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ORAL AND POSTER PRESENTATIONS

Patient simulations in developing clinical reasoning skills in undergraduate paramedic learners at the Central University of Technology

R G Campbell

Background/context: Advanced Life Support (ALS) Paramedics in South Africa practise a form of emergency medicine in the out-of-hospital context with limited resources and diagnostic tools. Avoidable patient care errors in an emergency setting, specifically in diagnosis, are well described in the literature. Effective clinical reasoning has proven to reduce diagnostic error. ALS paramedic training has traditionally been skills- and protocol-driven with little or no attention to clinical reasoning skills.

Aim/purpose: To demonstrate the contribution that patient simulations make to the development of clinical reasoning in third-year learners in the undergraduate National Diploma: Emergency Medical Care (NDip EMC) programme at the Central University of Technology (CUT).

Methods: Third-year EMC learners were provided with an interlinking framework of tasks and activities that highlight clinical problems and require clinical reasoning skills to solve. Each third-year learner was subjected to 4 simulated patient assessments followed by a case report on each. A significant focus of the case report was a discussion on differential diagnosis and reflection using the clinical reasoning process and evidence for best practice. Exposure to patient simulations by learner groups from 2006 - 2011 prior to formal assessment was analysed. Results of assessed patient simulations and reflective reports from 2006 - 2011 were analysed for performance improvements.

Results and discussion: The preliminary results demonstrate performance improvement among all learner groups over 4 assessed patient simulations.

Conclusion/take-home message: The anticipated outcome of this study is to demonstrate the importance that patient simulations have in developing clinical reasoning skills in third-year learners in the NDip EMC programme at CUT. Since patient simulations are introduced in the programme as early as first year, it is suggested these skills can be developed from earlier on in the programme.

Practise on standardised patients (SPs) for practice

A C Jacobs, Y Botma, M J MacKenzie, L van Dyk

Background/context: In 2011 the School of Nursing invested in training staff in simulation. Since then, simulations using standardised patients and high-fidelity human simulators were implemented. The School of Nursing

views simulations as a learning opportunity and sees learning as an active process of creating own knowledge. Outcomes, teaching and learning opportunities, and assessments are constructively aligned.

Aim/purpose: To share our experiences of standardised patients (SPs) in simulations.

Methods: Themes are developed in accordance with the teaching and learning model of the School of Nursing. Because simulation is seen as a learning opportunity, simulation with SP is aligned with the outcomes and assessment strategies of the theme. Developing a simulation scenario for SP occurs according to a standardised template. Second-year nursing students completed the theme on airflow limitation in which the theory and clinical skills were learned. The SP simulation scenario focussed on a patient with asthma in a primary healthcare setting. Simulation footage was analysed by the module coordinators, SP co-ordinator and educational advisor.

Results and discussion: Students enjoyed the experience but also identified their own limitations and mistakes. They were able to plan their own learning needs. Even fourth-year nursing students identified with the second-year students and recognised behaviour that they exhibit in their own practice and the need to improve.

Conclusion/take-home message: Standardised patients enhance learning and may contribute to bridging the theory-practice gap.

Practise makes perfect: A real-life challenge for facilitation of learning

Hanlie Pitout

Background/context: Real-life challenges as part of teaching are important in facilitating learning. A real-life challenge that was introduced during 2011, as part of my Fundamentals of Occupational Therapy curriculum, was for students to create a traditional cooking area for the hospital, where patients could practise traditional cooking, simulating patient's home environment.

Aim/purpose: The purpose of the action research study was to evaluate student response to a learning opportunity presented as part of a subject where managing services is taught. Changing the way that learning is facilitated and adapting the outcomes accordingly provided an opportunity for growth for both the facilitator and students alike.

Methods: Students were asked to reflect at different stages during the project. Initially they had to reflect on their understanding and expectations of the project. They had to present their planning and progress regularly through the process to peers and lecturers. Students' reflections on the process and their growth throughout were recorded.

Results and discussion: The students experienced personal and professional growth during their participation in this real-life challenge. They had the opportunity to apply the theory that they had learned on project management, teamwork, planning and organising, in a real-life environment. The end product was visible and of benefit to the hospital where the project was executed. The hospital now has the facilities and equipment to present traditional cooking activities.

Conclusion/take-home message: Providing a real-life challenge to students instead of teaching a predominantly theoretical course proved to be beneficial. Students received recognition from peers and other departments for their knowledge and skills. They received the opportunity to practice their project management skills and experienced the results of inadequate planning and insufficient teamwork first-hand in a supportive environment.

Reviving the SP – authentication breathes life into the SP

H Schweickerdt-Alker

Background/context: Although simulated/standardised patients (SPs) are used in many institutions, especially in portraying roles on given short scenarios, the scope of how much they could mean is still not fully understood. Often they are merely regarded as breathing manikins and are not used to their full potential. The creation of three-dimensional (3D) characters by implementing authenticity allows the SPs to become the person behind the patient and to deliver a realistic true-to-life portrayal.

Aim/purpose: Describe the effect of authenticity of patient portrayal by SPs.

Methods: Through experience as an SP the importance of playing a 'person behind a patient' or a 3D character, became evident. As an SP facilitator the opportunity arose to share this knowledge with SP trainees and coach them to understand and become 3D characters. The character traits, emotional background, personality etc. and the subtext (meaning behind the words) of a patient were examined and worked into the scenario as part of the patient as a 'whole' human being.

Results and discussion: The SPs portrayed roles more realistically, and their energy levels, enjoyment of the work and dedication improved. Verbal and non-verbal communication of the SPs became more congruent. Facial expressions became real. They became more believable characters with more depth. This allowed the students to delve into the person behind the patient to get to the actual root of the problem.

Conclusion/take-home message: If SPs are trained to be authentic, they come closer to the person they are portraying as patients. This dimension gives the students the opportunity to listen to what the SP (patient) is **not** telling them – to read between the lines – and to get as much out of their training as possible. The sessions with the SPs become a more exciting and authentic learning process.

Clinical Skills Unit: Addressing the needs for continued professional development (CPD) in allied health professions

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Background/context: The monitoring of continued professional education in South Africa became the responsibility of the Health Professions Council of South Africa (HPCSA). The HPCSA has implemented a compulsory Continued Professional Development (CPD) programme to ensure that health practitioners update their professional knowledge and skills to the benefit of their clients/patients. A study by Phillips concludes that higher education institutions have a responsibility towards alumni regarding CPD. Most of these development sessions are currently the improvement of knowledge and not necessarily skills. With the completion of the Clinical Skills Unit (CSU) of the School for Allied Health professions (SAHP) in 2011, one of the aims was to develop the unit as an institute for CPD activities.

Aim/purpose: To investigate the need for an institute for CPD among dietitians, occupational therapists and physiotherapists.

Methods: The study had a descriptive and comparative nature. Questionnaires (N=258) were distributed to qualified dietitians, occupational therapists and physiotherapists from the Free State and Northern Cape provinces, South Africa. To ensure reliability, 10% of the sample was tested after 1 month. Ethical approval was obtained to conduct the investigation.

Results and discussion: Round-one questionnaires were distributed among respondents; 127 professionals responded. The study population was mainly female (97.6%), with 56% from the Free State. Respondents were mostly employed in the public sector (71.7%) and attended CPD activities in Bloemfontein (65.9%). The majority of previous CPD activities were theory (70.6%), but most of the respondents (85%) indicated that they would prefer small-group learning. Respondents also expressed a need to observe experts, especially with regards to intervention skills. The majority of respondents agreed that the CSU can address their CPD needs. There were no significant differences between the 3 groups of professionals.

Conclusion/take-home message: Developing the University of the Free State CSU as a provider of CPD activities can address the needs of allied health professionals.

An investigation into participation trends by wheelchair basketball players at the Zimbabwe Paralympic Games: A case study of Bulawayo

Bhekuzulu Khumalo, Ignatius Onyewandume, Sungwon Bae, Shadreck Dube

Background/context: Physical activity and sports for participants with functional limitations and activity restrictions are increasingly being referred to within the framework of Adapted Physical Activity (APA) (Sherrill, 2004; Steadward *et al.*, 2003; Winnick, 2005), health promotion (Riley *et al.*, 2008), rehabilitation medicine (Roe *et al.*, 2008), Special Olympics (Shapiro,

2003; Farrell *et al.*, 2004) and Paralympics (Higgs and Vanlandewijck, 2007). The IPC recognises 6 different disability groups: amputees, athletes with Cerebral Palsy (CP), blind or visually impaired athletes, spinal cord injury athletes, and athletes with an intellectual/learning disability. This research focuses on amputees, spinal cord injury athletes and the other athletes with a physical disability, who participate in wheelchair basketball. Disability or the disablement process is manifested in the interaction between the individual and his/her environment. This research was guided by the UN Accessibility for the Disabled document, designed to guide and set standards for built environment accessibility by the disabled.

Aim/purpose: To investigate (i) challenges faced by wheelchair users in the use of public transport and roads; (ii) participation trends in wheelchair basketball; and (iii) reasons for participation or non-participation in basketball by physically disabled persons in Zimbabwe's Bulawayo city.

Methods: Randomly selected wheelchair basketball players from 2 clubs in Bulawayo were interviewed and group discussions carried out. Seventeen people (9 males and 8 females) were interviewed.

Results and discussion: The results show that the barriers to participation are a result of an unfriendly and non-adapted transport system, poverty, lack of access to equipment and non-adapted facilities providing health and safety risks over and above accessibility challenges.

Conclusion/take-home message: This research revealed a list of barriers to wheelchair sports participation, opening avenues for further research in the areas of mainstreaming and Paralympic sports participation in Zimbabwe.

The need and value of teaching knowledge and skills among Family Medicine registrars

Marietjie de Villiers, Francois Cilliers, Nicoline Herman, Francois Coetzee, Klaus von Pressentin, Martie van Heusden

Background/context: Postgraduate students specialising in various medical fields (registrars) work fulltime in the health services and are usually involved in the training of undergraduate medical students. This mostly involves individual or small-group clinical supervision and feedback, but some registrars are also doing formal lectures. Registrars, however, very seldom receive any training on how to teach.

Aim/purpose: This study reports on Phase 2 of a larger research project seeking to investigate the influence of a module on teaching and learning on family physician trainees and its effect on their teaching practices. Phase 1 results were reported at the 2011 SAAHE Conference. In Phase 2, current registrar perceptions of their role as medical specialists, attitudes towards teaching, and confidence with and participation in teaching activities were explored for groups before and after the module.

Methods: In-depth interviews were conducted with 11 purposively selected final-year students in the MMed Family Medicine programme at Stellenbosch University after completing the module. Two focus-group interviews were held with a total of 7 third-year students before commencing with the module. Interviews were digitally audio-recorded,

transcribed and thematically analysed. Ethical clearance was obtained for the study.

Results and discussion: Both student year groups emphasised the need for the inclusion of a module on teaching and learning in their training. The final-year students were more confident than the third-year students in terms of performing small-group and one-on-one teaching, as well as doing presentations. Stress levels for presentations were similar for both groups, but final-year students had reduced stress levels for one-on-one teaching.

