existing induction course for newly-appointed lecturers. To address their continuing professional development needs, the development of a more formalised induction programme should be considered.

Making assessment quality visible: QA-MAP is a visual tool to illustrate and monitor the quality of MCQ assessment

Rachel Weiss, Nick Kruger, Francois Cilliers

Category: Oral

What problem was addressed?

Generating high quality multiple choice question (MCQ) assessments is hard work. Course conveners often struggle to introduce and adhere to practices in their teams that ensure and improve MCQ assessment quality, like organizing team item-writing workshops, performing standard-setting and removing poorly-performing items from item banks. Monitoring test quality over time is also a challenge. One reason for this may be that post-assessment item response analysis (IRA) data has historically been presented in a numerical format, making it time-consuming to work with and difficult to interpret.

What was done

The QA-MAP (Quality Assurance of MCQ Assessment Practices) tool was used to retrospectively compare the quality of MCQ tests in two courses over time. This tool was custom-developed (Cilliers, UCT) to visually represent numerical IRA data in graphical format, plotting discrimination index against item facility and highlighting zones of good, fair and poor quality. Course-team 1 had participated in intensive team item-writing skills development and performed standard-setting and post-assessment IRA review over a four-year period. Course-team 2 only recently started writing single-best-answer MCQs after individual or team-based item-writing training, but did not use standard setting or post-assessment review.

QA-MAP proved useful to illustrate and compare the quality of assessments over time. For Team 1, good practice was associated with more good quality items and fewer difficult items over time. However, the proportion of poor quality items remained constant. For Team 2, use of QA-MAP was associated with a dramatic drop in difficult items and a slight increase in good quality items.

What lessons were learned?

QA-MAP is a user-friendly tool that allows easily-understandable visual representation of the psychometric characteristics of MCQ assessments. Areas for improvement are highlighted. Implementation as a feedback mechanism on MCQ assessment may encourage greater commitment of busy clinicians to item review and revision.

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Using a fellowship programme to prepare Masters Degree students for the HIV workplace

Gustaaf Wolvaardt, David Cameron, Dawie Olivier

Category: Oral

Background: Despite a general shortage of skilled professionals in South Africa some Masters Degrees graduates struggle to find suitable employment. In contrast many AIDS service organisations find it difficult to recruit skilled professional staff.

Description: Over a 5-year period FPD has managed a PEPFAR funded fellowship programme aimed at introducing highly skilled professionals (Masters Degree graduates) into the AIDS working environment. 245 fellows were placed with 101 organisations for a 1-year work experience programme. Their fields of study were: healthcare professionals (35%), social sciences (31%) management (33%) information technology (1%). Fellows completed an orientation programme with FPD prior to placement designed to meet employer expectations often not addressed as part of formal qualifications (i.e. project management and M&E skills). Fellows received a salary from FPD for the fellowship period after which the expectation was that they would either be absorbed by the host organisation or have developed sufficient contacts in the field to find employment.

Results:

- Retention rates post placement in the AIDS sector was good at 67%
- Retention rates with the original host organisation was poor at 14%
- The programme dramatically improved fellows income potential (200% increase from pre to post fellowship)

Conclusion: The programme clearly addressed a need as it rapidly became oversubscribed. Despite having only 50 positions available per year, applications shot up from 62 in the 1st year to 1229 by year five. This most likely is a reflection of relatively high levels of unemployment amongst applicants (32% more than 6 months) after completing their Masters Degree.

Recommendation: Consideration should be given to incorporating work based experience programmes into Masters Degree qualifications in the health sector this could also ensure greater relevance between curricula and future employers needs.

Using role-play to teach genetic counseling concepts: experience from the faculty of health sciences, UCT

Ambroise Wonkam, Karen Fieggen, Jacquie Greenberg, Raj Ramesar

Category: Oral

Background: Down Syndrome (DS) is the most common chromosomal condition and a stated priority for the National Department of Health in South Africa. DS encapsulates medical, ethical and social challenges related to prevention and care of genetic conditions. We introduced a new pedagogic approach, where 4th year medical students were placed in a role play situation of genetic counselling, using DS as the case scenario.

Objectives: : To implement a 'role play small group teaching' in a prenatal setting and to evaluate the perception medical students regarding this approach.

Methods: Teaching Procedure: The case scenario was a patient with advanced maternal age (AMA; > 37 years) that increased the risk for DS. Under supervision, students (6- 8 per group) were divided into subgroups of two; one played the doctor/genetic counsellor and the other played the AMA patient. A session lasted 1h30min including pedigree drawing, counselling for prenatal diagnosis for DS, and discussion of reproductive options.

Evaluation: self-administered questionnaire survey of 3 consecutive groups (2009-2011) of 4th year medical students.

Results: 180 medical students responded. The majority agreed or strongly agreed that: 'Session objectives were clearly explained' (86.6%); 'We had enough time for role play session' (86.7%); 'The "case scenario contributed to my learning of genetic counselling principles' (92.9%); 'Instructor's interactions were helpful' (97.8%); 'I gained a good understanding of concepts in genetics counselling' (88.9%); 'I developed the ability to approach a real problem in medical genetics' (75.5%); 'I developed the ability to communicate correct counselling information' (64.4%); 'I developed the ability to draw a pedigree properly' (82.2%); 'Overall The session was good' (96.4%).

Qualitative evaluation of student comments equally revealed a strong support to the 'role-play' pedagogic approach.

Conclusions: Role play small group teaching' appeared to be an efficient method to teach genetic counselling and communication concepts to medical students.

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SYMPOSIUM

Creating professional development through multi-professional learning in Allied Health Sciences Undergraduate Education at University of Cape Town - No easy task!

[Seyi Ladele Amosun](#), [Liesl Peters](#), [Letitia Rustin](#), [Nicola Keeton](#)

Category: Symposium

Inter- and multi-professional education is a recognised collaborative approach to develop healthcare students' awareness of their roles on inter-professional teams. In 2006 a mandatory multi-professional course was introduced at the Faculty of Health Sciences for all first year undergraduate students in Audiology, Medicine, Occupational Therapy, Physiotherapy, and Speech and Language Pathology. This was designed to promote professional attributes, and develop an appreciation of the contributions of other health professionals in promoting, maintaining and supporting the healthcare of individuals, families, and communities within the context of disability. Building on these foundations, the Department of Health and Rehabilitation Sciences (DHRS) developed and implemented a shared learning module for 2nd and 3rd year students in 2009. At a second year level, Disability in Primary Health Care (DPHC) module is structured to provide teaching and learning through both theoretical sessions as well as multi-professional site visits focusing on health promotion and disability prevention. Clinical educators facilitate learning and role awareness in the supervision of multi-professional student groups. The 3rd year module, focussed on community based rehabilitation, has multi-professional teams of students implementing and evaluating site specific interventions. However at a 4th year level, multi-professional work is introduced in only a few clinical placements, and involves only a small proportion of the students.

Reflecting on the practices and outcomes in three clinical placement platforms, it is perceived that the achievements of the DPHC modules at 2nd and 3rd year levels within the DHRS have not perhaps translated into better multi-professional role awareness within 4th year clinical contexts. The reflections suggest there may be tension between the model of multi-professional learning and its translation into practice. This has been challenging for students and clinical educators. The outcomes of the reflections could have been influenced by many factors, including professional 3 and structural barriers, 4 and the contexts in which the multi-professional groups are embedded.

The proposed symposium will include four 10-minute presentations

1. Introduction to Disability in Primary Health Care – presenter was involved in the development of the modules
2. Multi-professional practices in three clinical platforms – presenters are clinical educators responsible for the supervision of the students on the platforms

The remaining time will offer opportunity to engage, across disciplines, with the barriers and facilitators of integrating multi-professional learning and practice. The outcomes of the symposium will contribute to the ongoing review process of the DPHC modules at the University of Cape Town.

Convergence and divergence: Challenges in planning new medical schools in South Africa

[Ian Couper](#), [Steve Reid](#), [Julia Blitz](#), [Richard Cooke](#), [Zuki Zingela](#)

Category: Symposium

Background: A number of new medical schools are being proposed in South Africa. Planning for these brings into tension the need to base planning on established practices in health professional education (convergence), while at the same time offering innovative, forward-thinking approaches, to produce health professionals that are better suited to addressing the health care needs of South Africa (divergence).

Purpose: This is intended to raise some of the issues considered in investigating possible models for new schools in the Eastern Cape and North West, as a basis for discussion on the ways in which the tension between convergence and divergence can be addressed, in order to satisfy accreditation and other requirements while at the same time being at the forefront of – or even leading – international developments in health profession education.

Outline:

1. Introduction and overview – Steve Reid
2. Moving towards a health professions school in the North West province: possible models for a collaborative approach – Ian Couper
3. Blueprinting a new medical school for the Faculty of Health Sciences, Nelson Mandela Metropolitan University – Julia Blitz
4. Discussion in groups – Facilitated by Richard Cooke
Based on the model of social accountability and community engagement, training competent caring clinicians with broad skills, excellence in educational practice, and promotion of access and diversity.
5. Wrap up and conclusion – Zuki Zingela/Ian Couper

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WORKSHOP

An Introduction to Competency-based Medical Education

[Jason Frank](#)

Category: Workshop

What is competency-based medical education (CBME)? Why is it such a hot topic around the world? This brief workshop will review the origins, rationale, terms, and steps in using a CBME approach to health professions education. By the end of this session, participants will be able to:

1. Define CBME, competencies, EPAs, and milestones;
2. Describe the rationale & pitfalls of the CBME approach; and
3. Describe a stepwise approach to planning a CBME curriculum.

Revisiting social accountability

[Lionel Green-Thompson](#), [Trish McInerney](#)

Category: Workshop

In 2012, a workshop was conducted at the national conference of SAAHE in Bloemfontein which explored the meaning of social accountability in South Africa. Since then the presenters have studied perceptions of communities, students and partners in the educational process (academics and administrators regarding social accountability).

This workshop will provide a report back on this study as well as to engage the participants with a theoretical framework developed through this study for the understanding of social accountability and how it may be achieved.

Who should attend: All individuals involved in the education of health professionals including academic teachers as well as administrators of education and health facilities

Teaching critical theory in health professions education

[Alexandra Muller](#), [Harsha Kathard](#), [Mershen Pillay](#), [Talia Meer](#), [Sarah Crawford-Browne](#)

Category: Workshop

The health sciences have considerable authority over the production of knowledge and the scientific evidence they produce is often used to support pervasive and powerful beliefs pertaining to race, gender, sex, sexuality and identity (White 2008), which are difficult to challenge (Müller & Crawford-Browne 2013). This has direct consequences for those working in the health sciences, our students, and patients: it defines what is regarded as normal, and how people deviating from this norm experience the health system. For example, lesbian women are often invisible in HIV services, because the current normative framework focuses on heterosexual transmission, or, to a lesser extent, on transmission between men who have sex with men (Logie & Gibson 2013).

Despite the fact that HIV prevalence among women who have sex with women in Southern Africa is estimated at 10% (Sandfort 2013), our students do not learn about HIV prevention options for lesbian, bisexual and gender non-conforming women, or how heteronormativity (the normalisation of heterosexuality) and homophobia (discrimination and violence against sexual minorities) impact on their HIV risk. Similarly, people with disabilities, despite their increased social and economic vulnerability, are not seen as a population at risk for HIV because of the (erroneous) assumption that they do not possess a sexuality. Encouraged by Cribb and Bignold's (1999: 195) call for "more interpretive and reflexive research in medical schools and by medical school staff", we want to encourage educators to explore the possibilities of incorporating critical theory into their teaching. We have backgrounds in feminist, queer and postcolonial theory, disability and critical race studies, and all teach in health sciences faculties. Our experiences show that it is crucial for students to engage critically with our complex social context and the multiple identities that they/ we inhabit.

Who should attend: Lecturers, Clinicians, Staff developers, Curriculum developers

In this workshop, we will give an introduction to some critical theoretical frameworks and highlight the pedagogical rationale for including these in health professions education. We will then work in small groups on different case studies from our own experience to highlight the intersectionality of existing marginalisations, and illustrate possibilities to incorporate critical theory into health professions education. The workshop will be concluded by a plenary discussion, which will interrogate our role and positionality as academics in the health sciences.

Reflecting on how our knowledge is constructed, and who is in- and excluded in our understanding of health and health education, will help clinical educators to address the gaps in health education and care that render certain groups invisible. It will also help us to re-think the meaning of health professions education in our postcolonial and post-apartheid contexts. Participants will acquire practical skills to address these issues in their curricula. Critical health research is emerging internationally at the intersection of social and health sciences, and we need to ensure that this new knowledge is translated into health education.