Conclusion/take-home message: Registrars-in-training expressed a clear need to be proficient in teaching practices even at an early stage of their studies. Although only the perceptions of respondents were ascertained, these aligned with qualities expected of competent teachers.

A reflection on professional development of registrars completing a module in Healthcare Practice

G J Van Zyl, J Bezuidenhout, M M Nel

Background/context: The MMed professional training and the skills required by registrars are generic in nature. These skills were trained in the module in Healthcare Practice (GPV 703).

Aim/purpose: This research evaluated registrars' experiences of the module, including quality assurance, improvement of content and mode of presentation. Module development was specifically aimed to offer each registrar the scope to address the unique needs concerned with Ethics, Practice Management and Patient Communication.

Methods: The study was a quantitative study enhanced by qualitative methodologies. Guest presenters (clinicians, health sciences and other professionals) facilitated the contextualisation and application of the content of the module. A self-administered questionnaire included a rating scale and open-ended questions was completed by participant registrars to evaluate presentations.

Results and discussion: A total of 40 registrars who completed the newly introduced module GPV703 from 2009 to 2010 participated in the study. Informed consent was obtained before completion of the self-administered questionnaire. Thirty-one Heads of Department (HoDs) helped with the evaluation. Thirty-eight (95%) of the 40 registrars completed the questionnaire. Registrars reported a total satisfactory and very good combination mean percentage of 91% for the questions related to the orientation session, content and applicability of the module. Thirty-one (77.5%) of the 40 questionnaires collected, were completed by HoDs on the insight of registrars in GPV. Registrars found the lectures on ethics to be most valuable and an important aspect for the treatment and management of patients.

Conclusion/take-home message: Value was added and aspects required by registrars to develop and/or enhance their skills, knowledge and professional behaviour with regard to Ethics, Practice Management and Patient Communication were addressed.

Integration of learning in an undergraduate medical programme at the University of the Witwatersrand

Shalote Rudo Chipamaunga

Background/context: One of the key concepts underpinning the reformed MB BCh undergraduate programme of the University of the Witwatersrand has been to apply the principles of integration as a strategy to enhance learning. Integration is one of the cornerstones of current medical programme reform in the world. Horizontal and vertical integration of content from relevant basic sciences and pathological, humanistic and clinical disciplines requires specific efforts. There is evidence that integration assists students to assimilate and apply what they have learned more effectively, and thus enhance the goal of achieving professional competence.

Aim/purpose: To outline the application of phenomenography as a unique qualitative research approach for collection of data on student and staff views on integration.

Methods: Individual face-to-face interviews and focus-group discussions are being conducted to collect data from the following study samples as they continue in the 2012 programme: cohort 1: the 2011 class of MB BCh 1; cohort 2: the 2011 class of MB BCh 2; cohort 3: the 2011 class of MB BCh 3; cohort 4: the 2011 class of MB BCh 4; cohort 5: the 2011 class of MB BCh 5; teachers of medical students in years 1 - 6 of the programme; and academic staff involved in developing/reviewing the 6 years of the reformed MB BCh programme.

Results and discussion: This is work in progress (data collection is ongoing).

Conclusion/take-home message: Determining the effectiveness of integration requires obtaining the views of those who experience it. Phenomenography is one of the best methods of investigating students' experiences in education.

A document review of the MB ChB curriculum to inform enhancement of undergraduate public health (PH), evidence-based healthcare (EBHC), health systems and services research (HSSR) and infection prevention and control (IPC) teaching

Anke Rohwer, Taryn Young, Lilian Dudley, Fidele Mukinda, Neil Cameron, Bart Willems, Shaheen Mehtar, Frederick Marais, Angela Dramowski, Ben van Heerden

Background/context: Stellenbosch University, through a Medical Educational Partnership Initiative grant, aims to enhance the skills of medical professionals in HIV/AIDS and TB care in rural and underserved communities, and to increase research capacity in this field. Strengthening the knowledge and skills of EBHC, PH, IPC and HSSR among undergraduate medical students is key to this initiative.

Aim/purpose: We conducted a document review of the MB ChB curriculum at Stellenbosch University, to describe the current content of EBHC, IPC, HSSR and PH teaching, and to inform strategies to enhance the curriculum.

Methods: Four teams identified area-specific competencies aligned with the CanMEDS framework. Each team reviewed all 64 theoretical and clinical module guides and extracted learning outcomes relating to area-specific pre-specified competencies, using standardised data extraction forms. Learning outcomes were classified as knowledge, skill or attitude. 'Knowledge' outcomes were assessed based on Bloom's taxonomy of cognitive functioning by matching the verb contained in the learning outcome to the appropriate level of the taxonomy.

Results and discussion: EBHC, IPC, HSSR and PH are covered to varying degrees. Teaching is confined to specific modules and not explicitly integrated in a stepwise fashion, progressing from lower levels of knowledge to acquisition of skills and practical competencies throughout the curriculum. As this study was based purely on information in the module guides, it did not aim to comprehensively capture actual learning taking place in various teaching contexts. To supplement data, interviews with lecturers and tutors, and a survey with recent graduates will be undertaken.

Conclusion/take-home message: National health priorities should direct the competencies needed by health science students. This document review is the first part of a situational analysis which will inform the enhancement of EBHC, PH, IPC and HSSR teaching offered at undergraduate level.

Going rural: An analysis of the first year of implementation of an innovative medical education model

S Van Schalkwyk, J Bezuidenhout, H Conradie, M De Villiers, T Fish, B Van Heerden

Background/context: In 2011, 8 final-year medical students from Stellenbosch University commenced year-long clinical training at 2 sites on the Ukwanda rural platform. Two models were adopted: a traditional discipline-based clinical rotation programme at the regional hospital and the longitudinal integrated model at a district hospital. While students were required to complete the same summative assessment as their peers at the central hospital, a number of curriculum innovations were implemented.

Aim/purpose: This benchmarking study, supported by SURMEPI was undertaken to determine the success of the first year of implementation of the programme to inform future refinement of the model.

Methods: The formative evaluation adopted a mixed-methods approach. After obtaining ethical clearance, 22 in-depth interviews (with students, preceptors and administrators) and one focus-group interview (with home-based carers) were conducted. The transcribed recordings were analysed using Atlas ti. Comparative analyses between the results of the rural-based students v. students at the central hospital were undertaken.

Results and discussion: Students described their enhanced self-confidence and improved skills. Themes less explored in the literature, such as continuity of patient care and feeling part of a team and community, also emerged. Students explained how the experience had influenced their thinking and had encouraged self-study. The preceptors described their personal learning experiences – sentiments that were echoed by the healthcare workers on the rural platform. Also evident was how community-based activities had

heightened social awareness. The comparative analyses highlighted trends which require further exploration.

Conclusion/take-home message: The findings of our study exhibit congruence with existing literature and provide critical insights for future iterations of innovative rural education models. The resultant learning experiences are potentially transformative encouraging socially accountable practices.

Generic learning skills in academically-at-risk medical students: a development programme bridges the gap

V C Burch, G Gunston, D Shamley, C Sikakana, D Murdoch-Eaton

Background/context: A major global challenge of medical education is widening access and enrolling students from diverse educational backgrounds. Given the increased risk of attrition, development programmes have been established to improve the throughput of these academically-at-risk students. While these programmes acknowledge the importance of generic skills development in promoting academic success, there are no reports documenting the impact of these programmes on changes in the students' skills profiles.

Aim/purpose: Determine whether (i) academically-at-risk students, entering medical school at the University of Cape Town (UCT), have a different generic skills profile compared with conventional students; and (ii) the change in skills profile of these students after completing a 12-month Intervention Programme (IP).

Methods: A previously validated questionnaire was used to document students' self-reported practice of, and confidence in, generic skills including information handling, managing own learning and technical, numeracy, IT and organisational skills. The survey was self-administered at the beginning and end of first year after completing the IP.

Results and discussion: Four hundred and thirteen first-year medical students were enrolled in the study (99% participation) and 77 (19%) entered the IP after failing semester 1. There was a significant difference in the practice of, and confidence in 5/6 categories of generic skills between the IP students and conventional students upon entry to medical school. At the end of first year, after completing the IP, there was no significant difference between the practice of, and confidence in 5 of the 6 categories of generic skills between the IP students and conventional students. Sixty-two IP students (81%) successfully completed first year.

Conclusion/take-home message: Academically-at-risk students entering medical school at UCT lack a range of key generic learning skills. IP participation closes the skills gap and results in a first-year completion rate of 81%.

Do students calibrate their confidence after being informed of their assessed competence?

T P Yeow, K C Tan, L C Lee, J Blitz

Background/context: This research was conducted at Penang Medical College in Malaysia, among 3rd-year medical students who were learning practical skills prior to the start of their clinical rotations.

Aim/purpose: We confirmed that self-perceived confidence in practical skills is not an accurate reflection of competence in our student population. We were interested to determine whether students calibrated their confidence after receiving feedback on their assessed competence.

Methods: One hundred and fifteen third-year medical students underwent a 13-week practical skills module. Students were invited to rate their confidence for each skill pre- and post- module on a scale from 1 (don't know what this skill is) to 6 (fully expect that I am able to teach this skill to a junior colleague). At the end of the module, their performance in a selection of these skills was assessed by means of an OSCE. On completion of the OSCE, students were given their performance checklists with feedback. They then rated their confidence for the last time.

We analysed changes in pre- and post-OSCE confidence against whether they had passed or failed the OSCE stations.

Results and discussion: Sixty-two of 115 students who completed all confidence ratings were included for analysis. The majority of students with high-confidence pre-OSCE maintained this, regardless of whether they failed the OSCE or not, despite being informed of their poor performance. In response to open-ended questions added to the final confidence rating scale, 84% of students were unsatisfied with their performance during OSCE while 66% believed the OSCE performance did not accurately reflect their competence.

Conclusion/take-home message: Self-assessed confidence in practical skills was not calibrated in response to being informed of OSCE performance. Lack of calibration may be affected by students' inherent character, self-reflective skill and their confidence in the assessment process.

The effect of simulated emergency skills training and assessments on the competence and confidence of medical students

I Treadwell

Background/context: Medunsa's Skills Centre came into operation in 2010. The skills teachable in simulation were listed for 6 academic years to integrate theory and scheduled clinical practica. Sixth-year medical students have to manage 3 simulated clinical emergencies in small groups during the orientation period of the Family Medicine block. The skills incorporated in these simulations include basic life support, airway suctioning, oropharyngeal airway placement, endotracheal intubation, Bag-Valve-Mask ventilation and defibrillation. The 2012 6th-year students' emergency training was only through apprenticeship in real-life clinical situations. There is no evidence that these students had opportunities to practise these

skills during their clinical rotations or how competent and confident they are to perform emergency skills.

Aim/purpose: To determine the effect of skills training and assessments on the competence and confidence of senior medical students in performing emergency skills.

Methods: A one-group pre- and post-test quasi-experimental design is being used. A convenience sample will comprise students of 3 Family Medicine rotations (February to June 2012). *Pre-testing:* (i) questionnaire to determine participants' exposure to the above name skills during their training and their confidence levels in performing these skills; (ii) MCQ test on the skills; (iii) OSCE to determine the participants' competence. *Interventions:* (a) lectures and demonstration on skills; (b) supervised hands-on practise. *Post-testing:* (i) questionnaire on training experience, MCQ and OSCE.