The Role of a Health Professional as a Global Citizen

[Deborah Murdoch-Eaton](#), [Juanita Bezuidenhout](#)

Category: Workshop

Approaches to sustainable internationalisation of medical curricula include the expansion of not only opportunities for training in specific global health topics, but also the development of broader generic graduate attributes including global citizenship and ethical, cultural and social responsibility. Key components for successful implementation of such an educational framework includes a breadth of educational approach to effect truly integrated and effective curricular internationalisation.

This workshop will challenge and involve participants in considering the concept of Global Citizenship. Is a standardised, universal definition of the global citizen role appropriate?

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Workshop participants will collectively address

- enhancing our individual and group understanding of “global citizenship”
- considering how differing perspectives and cultures require adaptation of the global to local context and expectations.
- sharing ideas to meet the challenge of programmatic integration of learning and teaching activities to develop global citizenship, aiming for harmonization rather than standardisation and consider universal and ethical values.
- reflecting on measuring and evaluating the effect

This workshop will address the very relevant topic of global citizenship within the context of a multi-cultural such as SAAHE, South Africa and Africa. This will also contribute towards a common understanding of the concept in our environment and how it can be incorporated into curricula.

A conversation regarding the complexities of this issue will highlight the common ground for future collaborations.

The Cohen method of standard setting - WHY and HOW

[Scarpa Schoeman](#)

Category: Workshop

Standard setting or assessment calibration is the process by which a scientific method is used to determine the difficulty of an assessment and subsequently also its passing standard (pass mark). It is a crucial component of assessment quality assurance to make the correct pass and fail decisions of students, at all levels of health professions education.

The Cohen method is a newly described method (2010) from the Netherlands and holds much promise as simple and explicable method. It uses the very top performing students in the assessment to provide a benchmark of what score was possible to achieve in the particular assessment (difficulty marker). An absolute cut-score is then derived from this benchmark score to set the pass standard for the assessment. The method hinges on the stability of the very top performing students between cohorts within a stable selection process, curriculum and assessment regime.

Who should attend: All Health Professions Educators who are responsible for assessments of students and the quality assurance of these assessments. In this workshop, the Cohen method's conception, methodology and application will be explained. The latest research on this method's use and application will be presented on undergraduate and postgraduate data in medicine. Participants will then be encouraged to apply the method in the workshop to some of their own students' performance data to see how it works. A discussion with questions and answers will follow.

This workshop will provide access and training to a feasible and highly promising standard setting method that will enable the increased quality assurance of assessments' outcomes. It will actively train colleagues in assessment calibration (standard setting) so we can work together in health professionals education for better health outcomes in the nation - by making better decisions from our assessments.

The Novice's Guide to Contemplating PhDs

[Christina Tan](#), [Elize Archer](#), [Liz Wolvaardt](#)

Category: Workshop

Universities are placing increasing pressure on academic staff to complete doctoral degrees. Undertaking doctoral studies is arduous enough but health science educators have additional multiple demands on their time including clinical commitments and increasing class sizes. Both willing and coerced aspiring doctoral candidates often struggle with the period leading up to the decision to embark on a PhD (a “Contemplation” phase) and with the writing of the protocol or proposal (“Preparation” phase). They may often be working in isolation during this time without either formal or informal help or support, and may end up with projects that are not realistic from the outset. These important phases of the doctoral journey need as much attention to ensure that the PhD does not equate with Pain, headache, Depression & suffering, but instead invokes feelings of Pleasure, hard-but-rewarding-work, Discovery & scholarship.

While there is much in the literature providing guidance on the PhD process, this is usually from the perspective of supervisors or those who have successfully achieved their doctorate. Aspiring doctoral candidates from the health sciences could benefit from the experiences of colleagues who have recently passed through these phases and are well on their way.

The focus of this workshop is to help participants reflect on issues that they will need to address at the outset and to plan for in these initial phases of the doctoral journey.

Who should attend: Health care professionals considering or commencing doctoral studies (This could be in health professions education, but could apply equally to other fields related to their occupation)

For aspiring PhD candidates – to help them prepare a realistic plan of action and preparation towards their PhD

Assessment for and of learning: a framework for implementing student patient portfolios

[Susan van Schalkwyk](#), [Julia Blitz](#)

Category: Workshop

There is a growing body of evidence that attests to the value inherent in adopting portfolios as an integral part of student learning in health professions education. This includes the use of student patient portfolios as part of the formative and summative assessment practice in the clinical domain. However, introducing such portfolios into a traditional and established curriculum at undergraduate level can present significant challenges for programme coordinators as well as the faculty themselves.



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Drawing on our experience in implementing student patient portfolios for final-year medical students at a rural clinical school, this interactive workshop will give participants the opportunity to engage with a model for implementation that they can tailor to fit their own context.

This workshop will encourage discussion about the way in which students can use their patient portfolios to foster their own learning as well as how faculty can use the same portfolio for summative assessment of the student's clinical knowledge and reasoning. Attendees will be given the opportunity to review the curricula that they are involved with in order to determine what could be shifted to make space for this innovative teaching, learning and assessment tool. Lastly, a framework will be presented as a tool for those wanting to use student patient portfolios in their institution.

Who should attend: Faculty involved in curriculum planning; clinician educators, faculty development practitioners

This workshop will encourage institutions to consider one of the tools that assist students in shifting their learning from book-bound theory to patient-based practice. The way in which the same student patient portfolio can be used for both formative and summative assessment will be introduced

Interprofessional Education: A means to develop collaborative practice and enhanced care.

Firdouza Waggie, Anthea Rhoda, Stefanus Snyman, Gerard Filies, Nariman Laattoe, Elizabeth Egjeyeh, Linda Ntombizodwa

Category: Workshop

Inter-professional education (IPE) is a leading approach to facilitate student learning for future inter-professional teams in addressing the complex health needs of the community. There is now evidence to indicate that interprofessional education is an effective approach of enabling practitioners to better understand each other, to work more collaboratively and thus to enhance service delivery. Students familiar with this approach as part of their education are more likely to form collaborative teams, develop a shared vision of care and service delivery, show respect and positive attitudes towards fellow colleagues, develop shared responsibility for team actions, contribute to collective decision-making and sharing of information and knowledge.

The workshop aims to establish a shared understanding of interprofessional education, learning and practice to provide a conceptual basis for developing ways of integrating the IPE approach in health professions curricula. It will highlight models and frameworks used to facilitate and implement IPE activities and examples of IPE offered at universities in South Africa. The competency domains of interprofessional collaborative practice will also be presented. In this workshop you will work with colleagues experienced in IPE to explore understandings of IPE, how you could implement IPE at your institution and ways of enhancing learning in interprofessional teams in different practice settings.

Who should attend: lecturers, clinicians, teaching and learning specialists, curriculum developers and clinical educators.

To bring health professions educators together to share ideas and experiences on IPE. These individuals could develop into a core group which could further develop the IPE agenda at South African universities.

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POSTER

Paediatric Endocrinology Training in Sub-Saharan Africa

Francois P R de Villiers

Category: Poster

Background: Before the 1980s there was no official accreditation for subspecialty training in South Africa. Doctors who trained in subspecialties in other countries, or who had extensive experience in a subspecialty, were recognised as subspecialists, based on peer review. The development of paediatric endocrinology as a subspecialty in sub-Saharan Africa is an even more recent event.

The objective of this poster was to document the development of paediatric endocrinology as a subspecialty in sub-Saharan Africa as well as that of a new programme in a previously disadvantaged medical school.

Results: The Paediatric Endocrinology Unit of the University of the Witwatersrand was accredited to train paediatric endocrinologists in 1994. Soon after that, the University of Cape Town followed suit. In South Africa, paediatric endocrinologists are registered as such by the HPCSA. The training is provided by the paediatric endocrinology units of the universities, while the certificate examinations are administered by The Colleges of Medicine of South Africa.

PETCA is the training programme for Paediatric Endocrinologists for Africa. It is situated in Nairobi, Kenya. The initiative started in May 2008. Every 18 months, an intake of seven fellows are taken from different sub-Saharan countries. To date 41 endocrinologists have been trained. During the first few intakes, a considerable number of Nigerian doctors trained in Kenya. It was accordingly decided that Lagos should become the centre of a new initiative, PETCWA, training endocrinologists for West Africa.

Meanwhile, the Department of Paediatrics and Child Health of the MEDUNSA campus had applied to the HPCSA for accreditation of a new Paediatric Endocrinology training unit. The HPCSA accepted our application, and we started training a Fellow in January 2014.

Conclusion: The development of Paediatric Endocrinology as a subspecialty in Africa is now on a healthy footing.

An analysis of the practical experiences and confidence in performing emergency medical skills in south african medical interns

Mark Allen

Category: Poster

Introduction: South African internship is the last period of training before the mandated period of community service. This study was designed to investigate how confident South African medical interns are to perform emergency medical procedures and to investigate how their experiences or demographic differences might influence these confidences.

Methods: A combination of the paper-based and electronic questionnaires was distributed to doctors currently performing their internship in South Africa. The questionnaires were divided into sections covering demographics, experience and self-assessed confidence levels related to both paediatric and adult patients. The data were analysed using a Fishers exact test and applying a Bonferroni correction where necessary.

Results: Ninety-nine surveys were collected. Of the respondents, 33% were just starting Internship, 54% were finishing the first year of internship and 13% were finishing their internship. Each group had more responses from females than males. Eighteen emergency skills were investigated and confidence generally improved over duration of internship and at least 50% of the interns studied were confident in all but two procedures. Confidence relating to CPR was interestingly low on entering internship. No specific feature of training influenced confidence significantly.

Conclusion: The study showed a high level of confidence in the majority of procedures studied and identified some points of influence on this confidence. The confidence of South African interns compares favourably with international colleagues at a similar qualification level.

SOWING THE SEEDS: The use of Feedback in the Medical Curriculum as a Key Factor in Academic Success

Chauntelle Bagwandeem, Veena Singaram

Category: Poster

The transformative learning paradigm requires that Professional Education and Medical Education in particular, implement enabling actions, including educational reforms in instruction. A critical cornerstone is the way in which feedback is mutually given and received by faculty and students. Feedback may be defined as 'information provided by an agent (e.g. teacher, peer, book, parent, self, experience) regarding aspects of one's performance or understanding, implicitly with the aim of impacting on improvement. In combining instruction with constructive criticism which incorporates a plan on how to improve performance, the process moves beyond an evaluative assessment of past performance to a correctional review. As medical training progresses from undergraduate to postgraduate specialization, the need for constant, high-quality feedback from mentors to students to aid in the development of finely-honed competencies of the trainee in their chosen field intensifies, as it is only through the provision of feedback that strengths can be identified and amplified, and corrective measures implemented.

It is also important that those giving feedback are in turn provided with feedback about the feedback they give. Senior supervisors are not trained to teach. Thus, numerous studies reflect students' perceived dissatisfaction with the type, quantity and quality of feedback given, while supervisors are of the opinion that the feedback they give is adequate. Such evaluations allow for appropriate skilling of tutors. This study aims to investigate the value of giving and receiving feedback in postgraduate medical education. Using a mixed methods this study included online questionnaires and interviews. The sample included all registrars and consultants across all disciplines within the registrar training programme at the Nelson R. Mandela School of Medicine. The analysis of the data will be presented and discussed.

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A Proposed structure for video as primary content delivery medium in online learning

[Nico Baird, SB Kruger, MM Nel](#)

Category: Poster

The use of video to convey information has been used for many decades. Since the invention of the television by John Logie Baird, video has been used to not only inform but also for propaganda and education. Video is a powerful medium due to the fact that often content that was viewed is imprinted in memory the same way that a personal experience is.

For many years the most effective way of distributing video content was through physical media, e.g. video cassettes, CD's and DVD's. The production of video content was also very expensive.

In the last decade this has changed. The Internet has enabled fast, low cost distribution of content and the tools needed to produce high quality video has become nominal. Most of us carry a video production studio and distribution platform in our pockets.

The identification of an effective content delivery structure is vital for learning to take place in an online course where video is the primary content delivery medium.

The poster will focus on the online course structure that was identified by the researcher during his Phd studies in order to identify the best structure in which to present content online using video. After researching a number of the most popular online course platforms a structure was identified which combined the most popular structure elements combined with adaptations to better reflect the way in which content is delivered in the South African context.