Results and discussion: The questionnaire responses will be summarised by frequency counts and percentages. The percentages of 'favourable' outcomes before and after the teaching sessions will be compared using the McNemar test. The mean Likert scale scores, tests scores and OSCE results obtained before and after the teaching and practise sessions will be compared by using the paired *t*-test.

Conclusion/take-home message: Research is ongoing. Results and conclusions will be discussed at conference.

Rural longitudinal integrated clerkships: Lessons from two programs on different continents

Ian Couper, Paul Worley, Roger Strasser

Background/context: Flinders University in Australia has had a rural longitudinal integrated clerkship for selected medical students, the Parallel Rural Community Curriculum, since 1997. The Northern Ontario School of Medicine (NOSM) in Canada introduced a similar clerkship for all NOSM students in 2007. An external evaluation of both programs was conducted, in 2006 and 2008, respectively.

Aim: To analyse similarities and differences between these 2 programmes.

Methods: The evaluation took the form of a cross-sectional descriptive study conducted in each school using focus-group and individual interviews, involving students, faculty, preceptors, health service managers and community representatives. Interviews were analysed for emerging themes based on a grounded theory approach. Common themes were tabulated and validated. The themes for the 2 sites were compared and contrasted to assess similarities and differences.

Results and discussion: Interviews and focus groups were conducted with 87 people at Flinders and 39 at NOSM. All participants felt that the programs produced confident and skilled students. The educational value of the programs was expressed in terms of continuity of care, longitudinal exposure, development of relationships, mentoring, teamwork, and participatory learning. Common concerns were related to issues of standardisation,

ensuring exposure to all specialist disciplines, communication, support for students and preceptors, isolation, dealing with personal issues, and the process of site selection.

Conclusion/take-home message: The rural longitudinal integrated clerkship approach to teaching the core clinical components of the undergraduate medical curriculum has a positive impact on both students and clinicians, as demonstrated in 2 different sites on 2 continents.

Feet of clay? No! Our model of the learning effects of assessment seems robust

Francois Cilliers, Lambert Schuwirth, Cees van der Vleuten

Background/context: An intervention based on a validated model should result in better outcomes than a less theoretically grounded effort. While much research links assessment and learning, few models exist to explain the links that are typically observed. No models have been validated or have gained traction to inform intervention design. Using grounded theory, we proposed a model linking assessment and pre-assessment learning. We are in the process of validating this model.

Aim: To explore the model's generalisability in varied assessment contexts.

Methods: Cross-sectional surveys of 593 students at 3 universities were undertaken. A purpose-made questionnaire was developed, comprising pairs of written situational tests using the logic of the key-features approach. The chi-square statistic was used to determine significance for associations between assessment factors and learning effects. The frequency of involvement of mechanism factors was calculated. As the most stringent test of the model, we focused on the model's 21 weakest associations. Ethical approval was obtained.

Results: The response rate was 45.9%; 15/21 associations between assessment factors and learning effects were significant ($p < 0.00625$) across institutions. The role of 7/8 assessment factors, all 8 learning effects and all 10 mechanism factors were substantiated. Three mechanism factors (agency (25.7%), response efficacy (21.4%) and response value (14.6%)) mediated the majority of associations.

Conclusion: Model validation is an ongoing process - these results are but one link in a chain of evidence. The support for the weakest associations bodes well for future studies of the model's stronger associations. These results bring us one step closer to a model that could meaningfully inform assessment-based interventions.

The role and responsibilities of higher education institutions (HEI) regarding peer mentoring

Y Botma, S Hurter, R Kotze

Background/context: This presentation reports on the postgraduate critical care students' mentoring of the third-year undergraduate nursing students during integrated work-based learning in the critical care units.

Aim/purpose: The purpose of the research was to describe what the higher education institution (HEI) could do to improve this mentoring programme.

Methods: A qualitative descriptive design was used. The nominal group technique was used to gather data from the mentors and mentees. Data from the groups were combined and qualitatively analysed into themes. Thereafter the themes were quantitatively ranked.

Results and discussion: The themes, ranking from the highest to the lowest, were orientation, organisation, mentoring process, characteristics of the mentor, and feedback to the mentor. Findings suggest that the HEI does not always optimally support the mentoring programme. It is recommended that more than one communication medium be used to disperse information among role-players. HEIs should develop mentors, monitor their interactions with mentees and give them feedback on their mentoring skills. It is also the responsibility of the HEI to select mentors that match the desired profile of mentors.

Conclusion/take-home message: Main tasks of the HEI are to: (i) develop guidelines for the mentors and mentees; (ii) develop memorandum of understanding; (iii) develop the mentors; (iv) support mentors; (v) create and maintain open communication channels to all parties; (vi) monitor mentoring process; and (vii) provide feedback to mentors and mentees.

St. George's University School of Medicine (SGUSOM): Innovative student academic support in the basic sciences Glen Jacobs

Background/context: SGUSOM is located in the Caribbean island of Grenada in the West Indies and the majority of the students are from the United States. Performance on standardised measures to enter into medical schools is lower for these students than for students attending United States medical schools. SGUSOM students out-perform students from all other Caribbean schools of medicine and for 2010 equalled the first-time pass rate of 92% in the US and Canada on the United States Medical Licensing Examination (USMLE) Step 1, a standardised examination of basic science knowledge. An astonishing achievement.

Aim/purpose: To identify academic student support practices which may contribute to enhance student learning and academic performance in the basic sciences.

Methods: Comparing basic intake and outtake performance data of students on standardised examinations.

Results and discussion: On average SGUSOM students perform equally as well on USMLE Step 1 as students who took the basic sciences in the United States medical schools, even though their performance on standardised measures is lower. We have identified innovative practices at SGUSOM that we believe contribute to enhanced performance and that have become part of the learning culture of the university. This includes a unique Department of Educational Services, specialised advising system, academic enhancement program, imbedded small-group learning and review groups, Sonic Foundry and Sakai.

Conclusion/take-home message: The philosophy at SGUSOM is that once a student gets admitted to the university, it is a responsibility of the institution to help them succeed without compromising standards. This is done in a most efficient way by providing an effective student support system as well as sufficient resources. This support should be part of the medical school culture and not an add-on.

'For most of S Africans, we don't just speak': A qualitative investigation into collaborative heterogeneous PBL group learning

V S Singaram, C P M van der Vleuten, D H J M Dolmans

Background/context: An enhanced interaction across the racial, ethnic and cultural divide is particularly relevant for medical students as it prepares them for practising medicine in a multicultural community. Collaborative approaches such as problem-based learning (PBL) may provide the opportunity to bring together diverse students, but their efficacy in practice and the complications that arise due to the mixed ethnicity needs further investigation

Aim/purpose: This study explores the key advantages and problems of heterogeneous PBL groups from the students' and teachers' opinions.

Methods: Focus groups were conducted with a stratified sample of second-year medical students and their PBL teachers. Discussions were transcribed and analysed using Atlas-ti.

Results and discussion: Several themes describing opportunities, challenges and recommendations emerged. These included uniting diverse students and preparing them to work in multicultural societies. Challenges included segregation, non-participation due to inequalities, social status, language barriers and differing levels of academic preparedness.

Conclusion/take-home message: The presence of a multi-cultural student population at a learning institution does not necessarily mean that there will be positive interactions in intercultural collaborative learning activities. Students and staff need special diversity skills training and continuous feedback.

A dual perspective on a goal-directed mentoring programme for a junior lecturer in the Department of Speech-Language Pathology and Audiology

A M Wium, F Mahomed

Background/context: The benefits of mentoring in Higher Education are well documented. In order to orientate and integrate a new staff member in the Department of Speech-Language Pathology and Audiology a mentoring programme was introduced. Both the mentor and the mentee were seeking to develop professionally. The mentee, who had limited experience in Higher Education, required support in the academic environment and in teaching and learning. Communal goals were developed according to personal needs and were met through a process of goal-directed mentoring.

Aim/purpose: The aim was to develop a blueprint for a mentoring programme to be used with junior staff in the Department of Speech-Language Pathology and Audiology.

Methods: Specific goals were identified at the onset of the mentoring programme. The data collected was obtained from continuous reflections by the mentor and the mentee, peer review and self-evaluation. The process and the outcomes of the mentoring programme were documented and presented as a portfolio.

Results and discussion: The results are based on the experiences and reflections of both the mentor and the mentee. Goal-directed mentoring appears to be effective as benefits, such as personal and professional growth and empowerment of the mentee, were identified and documented by both. From this symbiotic relationship both parties experienced the process as meaningful and were motivated. Future needs were identified.

Conclusion/take-home message: Goal-directed mentoring combined with continuous reflection by both the mentor and mentee created the opportunity for professional and personal growth. Such a mentoring process can be used to advance the academic careers of staff.

BCMP student experiences of professionalism during clinical rotations

M O Mapukata-Sondzaba

Background/context: Medical professionalism as a set of behaviours that transcends personal values, beliefs and attitudes to incorporate ethical and moral principles, is considered to be a covenant between society and the medical practitioners. As a desired state, an understanding of the attainment of professionalism not as an event but rather as a process obligates both the academic and the clinical tutors to cooperate for the good of the patient.

Aim/purpose: To assess congruency between the academic and clinical training environment with regards to professionalism by reviewing Bachelor of Clinical Medical Practice (BCMP) student experiences of professionalism during clinical rotations.

Methods: Following 5-week attachments in 5 purposely selected clinical departments, 25 final-year BCMP students reflected individually on their personal experiences of professionalism in the workplace for 3 of the rotations. Qualitative methods were used to group emerging themes from 69 portfolios. BCMP student experiences of professionalism were analysed from an ethical perspective, guided by HPCSA guidelines for healthcare professionals.

Results and discussion: BCMP students reflected positively on the respect for patients, compassion and care that they observed in paediatrics. Professional integrity was recognised as a context-specific attribute for admitted patients. Role modelling was experienced in emergency medicine and in paediatrics. The lack of privacy between cubicles in the wards was perceived as compromising privacy and confidentiality of patient information. Inadequate communication, attitudes of staff, resources and cultural issues were some of the attributes that compromised patient care.

Conclusion/take-home message: BCMP students demonstrated congruency on professionalism by integrating theoretical knowledge with their experiences during clinical training rotations. They were able to recognise positive and negative contextual attributes of professionalism and identify individuals who they perceived as role models.

Creating an educational environment that fosters agency and social accountability in health professionals

Ellenore Meyer, Alwyn Louw

Background/context: Social accountability of medical schools is defined as 'the obligation to direct their education, research and service activities towards addressing priority health concerns of the community, region or nation they have a mandate to serve.' Balancing global principles with context specificity necessitates an understanding of the African context of community, including the concept of Ubuntu. Medical educators play a central part in providing relevant activities that will foster agency and social accountability.

Purpose: Evaluating the effect of this bio-ethics module on second-year medical students' knowledge of, and attitudes towards, social accountability.