Supporting task shifting through learnerships

[Alet Bosman](#)

Category: Poster

Background: Task shifting is increasingly becoming a model to expand AIDS treatment but is often hampered by a lack of mid-level workers. As donor funding to NGO's for direct service support to the SA Government (SAG) declines, task shifting has become a critical strategy to maintaining service delivery.

Methods: FPD is in public-private partnership with SAG whereby FPD seconded clinical and non-clinical staff for direct service delivery in AIDS clinics. Non-clinical staff was often employed to meet donors' reporting and M&E requirements. SAG did not have adequate posts to absorb them as donor support switches away from direct service provision. A big need arose for mid-level workers and SAG had funding mechanisms for learnerships to develop this level of health-care workers. FPD's exit strategy included enrolling employees earmarked for retrenchment in learnerships such as Pharmacy Assistance (PA).

Results: To date 107 FPD managed PA learners have successfully completed their learnership. Another 80 will complete in March 2014. All graduates have been offered employment by SAG and it is realistic to anticipate that the current crop of learners will be guaranteed employment upon successful completion. FPD is already in negotiations with various SAG departments to provide its learners with employment after qualifying as SA has a shortage of qualified mid-level workers to support task shifting policies. FPD will do a follow up survey with graduates twelve months after completion to track career development. The results of that survey will be available in May 2014.

Conclusions: In our opinion in the SA environment where donors are finding ways to exit support for direct service delivery, all donor-funded programs should actively, as part of their exit strategy, adopt this approach. Substantial SAG funding is available through SETAs. Developing staff not only creates a career path for them, but also strengthens health care systems.

A proposed method to introduce the CanMEDS Competency Framework to university students

[Adriana Botha, Lucinda Risseeuw](#)

Category: Poster

Background: The adaptation of the Canadian Medical Education Directives for Specialists (CanMEDS) Competency Framework in tertiary health professionals educational institutions in South Africa was proposed and outlined in 2012 by various stakeholders involved in health professionals education. The framework is based on seven roles that all Health Sciences graduates need to have, to be better Health Care Practitioners. Although the key competencies have been identified and specified, the implementation of the framework remains limited. Uncertainty about the approach to the implementation of the framework has been identified as an obstacle to students' acquisition of these competencies. A bottom-up approach is suggested as a possible solution to this difficulty. By creating awareness and a point of departure of these core competencies in students in the foundation levels of their course, the health sciences curriculum could be integrated with the competencies, certifying students to be better prepared for future health care practice. A student-centered approach alleviates the pressure on lecturers to orientate students to the model and desired outcomes.

Method: In a pilot project, a workshop has been developed for first-year MBChB-students of UL (Medunsa Campus). This workshop followed a pre-test/post-test approach. Individual students' understanding of the functioning of healthcare practitioners was anonymously obtained. The workshop introduced the key competencies of healthcare practitioners, and asked students to critically apply the described areas of competency to a case-study. At the conclusion of the workshop, students were again asked to convey their understanding of the functions of healthcare practitioners.

Conclusions: Students who attended the workshop exhibited an enhanced and expanded awareness of the roles of healthcare practitioners. However, feedback from students made it apparent that the outcomes are recognized, but the opportunities to acquire the underlying skills required to meet these outcomes are limited. A program aimed at teaching these skills is necessary.

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A framework for effective service learning in resource based disciplines

Renee Botha, J Bezuidenhout, MM Nel

Category: Poster

Background: From Literature it is clear that there exists a fuzzy logic in the definition, understanding, execution and research associated with Service-Learning. This fuzziness in rigidity warrants the applier to have a broad foundation of Service-Learning and also have the ability to bend to the winds of its whims. Service-Learning inherently does not subscribe to any one given approach, but important aspects such as Service-Learning philosophy, the triad stakeholder relationships, goal setting, relevance, implementation and evaluation should be used.

Aim: The aim of this study was to develop a framework for effective Service-Learning in resource-based disciplines such as Radiography.

Methods: Radiography students were divided into five groups, each with their own identified community of grade 12 learners at five different schools. Grade 12's and contact persons (teachers) at the different schools evaluated the Service-Learning interventions using different rubrics. Radiography students (n=68) completed the Watson-Glaser Critical Thinking Appraisal tool before and after the interventions. Students also completed a structured reflection. Additionally Service-Learning experiences of other institutions, nationally and internationally were sources.

Results: Using the above data, a framework for Service-Learning was created consisting of four phases. Phase 1 Premise: academics should be grounded in both Service-Learning philosophy and regulations.

Phase 2 Stakeholders: identification of stakeholders both internally and externally

Phase 3 Points of Departure: consulted needs of partners allow the facilitator to establish relevance to all involved within the discipline specific philosophy

Phase 4 Implementation: includes Facilitator management, Student organisation, Community participation, Assessment and reflection

Take home/ Conclusion: The framework has an action research approach in that there is constant evaluation and reflection on ideas and actions, where every phase influences the next and ultimately the idea of Service-Learning. This general approach in designing the framework allows other academic fields to make use of the framework.

Academics are faced with providing 'learning that lasts' despite ever-increasing student numbers. Active learning is an efficient way to engage larger classes, and improve the quality of students' learning. While clickers have been increasingly used as a tool to promote active learning, also in health sciences, little is known about the students' perception towards this.

Objectives: The objective of this study was thus to investigate the opinions and perceptions of level 2 pharmacy students towards active learning with clickers.

Methods: A questionnaire was used to measure students' opinions and perceptions towards active learning. Students were also asked to provide examples of active learning that they found most beneficial, in addition to describing what they liked most about active learning.

Results: Feedback from students with regards to active learning indicates that the students found small group discussion and the involvement with other students very positive. There was also a positive indication that this method of teaching improved students' understanding of the course content students indicated that they had a better understanding of the lectures and enjoyed using clickers.

Conclusion: Active learning was incorporated into an undergraduate BPharm module to improve student learning in a larger group. According to student feedback this strategy was effective in that students interacted more with each other, learned from their peers, and had a better understanding of concepts covered" it is thus clear that active learning achieved its goal.

Resource and systems management in the clinical skills laboratory: An emergency care perspective.

Candice de Waal, Benjamin de Waal

Category: Poster

Clinical skills laboratories have been widely used in medical education since the 1960's with activities ranging from skills training to complex and integrated life like patient simulations (Lateef, 2010), (Beaubien and Baker, 2004). Skills laboratory teaching has emerged as an important educational method in light of the well described low frequency of exposure which students have to certain patient subgroups, as well as particular skills (Bradley and Postlethwaite, 2003), (Stein, 2009). In addition, the ethical implications of students performing complex and invasive procedures, as well as the inherent risk to patient safety (Bradley and Postlethwaite, 2003) and practitioner liability, necessitates the use of simulation-based teaching.

It is also documented that patients are becoming more active participants in their healthcare and exercise their rights not to participate in medical education (Bradley and Postlethwaite, 2003). It is for these reasons that clinical skills labs have become popular alternative teaching environments to clinical practice. This has particular resonance for emergency care, as the context requires high technical and procedural competence, yet the clinical environment makes this challenging for students to develop (Stein, 2009).

High-fidelity simulations have been described as a particularly useful teaching method in medicine and other health professions (Garrett, MacPhee and Jackson, 2010), (Larew et al., 2006), (Childs and Seppls, 2006). Developing facilities, which can offer high fidelity simulation training, are resource intensive requiring highly specialized equipment and staff experienced in simulation teaching (Tuoriniemi and Schott-Baer, 2008), (Garrett, MacPhee and Jackson, 2010).

Creating a rich learning experience requires careful consideration of available equipment technology, capital expenditure, sustainability, occupational health and safety and the physical learning environment. This presentation aims to review strategies for improving and managing resources and systems in clinical skills laboratories which offer high fidelity simulation, using the example of the emergency care education context.

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Learning, agency and professional identity formation of students in a health sciences faculty.

[Arona Dison](#), [Simone Titus](#), [Nicky Roman](#)

Category: Poster

This paper reports on one component of a research project on students' learning needs in a health sciences faculty at a South African university. The research project arose from the University's Strategic Plan on Teaching and Learning which included the goal of 'ascertaining students' learning needs and developing/reconfiguring teaching and learning programmes in response to their needs'. A mixed methods approach was used with a population of third year students across the Faculty. Questionnaires were distributed to a sample of third year students in different programmes. Focus groups were facilitated with students and triangulated with individual interviews with staff. This paper is based on analysis of the qualitative data, which was done through a combination of inductive and deductive processes.

This paper explores the relationship between students' learning, agency and development of professional identity of third year health sciences students. Agentic learners are described by Billett (2009) as 'learners who are pro-active and engaged in making meaning and developing capacities in way that are intentional, effortful and are actively critical in constructing their knowledge'. The research raises a question about whether the development of agency and professional identity are largely an effect of background and maturation processes or whether learning environments and pedagogical approaches have a role to play in building students' sense of agency and professional identity, which is a crucial aspect of developing capable and agentic health professionals.

Billett, S. (2009). Developing agentic professionals through practice-based pedagogies. Final report for ALTC Associate Fellowship. Faculty of Education, Griffith University.

Assessment instrument for assessing Xhosa/ Afrikaans clinical communication skills

[Madele Du Plessis](#), [Philip Lewis](#)

Category: Poster

Background / Context: In 2011, Stellenbosch University Faculty of Medicine and Health Sciences (SUFMHS) embarked on a new initiative in teaching students in the undergraduate programmes language in communication with patients so as to improve health care service delivery. In this particular approach, the focus is on learning how to communicate in a clinical context in the target language and to develop the students' Xhosa/ Afrikaans language proficiency. Therefore, there was an important and urgent need to develop effective, appropriate and authentic assessment to match this.

Aim / Purpose: The aim is to describe the developmental process of an assessment instrument for the assessment of communication in a clinical context.

Methods: The assessment instrument was developed jointly by linguists, language facilitators and clinicians, bearing in mind that the emphasis would be on assessing the student's ability to incorporate relevant clinical skills in a communicatively competent manner. The instrument comprises three sections: (A) a checklist for assessing the performance of the clinical task in the station scenario, (B) structured guidelines for assessing the student's level of communicative competence in Xhosa/ Afrikaans in linguistic terms, both marked by the examiner, and (C) a picture-based Likert scale completed by the simulated patient.

Results and discussion: The development of the assessment instrument is an ongoing process. The new development of the use of scenarios will be described and discussed. Furthermore, the development of the mark allocation of section B (communicative competences) and section C (simulated patient feedback) will be described and discussed.

Conclusion / Take home message: The assessment of students' communicative competence is complex, and therefore this study is striving towards further development of this particular instrument in order to implement reliable and valid assessment instruments despite the complexities of assessing communication skills.

Who must teach clinical forensic medicine to undergraduate students?

[Lorraine du Toit-Prinsloo](#), [Gert Saayman](#)

Category: Poster

South Africa suffers from exceptionally high levels of interpersonal violence, including in particular sexual assault and violence against children. Although the clinical management of these patients is the health care worker's first responsibility, the need for appropriate identification, preservation and recording of evidence which may be required in subsequent legal proceedings, is also of great importance. Sadly, the latter perspective has been neglected, with numerous instances of miscarriages of justice due to poor performances from medical and nursing practitioners in this regard. Health care workers are very wary of becoming involved in legal proceedings, not least of which may be because they have been poorly trained to perform these functions.

There has been a huge increase in civil litigation against doctors because of perceived failures to properly carry out their professional duties and responsibilities towards patients. The possibility that doctors may also be held criminally liable for not rendering appropriate levels of care and recording with a view to facilitating the administration of justice, cannot be ignored, whilst complaints to the HPCSA are equally likely to result.

Medical students need to be taught not only the basic principles of forensic pathology (as currently taught by forensic pathologists at most medical schools), but also how to manage clinical (living) victims of violence. The latter may not fall within the ambit of forensic pathologists, but rather with defined clinical disciplines such as family medicine, gynaecology and paediatrics. Recently introduced legislative provisions now clearly differentiate between the rendering of forensic pathology and clinical forensic medical services - which will require adaptations also within the undergraduate medical curriculum.

This presentation will aim to outline the scope of clinical forensic medicine, provide an overview of international teaching practices and propose a multi-disciplinary approach to teaching this to undergraduate students in order to better equip them for the challenges in the management of cases and to be confident practitioners who may contribute positively towards the outcome of legal proceedings.

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Needs Assessment for a Service-Learning Module in the Course Oral Health II for students of Dental Therapy and Oral Hygiene at the University of Limpopo (Medunsa Campus)

Ruebecca Ebrahim, Hester Julie, Gboyega Ogunbanjo

Category: Poster

Background: In the past decade, universities' core functions have expanded from teaching, learning, and research to include service learning (SL). In keeping with the University of Limpopo's mandate for community engagement, it is imperative that service learning is formally integrated in the Oral Health II curriculum. In order to plan and implement a service learning module that will integrate learning in the classroom with practice in the community, it is important to conduct a needs assessment.

Aim: The aim of the study was to conduct a needs assessment for a SL module for the course Oral Health II.

Methods: A qualitative design was used to gather data from a conveniently selected sample. Two focus group discussions (FGDs) were conducted at a time and place that was convenient, with academics involved in curriculum development (n=11) and students who had engaged in SL activities (n=10). An interview guide was used to elicit the required information during the focus group discussions. The data was collected and analysed by the researcher. The recorded information was transcribed verbatim, and validated by an independent assessor. Data was analysed thematically. The transcripts were read and emergent themes identified.

Results: Six main themes that emerged from the FGDs were: a SL module would enhance teaching and learning, interaction with the community is a two-way learning process, SL offers a learning experience in an authentic setting, consideration of community expectations, the importance of feedback from the community, and the value of a multi-disciplinary module.

Conclusion and take home message: Academics and students concurred that a SL module would enhance teaching and learning. The needs assessment was valuable in informing the development and implementation of the SL module in Oral Health II, and provided information relevant to knowledge, attitudes and skills that could be included in the module.

Field trips as an intervention to enhance motivation for a management module in final year B.Pharm degree students

Mariet Eksteen, Gerda Reitsma

Category: Poster

Pharmacists are most likely to be appointed as pharmacy managers, as early as two years after graduation, no matter where they work, due to the shortage of pharmacists in South Africa. As a lecturer responsible for the management module in the final year pharmacy programme, I experienced that students did not realise the importance of this module in their curriculum and that they have difficulty integrating theory and practice. It seems that they don't see the bigger picture and they have difficulty to see where/how management fit in their everyday life as well as their professional careers as pharmacists.

In order to bring the practice into theory and to enhance students' perceptions regarding the importance of this management module, I took a group of fourth year students registered for the module Pharmacy Practice on field trips to different sectors within the pharmaceutical profession (community pharmacy, hospital pharmacy, wholesaler, courier pharmacy network, academy, etc.). During these field trips students had meetings and discussions with pharmacist manager(s) of the organisations where the general role of management was discussed within their everyday work as managers of the organisation.

Student experience was measured using both qualitative (narratives written by all students as well as focus group discussions with four groups of students) and quantitative (questionnaire to the control and experimental group both before and after the field trip intervention) research methods. The results indicated that integrating practice with theory enhanced the students' perceptions of the importance of the module in their training as pharmacists. The outcome of this research is the re-design of the pharmacy practice module 2014 to include more field trips as part of the students' learning experience.

Challenges associated with the assessment of an English intervention programme for first year BCMP (Clinical Associate) students at the University of the Witwatersrand.

Audrey Gibbs, Gila Carter

Category: Poster

For the majority of BCMP students English is not their first language, and some have difficulties with English usage. Wits introduced the Read On! programme for assessment and intervention of English proficiency. All BCMP 1st year students were assessed in February 2013 and were offered the intervention programme if needed.

Methods: The initial aim of the research was to study the results of the intervention programme to ascertain its usefulness. However a number of challenges made this not possible. The first component of the research identified the students matric English mark, the national benchmark test academic literacy mark, the Read On level achieved, the hours spent on the Read On programme and their final first year marks. An anonymous questionnaire was then completed by the students.

Results: The National Benchmark test academic literacy and Read On! assessment results correlated, but did not show correlation with neither the matric English marks nor the final 1st year marks. The usage of the Read On programme was too low for any correlations.

The student survey was anonymous and could not be linked to the Read On! results or usage. Many students commented on how good the programme was, but had not used the programme. Time was identified as the major factor in not doing the lessons, especially as it had to be done on campus.

Discussion: Usage of the programme was too low to determine any impact on academic performance. We would have to make it compulsory to increase usage and determine the impact. However it is very time consuming and can only be done on campus, so without evidence should it be made compulsory?

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Building self awareness, creativity and discovery in first year medical students as foundation skills in fostering graduate attributes

[Sandra Glajchen](#)

Category: Poster

Background: A global report on medical education (Frenk et al, 2010) highlights the need for medical graduate attributes that include social accountability, leadership and creative problem solving. A focus on self-awareness, creativity and discovery as foundation skills in reflective practice in the first year medical curriculum builds student skills in strength-based awareness and in longitudinal incremental reflective practice skills as part of the HIV training programme and community based learning activities.

Methods: A component introduced into the curriculum includes sequential lectures and experiential workshops. The awareness and skills gained are applied in the Making a Difference group community activities in first year and structured journaling reflection assignments to extract learnings and foster transformational learning. Facilitator training is key to the quality of the programme.

Results: Student evaluation of workshop components and of the group community service activity demonstrate important value for the students in both personal and professional skills.

Conclusions: A focus on self-awareness and creativity is an important foundation in building medical students skills for research, empathy and creative problem solving. Students 'find a voice', strengthen self-trust and build skills in teamwork and leadership. These foundation inputs are integrated into the curriculum to influence a range of emergent student personal and professional skills including reflection, empathy and creative problem solving.

Lessons Learnt for collaboration: Experiences of field testing breastfeeding training package for health workers in South Africa

[Beryl Green](#), [Justine Geiger](#), [Katherine Brittin](#)

Category: Poster

The development of training material intended for nation-wide use requires collaboration and evaluation by a diverse range of stakeholders throughout the development process. We report on our experience of field testing a breastfeeding training package developed by the South to South program, Stellenbosch University, Cape Town, for the South African National Department of Health and reflect on lessons learnt to ensure effective collaboration.

Field testing, which was not included in the initial project plan, was negotiated 7 months into development. Three field tests of the training package held in different provinces with participants from all provinces were facilitated during November 2014. Planning for these focused on testing the training process of the courses. Facilitators trained Interprofessional group of participants, observed by stakeholders involved in developing the course. The strategies for collaboration were adapted during the process as the need was identified. These include: involving an external training facilitator, clarifying stakeholder roles at the beginning of the field test, meetings with the stakeholders at the end of a day's training, approval of feedback by the National Department of Health and unplanned discussions to clarify concepts and needs.

There were differing expectations for the field tests amongst the stakeholders. Key differences included the purpose and required outcomes of the pilots, identifying appropriate participants and facilitators, stakeholder roles and the process of responding to the feedback received. During the field tests these led to confusion as to the facilitation process and desired outcome, limiting the output of information useful in refining the courses. These strategies improved collaboration and met with various levels of success.

A good field test of training material needs adequate planning and clear, frequent communication between stakeholders to align expectations. Separating the testing of the content from the training would also decrease the participant's confusion as to their role.

Critical care skills in emergency care: A critique on WIL through a transformative learning lens.

[Stephen Harrison](#), [Benjamin de Waal](#), [Nuraan Liebenberg](#)

Category: Poster

Work integrated learning (WIL) currently forms an integral part of emergency care education in South Africa (Castle and Owen, 2003). Students are routinely required to work in the field, perform skills and manage patients and emergency incidents under the guidance and supervision of a clinical mentor (Castle & Owen, 2003:10). The Professional Board of Emergency Care (PBECC) of the HPCSA requires students to complete a number of skills to be eligible for professional registration (HPCSA, 2011) which entitles a newly qualified practitioner to practise in the category of independent practice.

Stein (2009) has shown that students have limited exposure to cardiac arrest management in the city of Johannesburg. We present data to show that the Cape Town experience is not much different, as pertaining to exposure to critical care skills in the WIL setting. Despite the apparent difficulty of ensuring high levels of exposure, the link between levels of exposure and development of applied competence (Gamble, 2009) amongst emergency care students is not well described.

Gamble (2009) implies that applied competence refers to practical or procedural competence, foundational competence and reflective competence. Hence, as inferred from Roe's (2002) competency assessment framework, it can be argued that an undue emphasis on exposure alone is inconsistent with the creation of significant learning opportunities (Fink, 2003) and the development of applied competence. Engeström (2001) proposes that interacting with different systems (teaching in the university skills lab setting and WIL for instance), moves learners towards expansive learning, which he regards as being transformative in nature.

In this paper we critique an undue emphasis on number of skills performed in the emergency care WIL context, and propose instead that learning opportunities can be better created through a transformative learning process.

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Simulated learning for Radiography students

[Lynne Hazell](#)

Category: Poster

Background: Simulated learning has not been used in the Radiography programme at the University of Johannesburg. Simulation would be beneficial in radiography teaching as it would eliminate the unnecessary exposure to radiation for patients. Often in order for students to learn a specific examination at present it is necessary for the patient to be exposed to radiation more than if a qualified radiographer had performed the examination.

Simulation can also provide the opportunity to ensure that all students receive the same learning opportunities. The students at the University of Johannesburg are placed in twenty five different training centres and these may provide different exposure to types of examinations and procedures. Thus the introduction of simulated virtual learning can enable the facilitator to provide specific examinations or pathologies for all students to interact with and learn the same.

Computer based Simulation: The Department of Radiography has purchased two training programmes SHADERWARE© and ZILTRON©. One provides a virtual experience for the student which involves interfacing with equipment and the patient position and the other provides anatomy, image evaluation and technique and certain pathologies. The student receives immediate feedback via the programme and the student can repeat the simulation to improve the outcome.

As there is a drive towards safety of the patient simulated learning could provide the opportunity for the student to obtain clinical skills without impacting on the patient radiation dose.

Conclusion: The introduction of simulated learning may provide authentic learning without the radiation and ensure all students are exposed to the same situations. The simulated environment if successful could be extended in future particularly with the introduction of the new professional degree for radiography.

Directly Observed Clinical Work is an effective and underutilised method of training and supervision.

[Andrew Hooper](#)

Category: Poster

Background: Directly Observed Clinical Work involves the presence of the supervisor in the room with trainee-practitioner and patient during ordinary clinical work. The supervisor conducts him/herself in a particular manner to facilitate maximum benefit to the practical training of the supervisee and also takes clinical responsibility for the consultation/assessment/treatment as the case may be.

Aims: Evidence from the literature will be reviewed on the efficacy and utility of similar methods of supervision. Personal experience in the field of psychiatry will be described with particular reference to acquisition and demonstration of soft skills as well as an exploration of attitudinal issues relevant to success of the method proposed.

Results: Literature supports the utility of the method in various branches of health care and highlights faculty training issues.

Necessary attitudinal factors based on personal reflection and practical experience will be discussed.

Practical benefits in terms of training and supervision as well service delivery and job satisfaction will be mentioned as well as potential pitfalls.

A modus operandi relevant to psychiatric training will be offered.

Conclusion: The method needs to be tested in health-care training settings. Faculty leadership is needed to attend to issues of institutional culture that may be a barrier to successful implementation.

Perceptions of Agency among UCT Medical Elective Students

[James Irlam](#), [Lunelle Pienaar](#), [Claudia Naidu](#), [Steve Reid](#), [Mashiko Setshedi](#)

Category: Poster

Background: Medical student electives in the UCT Faculty of Health Sciences provide fifth year students with a short-term work experience in the South African health system. Many students report that their electives promote awareness of the broad determinants of patient health and personal insight into their identity and role as current and future agents of change in the South African healthcare setting. We wished to describe perceptions of agency among UCT medical elective students in order to provide evidence for promoting agency throughout the curricula of the Faculty of Health Sciences.

Aim: To describe the perceptions of fifth year medical students of how their clinical elective experiences helped them to understand their present and future roles as agents of change in the South African healthcare setting.

Methods: A cross-sectional study consisting of two stages of data collection was undertaken: review of clinical elective reports of three of the ten 2014 fifth year medical student groups, followed by structured focus group discussions with 5 randomly chosen participants from each of the three groups. The focus group discussions were recorded for thematic analysis.

Results and discussion: Preliminary results from the study will be presented. The implications for training students as agents of social change in the healthcare setting will be discussed, as well as the organization, framing, and assessment of the electives.

Conclusion: This study should provide evidence for understanding and promoting agency throughout the curricula of the Faculty of Health Sciences, and especially for improving the development of agency during the electives. The study may also provide evidence for incentivising electives in under-served areas, where the potential of student and graduate doctors as agents of change may be greater.