Method: The study evaluated an educational intervention; using a pre- and post-intervention test design. Qualitative and quantitative data were collected as part of a mixed-methods strategy in a survey by means of a questionnaire. The questionnaire focused on learners' views on community, social accountability and Ubuntu. Qualitative data were analysed and coded according to themes. Coding was performed through an inductive open process. Ethical clearance was obtained. The educational intervention entailed an in-class learning experience in small groups at the hand of multiple case examples over 4 weeks.

Results and discussion: Eighty-five per cent of 2nd-year students in the sample group completed questionnaires. On average, learners' knowledge regarding social accountability improved – the differential on the quantitative component pre- and post-intervention was +11.2% ($p=0.0033$). Qualitative data revealed a positive development of students' views and attitudes about their roles as health professionals having an agency and social accountability.

Take-home message: Embedding the principle of Ubuntu in the Bio-Ethics module has the potential to equip and inspire learners to fulfil their role as socially accountable change agents.

Introducing basic medical isiZulu to medical students for communication purposes – did it work?

L Molefe

Background/context: Teaching isiZulu to GEMP 1 medical students at the University of the Witwatersrand became necessary in 2011 as problems of communication continued between English-speaking health workers and African language speakers.

Aim/purpose: (i) To create a moderate background for students who do not speak isiZulu; (ii) to increase basic communication skills in isiZulu for those who have little to no background in the language; (iii) to straighten communication skills among mother-tongue speakers as well; (iv) to minimise cases where nurses become doctors' interpreters; and (v) to protect patient privacy.

Methods: Teaching material was created using the GEMP 1 block system; isiZulu sentences were created using the history taking questions and answers. Grammar and terminology from the blocks also formed part of the lessons. The same material was placed on a website for students to access, with video clips of a lecturer teaching isiZulu to promote correct pronunciation. Tutorials are managed by GEMP 1 students who speak isiZulu, with the help of a lecturer.

Results and discussion: Some students perceived that the course added to their study load. Hence, attendance was high in the beginning but decreased later. Mother-tongue isiZulu speakers never attended, while those with half the background of the isiZulu speakers attended occasionally. Only those with no background at all attended. However, the first OSCE saw an 80% pass rate, even in the final exam. GEMP 1 students of 2012 have shown incredible interest in the course. Their current attendance is immeasurable. This is partly because the course was not introduced as additional work, and also because the students understand the communication problem that this course is attempting to address.

Conclusion/take-home message: It is hoped that more African languages will be included in the same programme in the future. More basic isiZulu communication teachers may also emerge from the course.

Diagnose before you prescribe: A faculty needs assessment for a Faculty Development Programme in AHFAD

Tahra S Al-Mahdi

Background/context: Ahfad University for Women (AUW) is the pioneer in female education and empowerment in Sudan. Ahfad Medical School (ASM) was established in 1990 to produce the right type of graduates for its context through an innovative community-orientated curriculum. Due to many factors, the ASM curriculum has gradually deviated to a more conventional form. In 2008 winds of change arrive in the shape of a partnership with the American University of Beirut (AUB). This mandated a university-wide move towards a more student-centred approach. Ahfad Educational Development Centre (AEDC) was established to support faculty in coping with new demands, through various faculty development (FD) activities. Unexplainably, ASM faculty attendance of these activities was consistently low.

Purpose: To identify faculty's professional development needs (PDNs) prior to designing a suitable FDP.

Methods: PDNs were assessed in a 1-day workshop through small-group discussions. Consequently, a questionnaire was generated to prioritise the different areas and capture the desired format, duration and timing of FD activities. Both tools targeted full-time faculty ($N=56$ teacher). Forty-

eight members attended the workshop (85%), of whom 28 answered the questionnaire (50%).

Results and discussion: Eight FD areas were identified: assessment, classroom management, curriculum evaluation, instructional planning, instructional methods, research, student support, and technology. The different areas were prioritised from the most- to the least-needed and the desired format (workshop), duration (1-day) and days (e.g. Saturdays) for the FD activities. The workshop established some important recommendations which were translated into actions during the project duration: conduction of longitudinal workshops on assessment, implementation of a new exam format, involvement of students in their education, regular faculty meetings and reform of some courses.

Take-home message: Allow teachers to identify their own professional development needs; they will be more committed to filling identified gaps.

The value of standardised video demonstrations as an educational tool in clinical skills training

L de Bruyn, J Lombaard

Background/context: In clinical skills training, pre-clinical MB ChB students are taught the art of managing a patient during a clinical consultation. The nature and volume of the study matter necessitates longer teaching time and smaller student groups. The class is therefore divided into 6 groups. This implies that a session must be presented on 6 consecutive days by the clinical department responsible for the particular session (e.g. Urology). This is extremely labour-intensive and problematic for clinicians who are also service providers in clinics and hospitals.

Aim/purpose: To determine whether standardised video demonstrations of clinical presentations are of educational value in the Clinical Skills course.

Methods: Video recordings were made of presentations given by the designated clinician. The subjects included history-taking or performing a clinical examination. These were edited and their educational value enhanced by adding classifications, summaries and explanatory photographs of the content presented. At the end of their Clinical Skills course, the students ($n=113$) completed an anonymous questionnaire to determine their perception of the value of these video demonstrations. The results were analysed and presented as a percentage for this qualitative study.

Results and discussion: The majority of students (78%) responded positively and found the presentations of clinical examinations to be of educational value.

Conclusion/take-home message: Presentation of the components of the clinical consultation, e.g. taking a patient's history or performing a clinical examination, by means of video demonstrations is perceived as a valuable educational tool by students. This method has the advantage of replacing the consultants' repetitive presentations, allowing them to use their limited time to facilitate students' practising the physical examination and also, that each student receives exactly the same tuition.

Faculty development – a policy review

Ian Couper, Patricia McInerney

Background/context: As part of the development of the Guidelines for the Scaling up of Transformative Health Professional Education, the World Health Organization requested that a policy brief be written for the second Core Group meeting.

Aim/purpose: To understand the issues and challenges related to faculty development with respect to medical, nursing and midwifery education, in order to make policy recommendations.

Methods: A review of the literature was conducted of faculty development, specifically in relation to the teaching role of faculty members in terms of issues, challenges, impacts and outcomes.

Results and discussion: The issues and challenges related to the development of faculty for the teaching role are described in 7 broad areas: the multi-dimensional roles of health professionals; attitudes towards teaching; conflicting opportunities; the shortage of teachers; the increased demand for physicians, nurses and midwives; developing health professionals for a teaching role; and rewards for teaching. Assessing the impact on outcomes of faculty development initiatives is difficult due to limited focus in the literature on systematic evaluations of interventions using rigorous methodologies.

Conclusion/take-home message: Faculty development does impact positively on educational practices, and possibly on outcomes, but a supportive faculty environment, with rewards and incentives for teaching, requires broader institutional change. Recommendations for policy changes are made in relation to health professional schools, government and accrediting bodies.

Improving basic surgical skills for final-year medical students

Mohamed Labib

Background/context: The medical undergraduate curriculum at the University of Zambia's School of Medicine is mainly knowledge-based, with more theory than hands-on educational activities. Hospitals employing medical graduates often express concern at the inexperience of new interns in basic surgical skills. In self-assessment questionnaires, students reported little clinical procedural experience.

Aim: To measure the efficacy of a basic surgical skills workshop for senior undergraduate students, as well as retention of skills gained.

Methods: A practical skills workshop was conducted in order to set learning goals for the final study year through simulation. Three 1-day suturing and knot-tying workshops were held, where students were invited to acquire the necessary knowledge and learn skills of suturing. Sixty-three undergraduates participated in the workshops. The suturing skills of the students were assessed before and after training using a checklist. In every workshop, a pre- and post-training questionnaire was used to assess student knowledge about sutures and perceptions about the workshop. Sixty-

three students attended the workshop for the first time; 31 had a second assessment after 3 months.

Results and discussion: Teaching and assessment of technical skills in operation theatres is difficult due to pressure on theatre time, ethical issues and medico-legal concerns. All students completed the pre- and post-training questionnaires; 95% who passed the assessment said that the training improved their practical skills and theoretical knowledge. Out of 31 students who went for the second assessment, 24 (77%) passed.

Conclusion: Teaching of basic surgical skills is viable and beneficial. Basic surgical skills should be taught to all medical students regardless of their career aims, and such training is needed periodically.

Acknowledgment: Dr Johan Demper.

The role and position of clinical simulation as an additional component to current undergraduate medical curricula

M J Labuschagne, M M Nel, G J van Zyl, P P C Nel

Background/context: Clinical simulation cannot replace clinical training on real patients, but should be a required enhancement to the undergraduate medical curriculum. The integration process was investigated and recommendations were made.

Aim/purpose: (i) to explain the vertical integration of clinical simulation as instructional medium in a current medical curriculum; (ii) to explain the horizontal integration of simulation into an existing undergraduate medical curriculum; and (iii) to describe the role of clinical simulation in the curricula to develop leadership skills, group training and inter-professional skills of students and to improve patient safety.

Methods: A literature review, semi-structured interviews with international simulation experts, and focus-group interviews with lecturers of the clinical phase of the undergraduate medical programme at the University of the Free State were conducted, analysed and interpreted.

Results and discussion: The author aims to propose ways to integrate clinical simulation as an essential enhancement of undergraduate medical education and training. The integration of simulation into the curriculum, from the first to the final year, is described as vertical integration. The horizontal integration of theory, skills training and clinical training, will be discussed. There should be a continuous movement between the different components. The role of clinical simulation to develop leadership skills, group training and inter-professional skills of students will be highlighted. The important aspect of patient safety and how simulation can play a role in the improvement of patient safety will be highlighted.

Conclusion/take-home message: Clinical simulation can be integrated successfully into current medical curricula as an enhancement of undergraduate medical education and training.

Simulation taxonomy and conceptual framework, as proposed by the Canadian Network for Simulation in Healthcare in a South African context

M J Labuschagne, M M Nel, P P C Nel, G J van Zyl

Background/context: Much confusion exists in the literature regarding simulation taxonomy and terms are used haphazardly in the literature. The *Canadian Network for Simulation in Healthcare* proposed a taxonomy and conceptual framework for simulation in healthcare in 2011.

Aim/purpose: (i) to explain the 4 levels of the framework; (ii) to standardise the terminology, educational tools and educational experiences in clinical simulation; and (iii) to make it applicable for the South African context.

Methods: A literature review, semi-structured interviews with international simulation experts and focus-group interviews with lecturers of the clinical phase of the undergraduate medical programme at the University of the Free State were conducted, analysed and interpreted.

Results and discussion: The terminology used in clinical simulation is currently not standardised and confusion exists in the literature, with terms used haphazardly. The author aims to explain the taxonomy and the conceptual framework for simulation in healthcare as proposed by the *Canadian Network for Simulation in Healthcare*. The levels include instructional medium, simulation modality, instructional methods and presentation. The taxonomy and conceptual framework will be used to describe and standardise the terminology, educational tools and educational experiences in clinical simulation. The proposed framework is easy and simple to use, and is useful for instructional design and research. The application of aspects for the South African situation will be discussed.