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Experiences of transformative leadership through self-leadership in a research programme

[Karien Jooste](#)

Category: Poster

The presentation reflects on personal expectations of nursing academics prior to commencement of a leadership programme and their subsequent reflections on completion of this introduction to the leadership programme. The programme aimed at developing the participants as leaders in conjunction with development of the culture of research in a school of nursing at a university in the Western Cape, South Africa. A qualitative, exploratory and descriptive design was used. A total sample of 8 nurse academics at a higher education institution took part and narratives were written in July 2012. The results indicated active participation and involvement, development of skills and knowledge, a balance between programme and personal goals, a sense of confidence amongst attendees, creating structure for growth, and critical thinking. The implication of this study was that a leadership research team has been established with clear underlying assumptions of transformative leadership in research driven by self-leadership.

Medical student study resources and attitude towards various teaching methods

[Juan Klopper](#)

Category: Poster

Background: Technology offers opportunities to improve education, both in terms of access to content and of mediating student interaction with content. Despite this, many medical schools still rely on formal lectures and tutorials. Learning materials are still limited to textbooks or printouts of lecturer generated handouts. We investigated the resources used by medical students and their attitude towards different forms of instruction.

Method: An electronic questionnaire survey was undertaken of members of the University of Cape Town Surgical Society. The student-led Society comprises students across all years of study with more than 500 active members.

Results: 110 responses were received, well distributed over all years of study. Textbooks and lecture notes were most often used as study resources. 29% of respondents indicated they never used online video or audio lectures. 88% of students indicated they would prefer recorded online lectures.

Almost half (45%) of respondents found formal lectures boring. 51% noted they soon forget what was said during lectures and tutorials. 64% indicated that they did not prepare for lectures.

Regular large search engine inquiries were used to find study resources more commonly than more academically-oriented search engines such as Google Scholar. Even fewer students indicated the use of medical databases such as Medline. Wikipedia was used daily by 53% of students.

Discussion: Traditional medical education relies on ritualised teaching and self-study using textbooks and departmental lecture notes. Our findings call into question the effectiveness of these forms of teaching and suggest the need for better education of students on screening and selecting learning resources.

Utilising the service-learning paradigm to redesign students' research experience

[Liesbet Koornhof](#), [Renée Blaauw](#), [Maritha Marais](#), [Lisanne du Plessis](#), [J Visser](#)

Category: Poster

The Dietetics curriculum stipulates that all students should be involved in planning, execution and reporting of a research project. The four components of service-learning (academic curriculum, community partner, reflection and real world experience) was used to redesign the approach to the student research projects from small, individual projects to one comprehensive, community-based project. The specific chosen project was a response to a research request from a service partner, the Nutrition Sub-Directorate, Provincial Department of Health.

Students were divided into groups where each was responsible for the planning of a sub-section of the larger study. All the sections were combined in the compilation of the over-arching project protocol. All students were engaged in and responsible for data collection in primary health care facilities. Students performed quality control measures, captured data and each group wrote an article on their individual sub-sections in the context of the whole project.

Students reflected on their perceptions and experiences using structured reflections. The Graduate attributes for undergraduate students in teaching and learning programmes at the Faculty of Medicine and Health Sciences was used to induce themes on reflection data. Students developed insight and sensitivity towards the challenges experienced in the health system and showed appreciation for the role of good management and governance. They experienced first-hand how to engage with the community and were also exposed to cultural diversity which is beneficial for professional growth.

By embracing the pedagogy of experiential service-learning, the response to a research request by a service partner expanded the learning experience of the students and strengthened the Division's relationship with the service partner. It also exposed dietetics students to the concept of reciprocity and in doing so, broadened their appreciation for inter-professional collaboration. Their enthusiasm and positive attitude towards the research component is testimony to the success of the changes made.

Creating awareness for improving medical records for better learning and teaching at the Makchs dental clinic

[Annet Kutesa-Mutebi](#), [Jose Frantz](#)

Category: Poster

Introduction: The making, maintenance and storage of clear and accurate patient records is an important part of the professional training of a dental student.

Aim: Owing to the unsatisfactory state of the patients' records at the students' clinic, this study aimed to obtain information on the factors that affect this process by the dental undergraduate students. It also elicited recommendations to improve the system.

Methods: This qualitative cross sectional study used in-depth interviews with faculty and focus group discussions with fourth and fifth year dental students for data collection. Data was captured through a written transcript and an audio recorder. The data was transcribed and analysed manually through developing themes. The emerging themes were compared to the literature and interpreted.

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Results: Three themes emerged. 1) Making: The current clerking forms have a poor design and do not provide enough space for clinical notes. It was recommended that they be redesigned. 2) Storage: The current space for storing patient records was deemed inadequate and lacked a referencing system for easy retrieval. It is recommended that more space be allocated for storage of box files with a referencing system for easy file retrieval. 3) **Maintenance:** Patients' records especially X-rays were not well labelled and stored. It is recommended that drug envelopes be improvised, labelled and used to store the patient X-rays. An electronic system is deemed to be the ultimate answer to this problem.

Conclusion and take home message: The current patient record system at the student dental clinic is unsatisfactory. There is a need to improve and upgrade it to a more efficient electronic system. Lecturers have a bigger role to play in teaching students about the value of accurate record keeping.

Using language technology to improve health professions' students Xhosa clinical communication skills

[Philip Lewis](#), [Marietjie de Villiers](#)

Category: Poster

Background/ Content: E-learning is integral in developing students' clinical communication skills at Stellenbosch University Faculty of Medicine and Health Sciences (SUFMHS). Although the primary purpose of this platform is to optimise students' communicative competency, there is currently no component that provides feedback on students' intelligibility of the target language. To address this, the Sitheth'impilo Initiative at SUFMHS is collaborating with the Meraka Institute of the CSIR to pilot a project aimed at enhancing students' language proficiency through the incorporation of an automatic speech recognition (ASR) system designed to inform students whether they are producing intelligible Xhosa speech utterances, or not.

Aim: To provide an overview of the anticipated stages in the development of this project. Furthermore, to encourage on-going inter-professional participation and collaboration towards the development of speech technology enhanced computer-assisted language learning (CALL) in an emerging technological society.

Methods: Human Nutrition II (novices) engage in text-to-speech (TTS) activities on a mobile application to render pronunciation of text. Occupational Therapy II students (who have three semesters of Xhosa), provide similar TTS renditions to determine acceptance thresholds settings. These specifications are then made available to Human Nutrition II students in the final stage to determine the impact ASR has on their language learning.

Results: The first phase of results will be available towards the middle of 2014. Future developments that can assist in enhancing students' intelligibility of language and how it should be able to provide information for decision-making on investing in the wide-scale implementation of speech technologies to enhance clinical communication proficiency will be explored.

Conclusion / Take home message: Electronic interactive learning devices such as ASR have the potential to benefit health professions students learning another language. It is important to test developments of innovative CALL that will become integral to the complete training of a health professional in a multilingual society in order to understand the advantages and challenges involved.

Clinical audit as the teaching see-saw of clinical governance and evidence based nursing

[Guin Lourens](#)

Category: Poster

The nursing profession is experiencing a policy push towards evidence-based decision making, with a nursing profession of 'acknowledgeable doers' (Craig & Smyth, 2007:307) realised by aligning quality, knowledge and the action of practitioners.

Evidence-based practice is part of quality improvement, and is a useful tool in decision making in health care.

Clinical audit is viewed as pivotal in clinical governance and evidence-based nursing education.

Clinical audit is a formal, clinically led initiative that systematically analyses clinical care against explicit set standards and criteria. Ultimately, clinical audit seeks to improve the quality and outcome of patient care.

A clinical audit tool was designed and utilised to assess quality of care in an evaluation of the critical points in postoperative care, as documented in the standard care plans. The clinical audit of randomly selected postoperative patient files was used in a pilot study to teach nursing students the importance of postoperative care.

The feedback from postgraduate management students, who carried out postoperative audits in a pilot study at Paarl Hospital, points to the impact clinical audit can have on the learning experiences of students. The students gained knowledge about the concept of evidence-based care, developed an understanding of postoperative clinical audit, and applied evidence-based nursing to postoperative nursing care. When students discovered the errors, learning was enhanced.

The students used the information to analyse the components of the nursing care plan, combine the elements of evidence-based practice, by reflecting on patient outcomes, and evaluate the controversy around evidence-based nursing. They also judged the clinical audit against the proposed core standards.

To meet the essence of the SA National Core Standards, clinical audit is invaluable in ensuring a change in practice. This will require integration of clinical audit as a useful tool in teaching evidence-based care.

Developing learners - evaluating the impact of curricular changes designed to enhance generic skills experience

[Alwyn Louw](#), [Juanita Bezuidenhout](#), [Debbie Murdoch-Eaton](#),

Category: Poster

Background: Curricular revision was undertaken to meet enhanced and changing educational and medical practice, as well as to provide opportunities for enhancing of optimal generic skills underpinning effective learning. This study aimed to determine the extent to which the revised curriculum impacted on experience in necessary generic skills at first year students.

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Summary of work: Students provided annual formal end of module evaluation in addition to focus group interviews. Evaluation by teaching staff was conducted by individual in-depth interviews. A validated generic skills questionnaire completed at the end of each academic year monitored the impact on the students' generic learning skills experience.

Results: Feedback from these different evaluation methods identified immediate curriculum intervention needs. Annually minor curriculum changes and an educational capacity building programme resulted. These responsive curricular changes after evaluation have the intended positive effect.

Discussion: This study indicates the value of curricular evaluation that goes beyond monitoring output only in terms of content outcomes. It has also evaluated impact on student learning and specifically how they are equipped with generic learning skills to support their expected success in university.

Conclusion: This curricular evaluation aimed not to monitor content output only, but also the acquisition of crucial generic learning skills. Implementation of a revised curriculum, with ongoing responsive changes aligned with careful multi-modality monitoring ensured an approach focused particularly on key generic learning skills development of the students.

Take home message: The impact of curricular changes designed to enhance generic skills experience at students can be monitored by a careful multi-modality approach.

Dental Student-Patient Communication

Ronel Maart, Karien Mostert-Wentzel

Category: Poster

Background: Effective communication has proven positive influences on patient care and satisfaction. Dental student-patient communication is included in the clinical assessment at the University of the Western-Cape (UWC), however, without formal communication training in the clinical years. Embedding a communication course in the curriculum would require support of the clinical teachers.

Aim: The purpose of this study was to explore the perceptions of the clinical teachers regarding dental student communication and its training.

Methods:

The study had a two-phase, sequential exploratory mixed methods research design. The first phase explored the clinical teachers' perceptions of dental student-patient communication by means of a focus group interview (n=5). Findings were used to develop the questionnaire for the second phase. The survey was distributed to 57 clinical teachers using SurveyMonkey.

Results: All the respondents thought communication skills should be included in the dental curriculum. To teach communication skills in second and third year was the suggestion of 64%, and 26% suggested that it be taught throughout the five-year curriculum. Of the total, 47% strongly agreed that students' just want to get on with the work' and that students tend to merely see patients as required quotas. Forty-seven per cent of the clinical teachers strongly agreed that they need training on how to communicate and to assess communication skills. Sixty-eight per cent strongly agreed that developing and teaching a communication module should be shared amongst the Faculty.

Conclusion and take home message: Clinical teachers agreed that communication-skill training and clinical assessment in the dental curriculum are important. They suggest that this module should be embedded throughout the five-year curriculum. Awareness was raised among the faculty members about the importance of communication skills and ensured initial buy-in for the development of such a course.

Exposing medical students to traditional Health Practices and medicinal plant usage: An Innovative way of doing things differently

Marykutty Mammen, B Longo-Mbenza

Category: Poster

Abstract: It is important to enable medical students to understand the value of collaboration between modern and traditional healers/medicine as recommended by WHO and South African Government. The objective of the study was to assess the attitude of medical students towards traditional healing practices and the usage of medicinal plants in South Africa. This was a comparative study of three cohort (2010, 2011 and 2012) of first year medical students at Walter Sisulu University. Students were given a structured and standardized questionnaires at the beginning of each year before they hear anything about traditional healing practices at the institution. Information on socio-demographic factors, beliefs, attitudes and practices of students, friends, villagers and parents were obtained. Paired chi-squared test was used to measure changes in beliefs, attitudes and practices of students. At the base line and out of 98 students surveyed, 39%, 59%, 82%, 45%, 51% and 15.6% were males, females, blacks, believed in TM, had positive attitude to TM and recommended parents to TM. In conclusion, short educational interventions can positively influence students' attitude and practices towards TM.

Flip or Flop? Narrated Powerpoint for anywhere, anytime learning

Dianne Manning, Detken Scheepers

Category: Poster

Background and Aim: Investment in technology for delivering educational content is converging with student investment in mobile technology. This creates exciting opportunities for more interactive pedagogical approaches for blended learning. The learning platform of the University of Pretoria (ClickUP) includes a facility for easily creating and uploading narrated Powerpoint presentations.

The aim of this intervention was to introduce students to the benefits of accessing full lecture presentations anywhere, anytime as a step towards introducing a 'flipped classroom'.

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What was done: The Powerpoint slides for the lectures in a Physiology module were loaded onto ClickUP with synchronised narrative voiceovers prior to the scheduled lectures. Since the students already had the lecture content the contact time could be used more flexibly for discussion and explanation of challenging concepts.

Student usage of the website was monitored and correlated with test performance. At the end of the semester students were invited to complete a short online evaluation.

Results and Discussion: Records of the student activity on the site showed that of the 6 modules in the course 39% of all hits were for this module, with individual students accessing it between 0 and 39 times. There was no correlation between test scores and the number of times the site was accessed. There may have been some novelty value since the hits per lecture decreased over time.

Only 10% of the class responded to the evaluation questionnaire. There was however an overall indication that students had found the narrated slides useful but still valued the face to face contact. Class attendance did not fall.

Take home message: The ease of using the technology and positive outcomes are encouraging. The next iteration will involve greater use of application and problem solving in the contact time by inclusion of participation by other relevant disciplines.

Quality assessment of the Extended Curriculum Programme for medicine (MBChB-ECP) at the MEDUNSA campus of the University of Limpopo

Rosie McNeil, C Brandt, M Nyathi

Category: Poster

A well-established academic foundation is need for successful medical education. The Extended Curriculum Programme for Medicine is a pre-medical programme that began in the University of Limpopo in 2010. The aim of the programme is to assist learners by providing access to the Medical degree course and the curriculum is structured to provide leverage in the form of a prior course exposure to six foundation subjects: Anatomy and Physiology, Biophysics and Numeracy, Biology, Biochemistry, English and Study Skills and Information Management. Learners have to pass all their courses (with a minimum score of 50% in each of the courses) and the courses cannot be repeated, be carried over to the next academic year or serve as credit-bearing for admission into the MBChB course or any other university degree course.

This is a retrospective analysis of the final year marks of ECP students from 2010 to 2013. The final year averages were analysed and compared to each other.

The foundation year averages were 64% (for 2010), 67% (2011), 67% (2012) and 79% for 2013. This shows a steady improvement in the year marks. Analysis per subject, showed their highest score is in Biophysics and communication in English presented a language barrier which seems to down-play the students' performance. After the foundation level each class showed a specific performance characteristic; the pioneer ECP class (2010) seemed to be the weakest and also had the highest number of withdrawal at the 2nd year of the medical Programme. The 2011 ECP class had outstanding performance

ECP is a unique opportunity and is a useful tool in enhancing the academic performance of pre- Medical students.

The Dual Role of a Clinical Educator as Mentor and Assessor: Influence on the Teaching-Learning Relationship

Ilse Meyer

Category: Poster

At the core of clinical education, within the allied health professions, is the teaching-learning relationship between the clinical educator and the student which is reinforced by and grounded in the explanatory theories of socio-constructivism, experiential learning and positioning. A good teaching-learning relationship is fundamental to the success of the students' learning in the clinical environment. Clinical educators fulfil a dual role as mentors and assessors to students. The purpose of this study is to explore the students' and clinical educators' perceptions of the dual role of a clinical educator of students in the physiotherapy clinical environment, and how the perceptions of both parties influence the teaching-learning relationship. By following a phenomenological qualitative research approach with an interpretivist paradigm the researcher obtained data from focus groups and individual interviews. Data analysis involved a contextualised interpretive content analysis paradigm. The perceptions of the participants in the teaching-learning relationship, their particular expectations, challenges and preferences, reflect their experiences and are presented in the findings of the study. The findings of this study are comprehensively discussed and recommendations are made to transform the teaching-learning relationship by repositioning the participants in order to enhance the quality of the clinical learning experience within the physiotherapy clinical environment.

Open Educational Resources (OER) as tools for convergence

Veronica Mitchell, Greg Doyle, Nicole Withers

Category: Poster

The internet is revolutionizing educational practices. As educators and students expand their teaching and learning through the availability of free online resources, structured linear classrooms are being threatened by complex knowledge sources that introduce a landscape of uncertainty.

While the majority of our students inhabiting the open digital world welcome engagement from the web platform – a comfortable and connected space for them – many educators are apprehensive, partly due to copyright concerns. Creative Commons licensing, where permissions replace previous restrictions can provide opportunities for openly sharing knowledge and expertise.

Our poster aims to present our experiences, and to open a dialogue on the affordances of OER as a global tool for educational convergence.

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Over the past four years, the Education Development Unit at the University of Cape Town's Health Science Faculty has played a major role in promoting and publishing OER on the institutional repository. Our Faculty is producing knowledge and sharing it. Contributions range in granularity from PowerPoint presentations to full course modules. Over 80 resources have been openly published with downloads both locally and internationally. Prof Johan Fagan's Otolaryngology books have PDF chapters downloaded at a rate of over 700 per day amounting to 250,000 downloads so far. Dr Juan Klopper's teaching YouTube channel has received close to 200,000 views.

Uptake by students is growing as they engage with the material as consumers. Our first student-produced resource is now available as an Application for language access to improve healthcare communication.

However from the educators' point of view, using and remixing resources from others is not yet accepted practice. How can we change this to not reinvent the wheel?

Knowledge as a public good is challenging established academic practices.

OER is here to stay and is transforming education. Many prominent academics have embraced OER demonstrating the expanding impact of their educational contributions.

Awareness on assertiveness and communication skills in teamwork by third year students at Medunsa during Interprofessional Education

Florah Mantombi Mkhonto, M Ntsoele, Louise Schweickerdt-Alker

Category: Poster

Background: The WHO documents that Interprofessional Education (IPE) begins when students from two or more professions learn about, from and with one another to enable effective collaboration and to improve the quality of health care. At the University of Limpopo, Medunsa Campus, IPE was initiated in 2012 as a response to the international call to apply it in the education and training of health professionals. In 2014, an IP Selective was initiated for third year students in Medicine, Nursing, Human Nutrition and Dietetics, Occupational Therapy and Physiotherapy with a focus on four core skills namely leadership, situation monitoring, mutual support, communication and assertiveness. Reflection from the students' side forms an integral part of the IP Selective as this is how in-depth learning takes place. However, awareness on assertiveness and communication in teamwork amongst the students have not yet been established.

Aim: By making use of the reflective journals, the aim of this study is to explore and describe the extent of awareness regarding assertiveness and communication skills in teamwork by third year students at Medunsa during the IP Selective.

Methods: A qualitative study: Data collection will be done by means of reflective journals from 149 participating students. Content analysis and coding will be used to identify emerging themes, categories and sub-categories. Ethical clearance was obtained from the Medunsa Research Ethics Committee.

Results: The main themes relating to assertiveness and communication skills that emerge from the reflective journals will be presented at the conference.

Conclusion: It is envisaged that the results of this study will shed more light on the awareness on assertiveness and communication skills by third year students at the University of Limpopo, Medunsa Campus.

Development of skills laboratory training for second year medical students at the University of Namibia (UNAM), School of Medicine (SoM)

Milly Morkel, Marietjie van Rooyen

Category: Poster

Background: Clinical training in a skills laboratory purportedly helps students develop technical- (procedural- and physical examination skills) and non-technical skills (communication-, history taking-, presentation- and reasoning skills) in a safe environment, without fear of causing harm to the patient. Previously second year medical students observed selected skills in the hospital setting. Preceptors questioned the preparedness of these students for this environment and a decision was taken to first train the students in the skills laboratory.

Aims: This study was conducted to determine the skills that second year medical students need to have acquired prior to their clinical rotations and to develop a curriculum to teach these skills.

Methods: This study employed a qualitative research design. Interviews were conducted with all clinical faculty (6) and preceptors (6). Data was thematically analyzed. The prospectus of the School and previous study guides were analyzed for content during the document review.

Results: Four themes emerged: to effectively communicate with team members, patients and their family members (history taking and communication skills); to become involved in the caring of the patient as well as being part of the inter professional team (nursing skills); to be able to manage emergencies in the community where they start working in their second year of study (first aid) and to be able to recognize normal in preparation of recognizing abnormalities (physical examination).

Conclusion and take home message: Skills needed for second year medical students prior to clinical rotations were identified. This led to the design of a curriculum to teach these skills. Future research will be directed at programme evaluation and the development of a skills laboratory curriculum for senior students.

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Exploration of High Fidelity Simulation: Nursing lecturers' perceptions and experiences at Paray School of Nursing, Lesotho.

[Takaedza Munangatire](#), [Niri Naidoo](#)

Category: Poster

Introduction/Context: Simulations are defined as situations in which students use models of behavior to gain better understanding of those behaviors. Use of simulations in teaching can stimulate deep learning with the application of theory and practice. This may positively impact clinical decision-making and improve patient care. While simulations have long been used for training nurses, the introduction of technologically driven simulators has generated greater interest.

Aim/Purpose: This study explores nursing lecturers' perceptions and experiences of high fidelity simulation (HFS) as a teaching and learning strategy in a resource-constrained setting.

Methods: A mixed methods design included a self-administered questionnaire and a focus group discussion. All eight nurse lecturers at Paray School of Nursing who are in a position to use HFS participated in the study. The data was analyzed through content thematic analysis.

Results: The response rate to the questionnaire was 100%. It showed that although 86% of the lecturers are interested in HFS, only 57% are currently using it. From the subsequent focus group discussion, five themes emerged: lecturers' motivation to use HFS, current underutilization of HFS, lack of formal training, need for clear utilization guidelines and lack of resources. Lecturers' positive perception that HFS improves student's outcomes was seen as a facilitator to HFS use while technological complexities of HFS were viewed as a barrier.

Conclusions and take home message: Despite the lack of formal training, resources and clear utilization strategy, lecturers at Paray School of Nursing are motivated to use HFS and they perceive HFS as an effective teaching and learning strategy. Based on this study, they believe HFS to have been a worthwhile investment of limited resources for nursing education.

A cardiovascular perfusion programme for South Africa: the road to success

[Zainul Abideen Musa](#), [FE Smit](#), [Johan Bezuidenhout](#)

Category: Poster

Introduction and Background: The current outcomes and essential content of a cardiovascular perfusion programme in South Africa are inadequate for producing graduates who can immediately provide the wide range of skills required by modern and future cardiovascular surgery. This hypothesis necessitates the description of the outcomes and content of a perfusion programme.

Objectives:

1. To determine the current outcomes and essential programme content of a current cardiovascular perfusion programme.
2. To determine the required outcomes and essential content of a cardiovascular perfusion programme; and
3. Using the results from above to describe appropriate and relevant outcomes and essential programme content.

Methods: The research is a descriptive design consisting of a quantitative study with qualitative elements. The methods that will be used are an electronic questionnaire survey and the Delphi technique using the online EvaSys survey-management system.

The questionnaire survey will first be conducted to derive the Delphi statements. The questionnaire survey will be distributed to lecturers at the Central University of Technology and Durban University of Technology who are involved in tutoring perfusion students, and supervisors at various academic hospitals involved in the training of perfusionists.

Participants in the Delphi technique will be experts in the field of cardiovascular perfusion and cardiothoracic surgery in South Africa (SA) and abroad.

Results, Discussion and Conclusion: The results and discussion of the questionnaire survey will be available at the conclusion of the questionnaire survey process at the end of April 2014 and will be presented at SAAHE 2014.

The results, discussion and conclusion of the Delphi process will be available at the end of November 2014.

Pharmacy Students opinions toward active learning

[Frasia Oosthuizen](#)

Category: Poster

The objective of this study was thus to investigate the opinions and perceptions of level 2 pharmacy students towards active learning with clickers.

Methods: A questionnaire was used to measure students' opinions and perceptions towards active learning. Students were also asked to provide examples of active learning that they found most beneficial, in addition to describing what they liked most about active learning.

Results: Feedback from students with regards to active learning indicates that the students found small group discussion and the involvement with other students very positive. There was also a positive indication that this method of teaching improved students' understanding of the course content – students indicated that they had a better understanding of the lectures and enjoyed using clickers.