Conclusion/take-home message: The standardisation of terminology, educational tools and educational experiences in clinical simulation is essential for descriptive purposes in research and publications.

The effect of clinical simulation on inter-professional learning of healthcare students

I Treadwell

Background/context: An outcome for newly graduated healthcare workers highlights the importance of teamwork and the understanding and appreciation of the roles, responsibilities and skills of other care workers. The majority of students are, however, not exposed to formal inter-professional learning (IPL) events in order to form realistic expectations of each others' roles and scope of practices.

Since studies indicate that IPL is facilitated by experiential learning, the Skills Centre at Medunsa introduced inter-professional trauma simulations using high-fidelity simulators and SPs. Senior medical, nursing and occupational therapy students are scheduled to take part in these events.

Aim/purpose: To assess the effect of clinical simulation on the inter-professional learning of healthcare students.

Methods: A quasi-experimental study will be performed in May 2012, using a convenience sample of medical, nursing and occupational therapy students. Pre-testing will comprise a written test and an Interdisciplinary Education Perception Scale (IEPS) will be used to determine participants' attitudes towards other disciplines. The simulation will include active pre-hospital, initial in-hospital and follow-up management of a traumatised patient by Cohort 1 participants, while observed by Cohort 2 participants. Post-testing will be a repeat of the test and IEPS. Video recordings will be rated by an expert panel as well as both cohorts. Focus groups will be held on role clarification, additional needs and self-directed learning.

Results and discussion: The percentages of 'favourable' IEPS outcomes before and after simulation sessions will be compared by the McNemar test. Mean Likert scale scores before and after simulations will be compared by the paired *t*-test. Agreement between student and panel assessments will be measured by the Kappa statistic. Qualitative focus-group assessments will be summarised descriptively. Results will be reported and discussed.

Conclusion/take-home message: To be discussed at conference.

The effect of training in characterisation on the congruence of standardised patient (SP) portrayals

L Schweickerdt-Alker

Background/context: Although simulated/standardised patients (SPs) are used in many institutions in South Africa, the scope of how much they could mean is still not fully understood. Often they are given scenarios on too short notice. Due to the lack of time for proper training regarding the interpretation of the role, the SPs are confronted with questions that they find difficult to answer and often their portrayals are stereotyped and/or incongruent. In an attempt to face and rectify these challenges, the need for character development was identified.

Aim/purpose: To assess the effect of training with regard to characterisation (creating a three-dimensional person behind the patient) on the congruence of SP portrayals.

Methods: A quasi-experimental study will be conducted at Medunsa. The convenience sample will comprise ± 50 sixth-year medical students, allocated as per curriculum to the Family Medicine Blocks in April and May 2012 and the 4 least experienced SPs at the Skills Centre. **Pre-testing:** The performance of 4 SPs in identical scenarios will be captured on video during an OSCE. SP and student reflections on the congruence of SP performances will be captured and transcribed. The characteristics of congruence will be identified by 3 SP trainers. **Intervention:** Training of SPs on characterisation with emphasis on the identified characteristics of congruence. **Post-testing:** repeat of pre-testing procedures will be done during a second OSCE and the results will be compared with the pre-testing results.

Results and discussion: The effect of training will be measured for pre- and post-outcomes of defined characteristics of congruence. Where applicable, the Fisher's Exact test will be used for significant changes in outcomes. *P*-values ≤ 0.05 will be considered to be significant. The results will be discussed at the conference.

Conclusion/take-home message: To be discussed at conference.

Does increased authenticity in practise improve patient-centred care in practice?

B Y Uys

Background/context: Simulation strategies such as using low-fidelity patient simulators (manikins) and standardised patients (SPs) are implemented to enhance the competency of students before encountering patients in practice. One of the aims of using SPs is to create more authentic (more life-like) simulated learning experiences. Such experiences should help bridge the gap from practise (simulated) to practice (encounter with live patients) where patient-centredness is of crucial importance.

Aim/purpose: To determine the effect of enhanced authenticity in simulated skills training on patient-centred care rendered by nursing students.

Methods: A pre-experimental design, the post-test only design with a comparison group, was used. The study is being conducted at the University of Limpopo (Medunsa Campus) and the George Mokhari Hospital situated in Ga-Rankuwa. Cohort 1 participants will be trained to administer an intramuscular injection using a manikin while cohort 2 participants will be trained using an SP with a strap-on device. On completion of the training, cohorts 1 and 2 will be observed and objectively assessed in May 2012 on their procedural skills and patient-centred care, while administering an intramuscular injection to a patient in hospital. A comparison will be made in the patient-centred care rendered by the cohorts.

Results and discussion: Results will be captured in data spread sheets during analysis of observation patterns and interactions. Data will be quantified and the entire variety of statistical analyses will be utilised.

Conclusion/take-home message: To be discussed at the conference.

The influence of podcasting on undergraduate medical students at the Faculty of Health Sciences, Stellenbosch University

S H Walsh, M R De Villiers

Background/context: The podcasting (or vodcasting) of lectures has been shown to benefit students. Students mostly use them for revision and test preparation. This mixed study correlates undergraduates' 2011 Respiratory Block marks with the 2012 class, as well as qualitative feedback from students and lecturers.

Aim/purpose: To determine (i) whether undergraduate medical students find podcasting to be a useful addition to lecture attendance; (ii) whether the availability of podcasts influenced the Respiratory Block test scores; and (iii) how lecturers perceived podcasting.

Methods: Lectures in the Respiratory Block of the MB ChB II course were converted into podcasts and placed on Webstudies, where students could

view or download them. End-of-block class scores were compared with those of the previous year. The marks of the students who downloaded the podcasts were statistically compared with those who did not. The opinions of the students and lecturers were obtained by means of separate questionnaires at the end of the block.

Results and discussion: *Students:* 78% used the podcasts; 88% thought that all lectures should be podcasted; 88% of students used podcasts for clarifying concepts not fully grasped in class; the 82 podcasted lectures were viewed/downloaded 1 737 times (an average of 21 times each); compared with 2011, the end of block marks improved. *Lecturers:* 70% thought that the process was stress-free or extremely stress-free; 80% thought the podcasts did not influence class attendance or even translated into any improvements.

Conclusion/take-home message: Our students mostly found podcasts beneficial for clarifying concepts that they did not grasp in class. We are continuing to podcast the entire 2nd year's lectures and will evaluate the effect that this has.

The expectations of postgraduate students and supervisors: Both sides of the coin

H Friedrich-Nel, J L MacKinnon, S Queener

Background/context: The literature on postgraduate supervision is clear that a supervisor and a postgraduate student may not always operate from the same platform when expectations regarding the completion of the research project are discussed. As such, the expectations of the supervisor may focus on engagement, interaction and formative assessment. The needs of the student on the other hand may be completely different. The student, in need of support may need a life-coach, friend and adviser.

Aim/purpose: The question is whether a blue print exists for 'realistic expectations' from the parties, and how these expectations are communicated.

Methods: A qualitative study exploring the opinions of faculty and students was conducted with an American university as a case study. Students and faculty from various schools participated voluntarily in interviews according to a structured interview schedule after approval was obtained for the study. Responses were captured during the interview and verified with the interviewee at the conclusion of the interview. Data were investigated for common themes that emerged, and grouped.

Results and discussion: Fifteen students and 23 faculty members participated in the study. Although the responses from students and supervisors varied, the majority of the student responses indicated that the supervisor has to provide guidance and/or support throughout the research process, establishing a helpful/supportive relationship. The supervisor on the other hand is open about expectations, namely that the student needs to work hard, learn, accept constructive criticism, be committed during the research process, do their best, and successfully accomplish the degree.

Conclusion/take-home message: Given the challenges that we face in South Africa with postgraduate student completion and the preparedness of

supervisors, it is of value to translate the results obtained in the study to the South African context. The paper will communicate these results and reflect critically on the local context.

'Fit for Purpose': Graduates of a new Emergency Medicine programme

Heike Geduld, Leana Wen, Lee Wallis, Vanessa Burch

Background/context: The first Emergency Medicine (EM) training programme in Africa started in Cape Town in 2004 as a joint division between the University of Cape Town (UCT) and Stellenbosch University (SUN). Upon graduation, many of the junior Faculty were quickly drafted into roles as managers, teachers and mentors, to support the developing academic programme and provincial healthcare service delivery needs.

Aim: The aim of the study was to evaluate self-assessed competencies including medical expert, scholar and manager of graduates of the EM program. Faculty development needs were also identified, in order to develop an appropriate development plan for faculty and inform the postgraduate EM training curriculum.

Methods: This descriptive study formed part of a larger formal programme evaluation process. The study population included the 30 graduates of the first 4 years of the EM training (2004 - 2007). Participants were asked to complete a questionnaire and a structured interview by a single researcher not connected to the program. Participants were surveyed regarding their perceptions of training, evolving career plans and self-identified competencies and deficiencies for fulfilling their current jobs. Participation was voluntary and responses were recorded anonymously.

Results and discussion: Twenty-seven of 30 (90%) participants were sampled; 14 (52%) were in academic posts, 4 (15%) were in non-academic clinical posts and 9 (33%) had temporary posts; 21 (72%) were still in Cape Town. Participants felt that their training had provided them with appropriate clinical and procedural skills, but management, research and teaching skills were lacking. Formal management training was cited as necessary. Lack of clear career prospects and progression was concerning.

Conclusion: While the EM training programme provides excellent clinical knowledge and skills training, there are deficiencies in academic, management and leadership competencies. Potential solutions identified include graduated responsibilities during training, fellowships and formal faculty development programs.

The impact of training in pattern recognition on the ability of diagnostic radiographers to interpret images accurately

Lynne Hazell

Background/context: Diagnostic radiographers in South Africa could provide an interpretation of an image to a recognised practitioner in the clinical situation within their scope of practice. In many South African departments there is a shortage of radiologists resulting in delayed or no

reports to referring doctors. In order to meet the needs of the country, South African radiographers need to become multi-skilled radiographers. Empowering radiographers with pattern-recognition skills could address the problem in many South African departments

Aim/purpose: To assess the ability of qualified diagnostic radiographers in a Gauteng Government Hospital to apply pattern recognition and interpret a radiograph after training in musculoskeletal pattern recognition.

Methods: The study employs a pre-/post-test model and an intervention training of radiographers in musculoskeletal pattern recognition. Nine radiographers volunteered to participate. The radiographers identified whether an image was normal or abnormal and then provided a comment on the abnormal images. After the pre-test, training in the application of pattern recognition for the musculoskeletal system was provided.

Results and discussion: Accuracy of the image interpretation demonstrated a significant improvement in the post-test. The participants identified normal and abnormal images accurately. The comments on the images also showed a significant change from the number of incorrect comments on the images to partially or completely correct comments in line with the reference standard.

Conclusion/take-home message: The intervention – training in pattern recognition of the musculoskeletal system to enable image interpretation – appears to have been successful. To empower the diagnostic radiographers in these hospitals with the skills to provide image interpretation, a training programme would need to be developed.