Conclusion: Active learning was incorporated into an undergraduate BPharm module to improve student learning in a larger group. According to student feedback this strategy was effective in that students interacted more with each other, learned from their peers, and had a better understanding of concepts covered – it is thus clear that active learning achieved its goal.

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Improving maternal and neonatal health outcomes through maximized utilization of village health workers/ traditional birth attendants in Lesotho

Semakaleng Phafoli, MN Lebaka

Category: Poster

Background / Context: Lesotho faces a grave shortage of Human Resources for Health both in numbers and in skills. The difficult topography and poor communication results in inaccessibility of health facilities and these have led to a decline in key health indicators like maternal and neonatal mortality. The Village Health Workers/Traditional Birth Attendants provide links between modern health care services and the community. Providing appropriate training and supportive supervision to this cadre could lead to early diagnosis and management of maternal and neonatal complications and reduction of workload on professional midwives so that they focus on critical health issues. All these will lead to improved maternal and neonatal health outcomes in Lesotho.

Aim / Purpose: To acknowledge the impact of providing appropriate training and supportive supervision to the village health workers/traditional birth attendants in the reduction of maternal and neonatal morbidity and mortality in Lesotho

Methods: Desk review of documents, focus group discussions with community leaders, village health workers/traditional birth attendant, Public Health Nurses and other stakeholders.

Results and discussion: A total of five focus group discussions were held: three with village health workers/traditional birth attendants, one with community leaders and one with Public Health Nurses. The findings indicate that providing appropriate training and supportive supervision to village health workers/traditional birth attendants is viewed by all as the best strategy to assist in ensuring that pregnant and lactating women have full access to the comprehensive services at the health facilities which could lead to reduction of maternal and neonatal deaths.

Conclusion: There are a variety of ways in which maternal and neonatal morbidity and mortality can be reduced and training of village health workers/traditional birth attendants and supportive supervision has been found one effective strategy in the current shortage of Human Resources for Health.

Identifying best practice in the teaching of large classes in a simulation laboratory

Gerda Reitsma, A Naude, I Kotze

Category: Poster

Introduction: The use of simulations laboratories as learning environments is a common approach in health professions training. The Faculty of Health Sciences at the North-West University in South Africa has recently opened up a simulation laboratory for the training of pharmacy students. The challenge was to find an effective way to train the large number of pharmacy students (n=260) in the simulation laboratory with limited capacity (15 workstations) in a limited time period (1 hour per week for 8 weeks). In this study, three different teaching approaches were implemented and the effect on learning over time was measured.

Methods: The study involved an initial survey to determine students' previous experience with Information Technology Systems used in pharmacy practice. This was followed up with a practical pre-test done to determine their skills level with the Pharmacy Information Technology system. The students were then randomly divided into 3 groups, each group receiving a different teaching approach (lecturer guided; peer-teaching; self-study) during the course. A post-test to determine their skills level were administered after 4 weeks of training. Practical assessments were conducted after each practical training session to measure their improvement of knowledge and skills. over time. Student and lecturer reflections on the process and how it impacted on their teaching and learning were also included in the data.

Results: This research study is still in progress and will only be completed by the end of May when results will be available.

Discussion: The findings from this research will inform academic departments responsible for training health professionals such as pharmacy students on best practice regarding the use of simulations laboratories with large classes.

Theme: Simulation; teaching; skills development; pharmacy information technology systems.

E-learning of Evidence-Based Health Care (EBHC) to increase EBHC competencies in healthcare professionals: A systematic review

Anke Rohwer, Eva Rehfuess, Taryn Young

Category: Poster

Background: Various systematic reviews have explored the effects of teaching EBHC to healthcare professionals. These reviews show that teaching EBHC to students and healthcare professionals leads to increased EBHC knowledge and skills. The question is therefore no longer whether we should be teaching EBHC, but rather how we should be teaching it. Khan and Coomarasamy (2006) have proposed a hierarchy of teaching EBHC, where integrated and interactive teaching is seen as the most effective way of teaching. This, however, only refers to traditional lecture-based teaching of EBHC and does not include the popular method of e-learning. We assessed the effectiveness of EBHC e-learning on EBHC competencies in healthcare professionals.

Methods: We considered randomised and non-randomised controlled trials, interrupted time series and controlled before-and-after studies that compared EBHC e-learning or blended learning to no learning, face-to-face, blended or e-learning for healthcare professionals. We searched MEDLINE, EMBASE, CENTRAL, CINHAL, ERIC, SCOPUS, PsychInfo and Web of Knowledge. Two authors independently screened search outputs, selected studies for inclusion, extracted data and made risk of bias judgements. Discrepancies were resolved through discussion. We synthesised results in a meta-analysis where possible and narratively synthesised results of outcomes where meta-analysis was not possible.

Results: The search yielded 3772 references. After title and abstract screening, we identified 32 potentially eligible studies, of which 16 met our inclusion criteria. Included studies were individually and cluster RCTs and controlled trials. Participants included undergraduate and postgraduate students as well as practicing clinicians. Most studies compared EBHC e-learning to lectures or no learning, while some compared blended learning to lectures or no learning.

Conclusion: We identified a number of RCTs looking at the effectiveness of EBHC e-learning in healthcare professionals. This abstract presents preliminary results of the review. Risk of bias assessment and data analysis will be presented at the SAAHE conference.

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Integrated Curriculum: A Dissection of the Bachelor of Clinical Medical Practice Degree Programme at the University of Witwatersrand, South Africa

Scott Smalley

Category: Poster

The Bachelor of Clinical Medical Practice (BCMP) is a three-year bachelor degree offered by the University of Witwatersrand in South Africa, which provides the teaching and training of high school leaver students to qualify as a clinical associate.

The clinical associate (ClinA) is a new mid-level health professional initiated five years ago within the health care system of South Africa adopted from the physician assistant model in the United States. The ClinA is a competent, qualified health professional able to provide a full range of medical care from emergency to paediatrics to obstetrics to primary health care under the supervision of a doctor.

The BCMP training does not follow the standard curriculum of medical science courses separated by time and space, coordinated by different academic departments. Instead, the degree is completed with only three courses, one course per academic year, orchestrated by a team of medical tutors, lectures, and practitioners across departments; forming an integrated curricular model, combining traditional lectures, tutorial based learning, patient based learning, skill sessions and clinical practice.

Each yearlong course incorporates medical knowledge, patient consultation skills, laboratory studies, clinical procedures and examinations, medical pharmacology and therapeutics as well as ethics, professionalism and counseling. The academic teaching uses a patient case approach to understand the human systems, immediately linking the medical learning in the classroom to performing examinations and procedures in the skills lab, to then interpreting laboratory tests, diagnosing medical conditions and applying appropriate treatments for patients with hands on training in the clinical setting.

The aim of this presentation is to describe this integrated curriculum to understand how the University of Witwatersrand BCMP program is training the next generation of mid-level practitioners who will help transform medical delivery in South Africa.

Understanding the world of health: development, implementation and evaluation of a compulsory module for 2nd year students in the Faculty of Health Sciences at the North-West University.

Karliën Smit, AG Herbst, M Greeff, A Kruger

Category: Poster

Background: The context of health has changed, and is complex and dynamic. Health challenges demand a holistic approach with integration across disciplines.

Method: A compulsory transdisciplinary module, Understand the World of Health (WVGW 221), was developed. From 2010 this module was implemented into all curriculums across the Faculty of Health Sciences of the North-West University's Potchefstroom campus. Since then, this module was evaluated and revised annually over a four year period.

Results and Discussion: This module presented students with an opportunity to have interaction with other subject disciplines and to conduct debates critically and philosophically from different frameworks of thought. Students gained much more knowledge of the fields of other disciplines within Health Sciences.

This module consists of the following study units:

- Plan and implement a transdisciplinary health promotion project
- Functioning of a transdisciplinary team across multi-sectoral boundaries
- An introduction to world views and ideologies
- Health as well as fortigen and pathogen paradigms
- Health services in South Africa
- Health trends and determinants

Emphasis was placed on lecturing large groups. Blended-learning strategies were implemented through instructional design analysis to integrate technology with face-to-face contact sessions. Problem-based learning as well as an assessment activity involving a transdisciplinary health-promotion project was used. E-learning and technology was utilized successfully to improve administration, coordination and communication within large groups of students.

Conclusion: In spite of a number of challenges, a compulsory transdisciplinary module for second- year students across the Faculty of Health Sciences was successfully developed and implemented which offers numerous opportunities towards the development of health-care professionals. The module succeeded in its goal of increasing students' awareness of transdisciplinary co-operation. The success of this module lies in effective and continuous administration and coordination, lecturers that endorse a transdisciplinary approach in teaching, as well as facilitated interaction between students from various disciplines.

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Mobile health application utilising functioning and environmental factors for patient-centred care: A call for international collaboration

Stefanus Snyman, Catherine Sykes, Navreet Bhattal, Ros Madden, Charlyn Goliath, Coen van Gool, Olaf Kraus de Camargo

Category: Poster

Background: Community-based, person-centred healthcare strategies are central to realising the vision to reach health equity in the 21st century. These strategies are designed to identify ill-health, determinants of health, and to facilitate improvements in persons' health and their participation in all areas of life. Increasingly mobile phone applications are being used to collect health information. The pivotal role of data on functioning and context are often overlooked in these mobile applications. Currently, no mobile application incorporates the International Classification of Functioning, Disability and Health (ICF). This conceptual paper makes the case and calls for collaboration to develop a mobile application (mICF) based on the ICF.

Objectives: It is envisaged that the mICF, in providing a means to collect and transfer ICF-related information, could support interprofessional continuity of care by:

- ensuring accurate, efficient capture of functional status and contextual information
- conveying information securely between service providers in different service settings
- facilitating clinical decision-making by making data readily available
- facilitating administration and reporting through data aggregation
- minimizing need for repeat data collection.

Practical Implications:

- User friendly, including built-in decision support, to assist team members
- Low cost, open source, to enable broad accessibility and user configuration
- Provide holistic overview of individual and information flows, including assessment data, progress reports and interprofessional treatment plans
- Capable of real-time reporting and provision of aggregated data sets to health service and system managers
- Integrated single source of functional status information, also accessible to patients
- Able to 'plug in' and be interoperable with existing information record systems
- Use in various languages.

Social implications

- Provide means to collect and transfer ICF-related information
- Add value to interprofessional education and collaborative practice
- Improve continuity of care
- Contribute to more efficient and cost effective health systems

Developing graduate attributes in the Health Sciences

Stefanus Snyman, Michelle Visser, Jean Farmer, Adrian Parsadh, Jaco Janse van Vuuren, Linza Aucamp

Category: Poster

Background: It is universally accepted that universities should ensure that their graduates develop the necessary attributes or core competencies to equip them for the world of work and to function as productive members of society (Barrie, 2007). Graduate attributes are what all graduates should have developed once successfully completing their studies and are an orientating statement of education outcomes used to inform curriculum design (Barrie, 2009).

Methods: As part of the process of identifying and refining their graduate attributes, the Centre for Health Professions Education (CHPE) at the Faculty of Medicine and Health Sciences at Stellenbosch University, have embarked on a review of medical science literature which revealed an emphasis on the central importance of health equity and the need to address health inequalities and the call for students to function as agents of social good.

Results: It was found that the CanMEDS framework developed in Canada, has become the most widely used taxonomy of outcomes. After adapting the framework, it was agreed that a graduate health professional from Stellenbosch University should be competent to fulfil seven intertwined roles to assist in meeting the health needs of our country, namely that of healthcare Practitioner, Communicator, Collaborator, Leader and Manager, Health Advocate, Scholar and Professional.

Conclusions: The resulting envisaged five-year plan is to model, integrate and assess the graduate attributes in the Faculty's programmes with a core team of the Centre for Health Professions Education (CHPE) and the Department of Industrial Psychology in order to develop a draft strategic plan to:

- develop a change management and communications plan,
 - develop teaching material for the graduate attributes,
 - develop assessments tool,
 - integrate graduate attributes into curricula
 - develop a trainer of trainers programme as part of the faculty development process, and
 - monitor and evaluate the process by developing an educational research framework incorporating various postgraduate research projects.
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Experience and perceptions of students regarding inter professional education

[Annalie Theunissen](#)

Category: Poster

Abstract: An exploration of the experiences and perceptions of health and allied health care students regarding interprofessional collaboration and education in a rural clinical setting in South Africa was conducted.

The aim of the study:

To explore the experiences and perceptions of health and allied health care students regarding interprofessional collaboration and education in a rural health care context in South Africa during their clinical placement period.