Sustainability of a Postgraduate Diploma in Transfusion Medicine: Results from semi-structured interviews and a Delphi survey

Vernon J Louw, Marietjie M Nel, John F Hay

Background/context: Quality education in transfusion medicine is key to delivering a safe and cost-effective blood service. A number of factors affect the long-term viability and sustainability of such a programme, particularly in a poorly resourced context with a limited number of clinicians trained in this field.

Aim/purpose: To determine and test the criteria that are key to programme sustainability when developing a model for the academic development and implementation of a Postgraduate Diploma in Transfusion Medicine.

Methods: Qualitative and semi-quantitative approaches were followed to determine and test the criteria considered to be important in programme sustainability. A literature survey was conducted, followed by semi-structured interviews with national and international transfusion medicine experts, and a Delphi survey.

Results and discussion: Fifty-five criteria were identified from the semi-structured interviews. Consensus was reached on 41 criteria and stability was reached on a further 13. Elements essential to programme sustainability were identified and ranked in order of importance.

Conclusion/take-home message: Literature on programme sustainability in the field of transfusion medicine is virtually non-existent. This study identified a number of elements essential to the long-term viability of such a programme. This should prove useful to any institution developing a postgraduate training course in transfusion medicine.

Feedback of examiners as learning opportunities for supervisors and postgraduate students

M M Nel, G J Van Zyl

Background/context: The requirements that theses and dissertations in the Health Professions Education programme should meet, are that they should demonstrate the candidate's familiarity with the relevant literature, their research skills, and their ability to write a proper report on their research. A thesis should, in addition, make an original and significant contribution to the subject field. As far as research is concerned, the candidate should prove that they are fully conversant with the research methods and techniques of their specific subject field and that they have mastered and are able to use the research methods and techniques of the particular subject field. As far as the report is concerned, they should be able to document the research problem and objective, the research setup or design, method, results and conclusions in a proper scientific (systematic and logical) manner. The work should bear evidence of the candidate's analytical skills, critical stance and substantive insight.

Aim/purpose: To analyse the feedback in 115 reports of examiners.

Methods: Quantitative and qualitative approaches were used. An empirical, non-experimental research design was followed in this descriptive study.

Results: The findings of the study are reported on by means of a description and a discussion. The findings are used to make recommendations on postgraduate education as far as the selection of a research theme, problem statement, literature review, research methodology, analysis and interpretation of results and documentation of the report, etc.

Conclusion: The role that defined criteria and clear recommendations can play was of utmost importance. With this study an attempt was made to emphasise feedback of examiners as learning opportunities for supervisors and postgraduate students.

Narrative inquiry in identity construction research: What do we do with these stories?

Lakshini McNamee

Background/context: In the human and social sciences, narrative methods are widespread in identity construction and professional development research. However, there is a noticeable lack of narrative research into the development of medical practitioners. Empirical strategies for analysing personal narratives are scarce in medical education. Even in studies that have reportedly generated suitable qualitative data, analyses are limited to thematic approaches, and structural analysis of narrative form remains

neglected. This progress report describes an ongoing study using narrative inquiry to examine the learning processes and identity construction of newly qualified doctors (NQDs).

Aim/purpose: To gain a better understanding of the school-to-work transition and internship experiences of NQDs.

Methods: Autobiographical reflections of NQDs (generated by a previous study) were examined using socio-linguistic methods, using a socio-cultural theoretical framing of 'situated learning' in 'communities of practice'. A modified Labovian classification of clauses was applied to storied events. Close attention was paid to language, discourses and narrative form (telling of narrative rather than referential aspects alone). Inferences were made regarding participants' self-categorisation and positionality in relation to various social groups encountered in practice.

Results and discussion: Identity construction of NQDs is not fixed, and as newcomers their identities were in a state of flux. They experienced various degrees of angst due to unfamiliar systems, burdensome responsibility and their sense of how others perceived them. Individuals aligned themselves with other interns and healthcare professionals according to perceived strengths. Learning opportunities afforded by different environments varied considerably, however, participants demonstrated intentionality, judging their own situations, negotiating their individual progress and choosing trustworthy sources of assistance or guidance.

Conclusion/take-home message: Early career learning viewed from a social practice perspective offers a meaningful way to study identity construction of NQDs. The professional development of medical practitioners is a complex process where identity construction is implicated along with the development of knowledgeable skill. Relational aspects of persons play an important role in determining practice.

Evaluation of a web-based module on evidence-based medicine (EBM) for Family Medicine specialist in training at Stellenbosch University

Anke Rohwer, Taryn Young, Susan van Schalkwyk

Background/context: Practising evidence-based medicine (EBM) using current best evidence in making healthcare decisions typically involves 5 steps: phrasing answerable questions, searching for relevant studies, critically appraising it for validity and usefulness, applying results, and auditing the process. Acquiring basic knowledge and skills of EBM is essential for successful implementation and subsequent improvement in healthcare quality. Enhancing EBM knowledge and skills at postgraduate level is a key strategy of Stellenbosch University's (SU) Medical Educational Partnership Initiative grant which aims to enhance skills of medical professionals in rural and underserved communities. SU's Family Medicine Division offers a 12-week online EBM module to specialists in training during their first year which could be expanded to other specialists in training.

Aim/purpose: To formatively evaluate the EBM module to inform further enhancement of delivery and content.

Methods: A mixed-methods approach was adopted. This consisted of a document review comparing learning outcomes to EBM competencies; semi-structured interviews with tutors; and a survey of the students. Ethics approval was obtained.

Results and discussion: The module content addressed 4 of the 5 main EBM competencies, although learning outcomes were poorly defined. Most students had a positive attitude towards EBM and the module, however some felt they needed more support from tutors. Interviews highlighted the need for more advanced technologies to support learning, to respond to questions and address difficult concepts in real time. The importance of EBM teaching to specialists in training was also emphasised.

Conclusion/take-home message: Results show that the content of the EBM module is adequate in addressing 4 of the 5 main EBM competencies. There is a need to incorporate modern technologies like social media, screencasts, blogs and more interactive sessions to create a more authentic learning environment. Similar modules are needed for other specialists in training.

'Teaching Teamwork'

Alan Barnard

Background/context: The teachers of palliative medicine at the University of Cape Town (UCT) work in a team of 3 palliative care trained professionals: a nurse, a doctor and a social worker. An element of the teaching is the importance of interdisciplinary teamwork. This is both taught in a didactic session (small-group lecture and a subsequent tutorial). The teamwork is also modelled by the teachers in the classroom and at the bedside (with clinical ward staff) during the clinical pharmacology ward round. The teachers and the students have never had the opportunity formally to comment on this aspect of the teaching, and this evaluative research is an attempt to address this gap.

Purpose: To understand the experience of the teachers and students in the fourth-year palliative medicine programme at UCT in respect of the interdisciplinary team approach to palliative medicine, so as to improve teaching and learning in this important field.

Results: A qualitative analysis of interviews with the teachers in this programme and the reflective commentaries of the students will be presented to illustrate the experience of teamwork teaching and learning in this programme.

Impact: The results are expected to be valuable to all health professional educators who are concerned about team functioning in the graduates of their programmes, and the functioning of teaching teams within the programmes.

A 'toolkit' for the promotion of undergraduate research: When students talk to students

G I Van Schalkwyk, H Botha, J Bezuidenhout, J Blitz, S C De Vries

Background/context: Conducting research as an undergraduate medical student has been shown to encourage later research interest among these students, and to also develop their critical reasoning and information literacy skills. At our institution, despite there being opportunities within the curriculum for medical students to complete research projects, few avail themselves of the opportunity to carry the process through from obtaining ethical clearance to eventually disseminating results via presentation or publication.

Aim/purpose: Led by 2 final-year medical students who had completed a number of research projects as part of their studies, we sought to develop an instrument that would encourage and guide undergraduate health sciences students in conducting research. Our ultimate aim is to increase undergraduate research output at Stellenbosch University's Faculty of Health Sciences.

Methods: The process of developing the artefact which has become known as the 'toolkit' was initiated by the 2 students who are also the primary authors. Drawing on their experiences, which included first author publications, they sought to specifically address those aspects of the research process that they had found to be challenging or of value. A number of experienced researchers acted as supervisors on the project.

Results and discussion: The toolkit, which is presented in a student-friendly format, comprises 3 documents. The first offers general guidelines on planning, designing and implementing a research project. This is followed by a discussion of quantitative and qualitative research methodologies respectively. In each case the importance of sharing one's findings with peers is encouraged. Twenty students attended a Saturday seminar during which the toolkit was explained and distributed – a marked increase in the number of students expressing interest in undergraduate research over previous years.

Conclusion/take-home message: Encouraging research at undergraduate level has the potential to enhance the student's learning experience. Facilitating such participation with innovative, student-driven interventions provides an important catalyst.

Perceptions among University of Johannesburg Emergency Medical Care students towards mandatory physical training

Andrew Makkink, Phoenix Bean

Background/context: Physical fitness plays an integral part in the performance of emergency service duties by both male and female emergency service personnel. The duties of emergency service personnel often comprise heavy aerobic content and muscular strength components that are best performed by practitioners who are in good physical condition. The University of Johannesburg's Department of Emergency Medical Care acknowledges the need for improved physical condition among emergency service personnel, and has addressed this need by implementing

a mandatory physical training programme for all students enrolled in the Bachelor of Emergency Medical Care (BEMC) programme.

Aim/purpose: The aim of this study was to analyse the perceptions of EMC students towards the mandatory physical fitness programme and its facilitation on the Bachelor of Emergency Medical Care programme.

Methods: A 26-question survey was conducted and the responses of 66 (63%) participants were quantitatively analysed.

Results and discussion: The results suggest that the students generally enjoy participating in the training sessions. There is, however, a need for improved structuring and better objective setting, to assist students in reaching expected outcomes of the program. The majority of the students felt that the programme had benefited them physically and had motivated them to improve their own health, physical condition and lifestyle choices.

Conclusion/take-home message: The mandatory training programme is an essential and indispensable component of the BEMC course, that has a significant impact on the students lifestyles, their own health and their physical condition. It should be considered crucial for improving and maintaining adequate physical condition in prospective emergency service personnel of South Africa.

Is drama meaningful in healthcare education?

Margaret Hugo, Louise Schweickerdt-Alker

Background/context: MB ChB III students choose from a group of at least 10 selective courses which do not teach them about medicine *per se*. They attend the course throughout the year, and receive a mark at the end as proof that they have learnt something other than just becoming a medical practitioner. At Medunsa, Drama has been offered since 2009; 20 - 25 students attend the course annually. The program: learning about oneself, visualisation, the voice, movement, connecting with an audience, writing plays, rehearsing, performing, and working with stage make-up, props, lighting and music. Students perform in the children's wards and in front of their peers. A 'test' at the end of the year is written in groups, where they discuss the following: value of the course, development of communication skills and use of the acquired skills with patients. They voice experiences in discussion groups, throughout the year.

Aim: The ongoing question of the lecturers is: what value can a creative course have in the teaching and learning of medical students?

Methods: A qualitative analytic method was employed.

Results: Lively discussions mostly result in positive feedback, although negative feedback is appreciated and encouraged. Personal issues are faced, growth take place and confidence is gained. The students get to know their own unique abilities, learn to trust themselves and to appreciate their own unique way of communicating. Their energy levels increase. They learn sensitivity and trust in teamwork. Empathy is enhanced and the holistic concept increased. Inner creative abilities are developed which help with effective problem solving.

Conclusion: Creative courses facilitate students to look at and experience themselves, as well as patients and patients' life worlds differently. Personal growth is essential in developing a professional attitude, which in the end prepares them to render effective, comprehensive clinical care.

From colour-blind to rainbow-brained: Using Whole Brain Learning (WBL) principles in physiotherapy education

A Human, P H du Toit

Background/context: Institutional changes in higher education call for innovative ideas in teaching practices. The scholarship of teaching and learning requires scholarly enquiry into student learning to inform the practice of teaching. Learning style flexibility in teaching practice can bridge the gap between the individual learner (and their preferences) and the design and delivery of the facilitation of learning. As a facilitator of learning (FOL) I wanted to engage in critical discourse regarding my teaching practices by implementing innovative ideas in my class room based on the principles of WBL.

Aim/purpose: This study aimed to determine the effect of facilitating Whole Brain Learning (WBL) on the teaching practice of the FOL in the Department of Physiotherapy, Medunsa.

Methods: A participatory action research method was applied in an attempt to transform facilitation of learning in the second-year module on paediatrics/child health. Triangulation of qualitative and quantitative data collected from questionnaires, peer-review, and reflections were performed.

Results and discussion: Despite differences in learning style preference between the FOL and the second-year physiotherapy students, I was able to accommodate and challenge my learners on various levels. My professional development in my teaching practice within the context of the 7 roles of the educator as observed and experienced by my second-year physiotherapy students is explained. Evidence is presented that WBL principles assist in improving facilitation of learning on multiple levels and seems to increase the students' satisfaction and creates an environment conducive to learning.

Conclusion/take-home message: As FOL we must be flexible in our teaching and learning styles in order to accommodate and challenge all students in class so that they can maximise their human potential. This participatory research project formed a foundation for further research and reflective practice in our department and institution.

Perceptions of preceptors regarding expected competencies of final-year midwifery students of Mulago School of Nursing and Midwifery, Uganda

Margaret Milly Kabanga, Fikile Mtshali, Sarah Kiguli

Background/context: Midwifery training at Mulago School of Nursing and Midwifery (MTSNM) was traditional, teacher centred until curriculum was changed and implemented competence-based training (CBT) model. However, there are complaints by qualified midwives (Preceptors) who

supervise and mentor students during clinical placement, regarding expected competencies of final-year midwifery students.

Aim/purpose: This study was designed to explore and document perceptions of preceptors regarding expected competencies of final-year midwifery students of MTSNM. The study findings would provide a basis for quality improvement in midwifery training in Uganda.

Methods: A cross-sectional descriptive study was conducted at Mulago Hospital, a clinical placement site for midwifery students. Qualitative data collection methods were employed. Seven focus-group discussions (FGDs) were conducted with 33 preceptors, purposively selected from clinical placement areas including labour wards, postnatal clinics and family planning clinics. An interview guide was used to conduct FGDs. Two investigators worked independently to review and analyse transcripts for contents and emerging themes.

Results and discussion: Students are expected to have knowledge in family planning methods, and antenatal, delivery and postnatal care. Desired skills include examination of patients during antenatal, delivery/postnatal period, communication/interpersonal skills, decision-making, management of procedural skills including delivering babies, inserting contraceptive devices and intravenous lines. Students are expected to portray attitudes such as professionalism and ethical practice. Gaps identified were mainly professionalism, communication and interpersonal skills. Causes of competencies included inadequate mentorship and supervision of students by preceptors.

Conclusion/take-home message: Preceptors of midwifery students should be empowered with CBT knowledge to enable them to effectively provide mentorship and support to midwifery students of MTNSM.

Implementation of OSCEs in assessment of postgraduate students in the Department of Obstetrics and Gynaecology, Makerere University College of Health Sciences

Mike N Kagawa, John Tumbo, Elsie Kiguli, Sarah Kiguli

Background/context: The department of Obstetrics and Gynaecology (O&G) has been in existence for over 30 years and offers a 3-year fulltime course leading to the award of a Master of Medicine (O&G) of Makerere University. Several methods have been used to assess clinical skills of postgraduate students. In an effort to improve assessment, OSCEs were introduced about 5 years ago.

Aim/purpose: To evaluate the implementation of OSCEs from 2008 to 2011.

Methods: Through a descriptive cross-sectional study, observation of the OSCE process, key informant interviews with the Head of Department (HoD) and course coordinators, desk review of external examiners' comments and a retrospective evaluation of students' OSCE scores, was performed.

Results and discussion: OSCE formulation was done by a committee of the HoD, course coordinators and senior faculty. There were 5 - 7 OSCE

stations of 15 minutes each. There was, however, no OSCE blue-print and the examiners were not trained. The venue was spacious but with little auditory/visual privacy. Real patients and models, as opposed to simulated patients, were used. Most students scored above the university pass mark of 60%. The average score of the students ranged from 48.6±9.5 to 84.8±6.5 for year 2, and 54±7.6 to 84.0±7.6 for year 3. There was no feedback given to the students.

Conclusion/take-home message: The OSCEs were generally well conducted with adequate preparation and good students' performance according to the pass mark. There is need to develop an OSCE blue-print and train examiners, organise feedback to students and improve on privacy between the candidates.

'We are becoming doctors!': The social context of problem-based learning for developing professional identity

Dianne Manning

Background/context: The concept of a community of practice as a social learning environment offers a useful framework with which to interrogate student engagement with the intended learning. The medical programme of the University of the Witwatersrand uses problem-based learning (PBL) as a vehicle for integrating knowledge and introducing an approach to clinical reasoning. Interaction with the small-group facilitator and meaningful participation in PBL tutorials thus provides students with access to discipline-based discourse and opportunities for developing professional identities.

Aim: To understand the role of the PBL facilitator as an agent and role model in students' construction of meaning and development of professional insights.

Methods: A mixed-methods cohort study design was used. Fourth-year medical students were invited to complete an anonymous self-administered questionnaire and to participate in semi-structured focus-group discussions. Questionnaire data, consisting of responses to 7-point Likert scale items, were analysed using descriptive statistics. Focus-group discussions were audio-recorded, transcribed and analysed qualitatively for emergent themes. Data from the questionnaires and interviews were triangulated.

Results and discussion: The results clearly indicated the importance of the specific social context of the PBL group interaction for effective engagement with the medical discourse. The role of the facilitator was identified as the most important factor for guiding students in developing professional ways of thinking. The PBL tutorial thus provides a valuable opportunity for students to start creating professional identities as medical practitioners and developing personal trajectories into the practice.

Take-home message: PBL facilitators in a medical programme need not be subject experts in the tutorial content, but should preferably be medically qualified. Where human resources are limited, facilitators from different backgrounds should be assisted in developing ways of thinking which are appropriately aligned with the clinical reasoning process.

Understanding the role of a supervisor during the Integrated Primary Care (IPC) rotation for final-year medical students P N Mngapu, L Du Toit, N Sondzaba, I Couper

Background/context: As part of medical training, final-year medical students complete a 6-week integrated primary care (IPC) rotation in urban or rural sites. The purpose of the IPC rotation is to familiarise medical students with primary healthcare and to develop and enhance students' clinical skills. During the rotation students are allocated to a local supervisor at the site.

Aim/purpose: The aim was to understand the role of the supervisor from both the supervisors and the students' perspectives, and to assess how supervisors see their role in terms of their responsibilities to students, comparing these with student expectations.

Methods: Data used was obtained from IPC rotation student post-placement questionnaires in 2011 and from 2011 supervisors questionnaire. The aim of the supervisors' questionnaire was to establish their understanding of their role. Data from both were entered in Excel and analysed for common themes.

Results and discussion: The study has identified common characteristics of what the student and supervisor perceive the role of the supervisor to be, such as being a role model and truly being willing to teach. Dedication to patient care and a good work ethic were furthermore identified as key characteristics. Both identified common traits of mentors, and classified a mentor and a role model as the same thing.

Conclusion/take-home message: The results showed that there is an overlap in understanding what the role of the supervisor is among both students and supervisors. Assessment of rational prescribing skills in the written exit-examination at the Medical School of the University of the Witwatersrand.

Assessment of rational prescribing skills in the written exit-examination at the Medical School of the University of the Witwatersrand

Shirra Moch, Devika Naidoo, Lionel Green-Thompson

Background/context: Prescribing medicines is the primary intervention that doctors offer to influence their patients' health; however concerns have been expressed about the extent to which graduates are prepared by medical schools to assume prescribing responsibility.

Aim/purpose: To analyse the exit-level written assessment component of final-year students in the Graduate Entry Medical Programme (GEMP) at the University of the Witwatersrand, Johannesburg with respect to fitness-for-purpose (validity) to test rational prescribing skills.

Methods: Permission to conduct the study was obtained from the Human Ethics Research Committee (Medical) of the University of the Witwatersrand, Clearance Number M080949. Examination questions were selected via an adjudicative process to determine a prescribing mark. Question items were then analysed according to Bloom's Revised and the SOLO Taxonomies. The theoretical framework of constructive alignment

was used to interrogate fitness-for-purpose and the knowledge structures of the skills were explored using a Bernsteinian lens.

Results and discussion: A comparison of 'A-Type' (single best answer) multiple choice questions (MCQs) with 'R-Type' (extended matching) MCQs paradoxically highlighted students' greater proficiency in the R-Type questions ($p < 0.0001$). Both Bloom's and SOLO taxonomies indicated that students scored well on questions which tested recall and application of knowledge, but struggled with questions involving evaluation. Questions were poorly distributed according to Harries' delineation of prescribing skills to be tested. Examination marks showed that 83.6% of students were competent to prescribe according to the graduating standards of the University.

Conclusion/take-home message: Despite high examination scores, this study illustrates a lack of constructive alignment between assessment requirements, curriculum delivery and course objectives. Curricular components including problem-based learning and horizontal integration constrained epistemic access to the structure of rational prescribing knowledge and the exit-level written assessment does not sufficiently test rational prescribing skills.

Peer-tutoring in a language code-switching lecture as strategy for educators in multilingual classes

Sandra du Plessis

Background/context: Educators have the responsibility to prepare students for the future, and to be successful in their task with multilingual students, they have to incorporate certain teaching approaches and strategies, as well as modifications, in their presentations. One of the challenges is to use language creatively in the multilingual classroom, and language code-switching (the switching from one language to another) may be one method of experimenting with language. Educators who cannot language code-switch themselves, may employ peer-tutoring. Peer-tutoring is a promising strategy in multilingual classes in Higher Education, by which individualised help may be provided to students in a large groups. Through peer-tutoring the home language (L1) of the students may be a resource in an English-only environment where educators are not proficient in the students' L1.

Aim/purpose: The aim was to evaluate the effectiveness of peer-tutoring as teaching strategy during language code-switching in a multilingual first-year classroom.