The specific objectives included:

- The exploration of the experiences of students regarding interprofessional collaboration within an interprofessional educational context in a rural healthcare setting in South Africa.
- The establishment of the perceptions of students regarding interprofessional education within the interprofessional education programme in a rural health care context in South Africa.

An explorative, descriptive research design with a qualitative approach was applied to explore and describe the experiences and perceptions of health and allied health care students regarding interprofessional collaboration and education in a rural clinical setting in South Africa.

The disciplines included were Nursing (WCCN / CPUT), Medicine, Speech and Hearing as well as Physiotherapy from Stellenbosch University. In total 14 participants were included in focus group interviews.

Ethical approval to conduct the study was obtained from the Health Research Ethical Committee at Stellenbosch University. Consent was obtained from participants to conduct the interviews and permission was obtained from respondents to use a tape recorder to record the interviews.

Many themes and subthemes were identified which provided valuable information. Recommendations or suggestions were made by the researcher to further improve IPC within IPE in a multi-cultural student group and society.

In conclusion, the experiences and perceptions were very positive and valuable information was obtained which may serve as the foundation for much needed future research within the South African context.

Reflections on interprofessional teamwork experiences involving students from five healthcare professions at Medunsa.

[Ina Treadwell](#), [L Schweickerdt-Alker](#), [H Pitout](#), [R Gordon](#), [N Sobantu](#), [F Mkhonto](#), [M Ntsoele](#)

Category: Poster

Background: An interprofessional education (IPE) selective for third year students from medicine, nursing, occupational therapy, physiotherapy and human nutrition was introduced at Medunsa in 2014. This course aims to increase team awareness, clarify team roles and develop students' teamwork skills in preparation for collaboration in healthcare practice. Four main teamwork skills, based on the TeamSTEPPS[®] system, are included: leadership, communication, situational monitoring and mutual support. The objective of this study is to explore the students' reflections on the value of the IPE course and the effect on the development of their teamwork skills.

Summary of work: Students (n=149) were divided into 6 groups, each comprising a facilitator and students representing the different professions/disciplines. All students were orientated in the writing of reflections and the use of the rubric that is used for the assessment of the reflections. Each group took part in three practical sessions on teamwork skills and both students and facilitators kept and updated their personal reflection journals at the end of each session. A guided oral feedback session regarding reflections on experiences was facilitated for each group and these were audiotaped.

Summary of results: The audiotapes were transcribed and the reflection journals analysed. Coding of the above qualitative data, content analysis and development of themes were done. Variables for coding were developed for the inductive approach.

Pharmacy students' awareness of Complementary and Alternative Medicine

[Ilse Truter](#)

Category: Poster

Background: Complementary and alternative medicine (CAM) is part of the legislative framework for health practitioners in South Africa, yet not all health professions educate their students adequately in CAM.

Primary aim: To determine the awareness of final-year pharmacy students at NMMU in 2012 regarding different CAM therapies, and to assess their feedback after a lecture series on CAM.

Methods: Final-year pharmacy students at NMMU were asked during their first CAM lecture in 2012 to write down all the CAM therapies that they were aware of. A total of 38 students voluntarily made a list of CAM therapies known to them.

Results: Fifty-four different CAM therapies were listed. Acupuncture/Acupressure was listed by 73.7% of students, followed by Aromatherapy (65.8% of students). A third of students (31.6%) listed Yoga, Herbal Medication and Meditation. Massage therapy, Reflexology and Homeopathy were each listed by more than 15% of the students. Students listed on average 5.0 (SD=3.3) different therapies. A fifth (21.1%) of students listed supplements such as ginkgo biloba, ginseng, goat's milk, cranberries, garlic and parsley. Students therefore had a limited knowledge of the most commonly known CAM therapies, as well as the variety of therapies available. After a lecture series equivalent to eight contact hours, most students agreed that the lectures were informational. Lectures covered the CAM philosophy, the classification and general overview of therapies, legal and regulatory aspects, homeopathy, nutritional therapies, herbal medicine and mind-spirit therapies.

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Feedback included that the lectures provided 'insight into an unknown field', 'the most fascinating one for me was homeopathy, I have never heard of it' and 'I learned how to respect other people's choices and not be judgemental'.

Conclusions: The current knowledge of pharmacy students regarding CAM appears to be inadequate, and commonly used therapies could be covered in more detail in the undergraduate pharmacy curriculum.

An investigation into the characteristics of the anatomy and embryology module (MEF153) that affect first-year medical students' academic performance at the University of the Free State: A students' perspective

Gerhard van Zyl

Category: Poster

Background and Objectives: Poor academic performance of students in module MEF153 (Introduction to Anatomy and Embryology) in the first year of the Programme for Professional Medicine (M.B.,Ch.B.), in the School of Medicine, Faculty of Health Sciences, University of the Free State necessitated investigation to improve the academic performance, without lowering academic standards. Factors within the curriculum of module MEF153, that influence the academic performance of students was investigated. Research was conducted with the goal of making recommendations for changes to the curriculum.

Methods: A quantitative study, enhanced by qualitative data, was conducted. A self-administered questionnaire, that included a rating scale and open-ended questions, was used. The quantitative responses were reported as frequencies and percentages or medians for each factor, and the qualitative data were classified in themes and categories for each question.

Results: The questionnaire was completed by 133 (88%) of registered students in module MEF153. For every factor investigated, some students perceived the factor to have a positive effect on academic performance, some a negative effect, and some no effect on academic performance. Factors with the greatest perceived positive effect on academic performance included personal motivation, academic ability, intelligence, academic environment, the outcomes-based curriculum, and the organisation and lay-out of the module. Factors with the greatest perceived negative effect on academic performance included workload, volume of content, load of independent study, difficulty of content, difficulty of language used in study material, assessment opportunities, time schedules, and clarity of outcomes and expectations in the module.

Conclusion: The results show that the module MEF153 manage most factors in such a way that it contributes positively to academic performance for the majority of participants in this study. Furthermore, it emphasises the diverse effect of each factor on academic performance among participants. This knowledge can be used to address problematic areas of the curriculum to improve academic performance. It can also be used to improve academic development and support activities to address shortcoming in skills among students.

Towards Tailored Teaching: Enhancing the workplace-based learning experience of Longitudinal Integrated Clerkship (LIC) students in a South African rural district hospital

Klaus von Pressentin, HOFFIE Conradie, Firdouza Waggie

Category: Poster

Context: The Ukwanda Rural Clinical School (RCS) represents an innovative clinical placement model for the Faculty of Medicine and Health Sciences, Stellenbosch University, South Africa. The Longitudinal Integrated Clerkship (LIC) represents one of the RCS's two educational models. The LIC model enables undergraduate medical students to spend their final year within a rural district hospital. A discussion between the first group (2012) of LIC students and preceptors at Robertson district hospital (one of the LIC sites) revealed the need to enhance the site's students' learning experience.

Aim: The purpose of this study is to understand the current workplace-based learning opportunities within this rural clinical placement and to identify one specific teaching and learning intervention for implementation during 2013. The final objective is to evaluate the process of implementing the identified intervention and make appropriate teaching and learning recommendations.

Methods: A participatory action research method was used. A cooperative inquiry group (CIG) was formed consisting of the three final year medical students, five doctors and three family physicians. Two meetings were held to introduce the study and to decide on data gathering methods to identify learning opportunities for students. Data was gathered from a focus group interview, an individual interview and from the DREEM questionnaire. The results of the analysed data were discussed at the third meeting where an educational intervention was proposed. The fourth meeting reflected on the implementation of the intervention.

Results: The educational intervention was based on two themes: addressing student anxiety and reviewing the preceptors' role. Recommendations to enhance the student's learning experience included structured student-preceptor contact where tailored strategies addressed the gaps as perceived by the students and preceptors.

Conclusion: Smaller preceptor and student numbers enable collaboration to shape a tailored learning structure within the context of the rural district hospital.

How Podcasts Modify Medical Students' Behaviour

Stephen Walsh, Marietjie de Villiers

Category: Poster

The availability of podcasted lectures influences both how students study and their lecture attendance.

1. Influence on Studying

The perception is that podcasts are very important or important for the first four years of study. An interesting finding was that students in their clinical years also found them important. They mostly use them to refresh their memories.

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The usefulness of podcasts for assisting learning declines when students reach their clinical years. During their first 4 years of study, between 40% and 49% reported that podcasts almost always assisted their learning. This dropped to 27% in the clinical years (years 5 and 6). However all years rated podcasts as assisting their learning to a considerable degree (between 30% and 38%).

For the first two years of study, students are dependent almost equally on the class hand-outs and lecturer's PowerPoint slides as well as the podcasts. Reliance on podcasts dramatically increases in the third and fourth study years, while students in their clinical years rely mostly on textbooks to get their information.

2. Influence on Lecture Attendance

About 2% of students always miss lectures and rely on podcasts. Six percent will frequently miss lectures due to access to the podcasts. The tendency to frequently miss lectures is most pronounced in the first three years of study.

Those who always missed lectures mostly watched 75 to 100 podcasts during the year. Sixteen percent of those who very frequently missed lectures watched more than 100 podcasts during the year. Depending on the year, there could be 500 podcasts.

Gender based violence for healthcare professionals training: Does it work?

Renee Wentzel, Dawie Olivier, Alet Bosman

Category: Poster

Background/ Context: Violence against women is a persistent and universal problem. It is important that health care professionals are equipped with the knowledge to understand the causes of violence and gender-based violence, understand the strategies for identifying and preventing violence in their workplace and families, and be equipped with the resources to support victims of violence. Foundation for Professional Development's gender based violence for healthcare professionals training aims at making doctors and nurses raise the issue of sexual and gender based violence with patients in their everyday work. FPD conducted an evaluation of the gender based violence for healthcare professionals training in 2013.

Aim/ Purpose: The purpose of the evaluation was to determine if the training improved the healthcare professionals' knowledge, skills and attributes; and to determine whether service delivery improved for victims of gender based violence.

Methods: A mixed methods approach was used, collecting data from the training participants. Both paper based and electronic questionnaires were administered which collected pre and post course data. Telephonic interviews were conducted to gather qualitative data. Additional telephonic interviews were conducted with peers of the training participants to verify the data provided by the participants and to collect additional information. A pre and post course quantitative analysis was done; and a qualitative thematic analysis yielded information about the changes made in the workplace.

Results and Discussion: FPD's gender based violence training for healthcare professionals increased the knowledge, skills, attributes and service delivery of the participants. The identified themes demonstrate intrapersonal, organisational and community changes and barriers to implement newly acquired skills were identified.

Continuous evaluation of training programs will inform the future design and development of interventions that aims to equip healthcare professionals with the resources to support victims of violence.

Exploration of human genetics teaching

Ambroise Wonkam, Karen Fieggen, Jacque Greenberg, Peter Beighton, Raj Ramesar

Category: Poster

Background: Medical doctors are increasingly called upon to be knowledgeable about genetics to cope with the challenges of the new genomic medicine era. Little is known about the Human Genetics curricula of Faculties of Health Sciences in South Africa.

Objectives: The study aimed to explore the actual content of Human Genetics teaching and its perception by 4th year MBChB students in the Faculty of Health Sciences, University of Cape Town (FHS-UCT).

Methods: 1- Review of the available curricula documents and courses; 2- Self-administered questionnaire survey to 3 consecutive groups of 4th year MBChB students (2009-2011) concerning their perception of human genetics teaching in the FHS-UCT MBChB curriculum.

Results: A total of 20 hours contact times were devoted to Human Genetics teaching over the 6 years MBChB degree. Five additional lectures with genetic content were taught by other disciplines. No Problem-Based Learning (PBL) case, out of 20, was devoted to a genetic condition. Analysis revealed some duplicated content in various lectures.

A total of 180 students responded to the survey: up to 71.1% agreed/strongly agreed to the 'need to improve the human genetics curricula'; and 66.7% disagreed/strongly disagreed with the amount of 'hours devoted to human genetics'; 66.7% agreed/ strongly agreed with the need for 'additional formal lectures'; however, a minority agreed/strongly agreed with the need for 'additional PBL with specific genetic topics' (47.7%); or 'Additional Role-play small group teaching' (36.4%). Major trends after qualitative analysis of students' comments underlined a perceived repetition of lectures and the lack of cohesion throughout the curriculum.

Conclusions: The study revealed relatively little contact time was devoted to Human Genetics teaching and the need to improve the curricula both qualitatively (content, cohesion and integration) and quantitatively (contact time) and to vary pedagogic approaches. Corrective measures were taken to improve the situation.