Methods: A descriptive design within the quantitative framework was selected. A questionnaire was designed as data collection instrument and was completed by first-year students after peer-tutoring in a language code-switching lecture.

Results and discussion: In the results the linguistic profile of the students is presented to illustrate the complexity of the situation. In addition an evaluation of the peer-tutoring strategy reveals that the majority of the students experienced peer-tutoring positively and provides some directions for future implementation. Other linguistic support needs are also identified by the students.

Conclusion/take-home message: By reinforcing students' conceptual base in their L1, a foundation may be provided for long-term growth in English skills. Language code-switching is currently recognised as a teaching strategy in multilingual classrooms. It is suggested that L1 can support especially first-year students in Higher Education to understand curriculum content and new concepts.

The autopsy as a teaching tool in forensic medicine for undergraduate students: A University of Pretoria experience

L du Toit-Prinsloo, V Tredoux, G Saayman

Background/context: The use of the autopsy in teaching medical students has strong historical precedent. As large numbers of unnatural deaths in South Africa require medico-legal investigation by medical practitioners, it is important that undergraduate medical students receive some training and exposure to the field of forensic medicine. The scope and nature of such training remains a topic of uncertainty and discussion, while the possible vicarious effects of – and the attitude of students to – this activity requires careful consideration.

Aim/purpose: To assess the attitudes of senior medical students towards the autopsy as a training tool in the medical curriculum at the School of Medicine, University of Pretoria.

Methods: MB ChB V students attend daily forensic autopsy at the Pretoria Medico-Legal Laboratory, for a continuous period of 2 weeks. Students were requested to comment on their experience, voluntarily and anonymously, regarding the general impression and rating of the rotation and to comment on strengths, weaknesses, opportunities and threats which may have been experienced.

Results and discussion: Of the approximately 220 students who were enrolled in MB ChB v. 95% of students provided feedback. The overall experience appears to have been a very positive one, with an 8.2/10 overall rating for the block. However, 64 students indicated that they felt psychologically unprepared for the block and that they experienced it as emotionally traumatising, with some students stating that they experienced nightmares due to the exposure.

Conclusion/take-home message: Exposure of students to forensic autopsies may be a valuable training modality, but more research is needed as to the possible vicarious effects and the emotional support which students may require, before and after such exposure.

Early exposure to physiology: Challenges faced by health science students and their teachers

Susan B Higgins-Opitz, Mark A Tufts, Lihle Qulu, Sabiha Essack

Background/context: Health Science students at the University of KwaZulu-Natal perform better in their professional as compared with their physiology modules. Pass rates of physiology modules, particularly in the first-year basic physiology module taught in the first semester when students are still

adapting to University, have steadily declined. Our data has also shown a strong correlation between these students' performance in their first class test and their final performance.

Aim/purpose: To devise a strategy identify struggling students early i.e. before they write the first class test, so that appropriate interventions can be made to prevent them failing the module.

Methods: Using a short questionnaire, students' attendance of tutorials, financing of their studies, and their perceived relevance of physiology to their future professions were probed. Following the first class test, failing students were invited to complete a second questionnaire in which attendance of teaching sessions, perceived reasons for their poor performance, and their plans for improvement in subsequent evaluations were explored. Student results and demographics were obtained from the module records.

Results and discussion: One hundred and eighty students completed the first questionnaire, which represented 83% of the class. 73% of the respondents were first-year students and therefore had not been risk assessed, while 44% ($n=77$) of students failed test 1, which mirrored the failure rate of the entire class (46%). The questionnaire results indicated that most students were positive about physiology and recognised its relevance. Almost 50% (36/77) of failing students completed the second questionnaire, 28 of whom were first-time students. Analysis of their responses revealed that the majority of students (>60%) who eventually passed the module ($n=8$), had plans that specifically addressed their problems.

Conclusion/take-home message: Based on these findings, we have embarked on a more interactive strategy centred on e-learning and earlier monitoring of struggling students.

Primum non nocere: The preparation of University of the Witwatersrand medical students in Pharmacology – a student perspective

P Keene, S Moch, D Manning

Background/context: Medical education literature reflects a global concern about the pharmacology education of medical students and its ability to produce junior doctors who have the knowledge and skills to prescribe drugs safely and appropriately. Formal pharmacology teaching in the University of the Witwatersrand MB BCh degree takes place in the 3rd and 4th years, consisting primarily of lectures within a system-based, integrated curriculum. A PBL case each week contextualises appropriate pharmacological management. Assessment is integrated and no subminimum is required.

Aim/purpose: To determine: (i) whether senior students are confident in their pharmacology knowledge acquired in the formal phase; (ii) attitudes to learning pharmacology and the factors contributing to this.

Methods: This study was conducted by 5th-year MB BCh students in the compulsory research component of the curriculum. An anonymous questionnaire was administered to 5th- and 6th-year students, consisting of 29 fixed-response items, (28 graded by a 5-point Likert scale), and 5

open-ended questions. Results were respectively analysed in Excel and thematically.

Results and discussion: While satisfied with the quality of the course as delivered, they indicated that their knowledge was insufficient both for the senior years of their course and for practice once qualified. The lack of a subminimum and consequent strategic failure to learn the subject contributed strongly to this. The lack of alignment of the curriculum to clinical experience and insufficient contextual learning were also problematic.

Conclusion/take-home message: Assessment drives learning – this course needs to be assessed more extensively and requires a subminimum in order to ensure that students gain sufficient knowledge.

Enhancement of registrar competence through professional development in completing a module in Healthcare Practice

J Bezuidenhout, M M Nel, G J Van Zyl

Background/context: A need for professional development in the training of registrars was identified by the School of Medicine, University of the Free State, in 2007. Registrars have not always been trained in aspects outside their specific clinical disciplines as required for professionals.

Aim/purpose: This part of the research focused on responses from registrars regarding the orientation session, content and applicability of the module in Healthcare Practice (GPV703). Module development was specifically aimed with a view to offer each registrar the scope to address the unique needs in as far as Ethics, Practice Management and Patient Communication are concerned.

Methods: The study was a quantitative study enhanced by qualitative methodologies. A self-administered questionnaire was completed by registrars evaluating the presentations made. The questionnaire included a rating scale and open-ended questions.

Results and discussion: A total of 40 registrars completed the newly introduced module GPV703 from 2009 to 2010 and participated in the study. Informed consent was obtained before completion of the self-administered questionnaire. Thirty-eight (95%) of the 40 registrars completed the questionnaire. Registrars showed a total satisfactory and very good combination mean percentage of 91% for the questions related to the orientation session, content and applicability of the content of the module. Thirty-one (77.5%) of the 40 questionnaires collected, were completed by HoDs on the insight of registrars in GPV and it was found that registrars showed significant improvement in content and applicability. Registrars found the lectures on ethics to be most valuable as an important aspect in the treatment and management of patients.

Conclusion/take-home message: Value was added and aspects required by registrars to develop and/or enhance their skills, knowledge and professional behaviour with regard to Ethics, Practice Management and Patient Communication were addressed. Strive towards excellence in Medical Education.

Health Professions Education (HPE): faculty needs assessment at the University of Zimbabwe, College of Health Sciences

M M Chidzonga

Background/context: Faculty development has assumed great significance in meeting the diverse roles and responsibilities of health professions educator. HPE training facilities are desirable.

Purpose: No facility designed to train/guide HPE issues exists at UZCHS. This study was designed to assess the faculty HPE needs so as to guide the establishment of a facility that offers relevant services.

Methods: A cross sectional survey using a self-administered questionnaire was used: socio-demographics, teaching experience, academic grade, education/experience/training in HPE issues, willingness to participate in and time to be allocated to HPE activities and the format they should take, the use and role of technology were assessed. Perceived knowledge/importance of HPE issues was assessed using a 7-point Likert scale.

Results/discussion: The departmental response rate was 96% (22/23); overall response rate was 37% (74/201); 54% of the respondents were male, 34% in the age group 36 - 50 years; 54% were in the lecturer grade with less than 10 years teaching experience, relatively young and inexperienced. This should make training more acceptable and more useful before they are entrenched in their own ways. Curriculum development and finding relevant tools and aids were identified as important and faculty had least knowledge; regular seminars and online courses were the preferred formats for educational activities. Power point presentations, 96% (71/74), most commonly used and the least used was web-based courses (10%) (7/74); 99% (73/74) indicated willingness to participate in HPE activities; 36% (27/74) preferred 2 hours per week; 58% (43/74) suggested the activities be compulsory.

Conclusion: The junior/young faculty with limited knowledge of HPE issues is appreciative of their importance willingness to train. The proposed HPE unit will be driven by the identified faculty needs.

Perspectives of South African general surgeons regarding their postgraduate training

M M de Beer, H Pienaar

Background/context: One of the most critical stages in the professional life of new surgeons is residency training, and the objective of a surgical residency programme is to ensure that newly trained surgeons are competent to deliver the relevant skilled services to their patients. Because of the fact that the curriculum has not been revised for a number of years, the need arises to consider adapting the curriculum to changing needs and circumstances.

Aim/purpose: The aim of the study is to determine communal strong and weak points in the training of general surgeons in South Africa, as well as to provide guidelines for the possible improvement of the current system.

Methods: The population group comprised of all qualified general surgeons in the country. Data collection was done by means of a questionnaire sent to

the population group via e-mail. The number of responses was statistically adequate, and analysis of the data was done to extract the main themes.

Results and discussion: The 4 main areas of questioning in the survey were: theoretical knowledge, research training, operative technique training, and practice-related needs. The discussion will cover all the main categories, and elaborate on each of them in detail.

Conclusion/take-home message: A discrepancy exists in the need of practising general surgeons in South-Africa, and the training that is being provided. By examining the shortcomings, as well as the strong points of the current training programme, a more applicable curriculum can be established in the future.

Improving facilitation of problem-based learning through monitoring, feedback and professional development

M Alperstein

Background/context: A primary healthcare-led curriculum, with problem-based learning (PBL) as a philosophy and teaching methodology, was implemented in the University of Cape Town's MB ChB programme in 2002. A small core of PBL facilitators has remained constant, but there has been a rapid turnover of many facilitators annually. Quality of facilitation across PBL groups has been highlighted in the literature. A PBL monitoring project arose from concerns of course convenors regarding quality of PBL facilitation. For the Education Development Unit (EDU), it was to ascertain the aspects of training that needed more attention to promote improved quality of facilitation in PBL.

Aim/purpose: This evaluative paper aims to demonstrate shifts in facilitation following monitoring, feedback and further professional development.

Methods: The EDU facilitated the development of a monitoring tool and coordinated a standardised monitoring project in 2009 and 2011 across the first 3 years of the programme. In 2009 and 2011, 4 experienced facilitators were recruited and trained to use the monitoring tool developed in 2009. Data were collected by the 4 facilitators by observing 32 out of 60 PBL facilitators in 2009, and 25 facilitators in 2011. Observations were recorded on the monitoring tool. Quantitative and qualitative data were captured electronically and analysed for results.

Results and discussion: Aspects identified as needing improvement in 2009 were focused on in PBL training in 2010. All facilitators monitored were given individual feedback on their strengths and areas needing improvement. The 2011 results showed improvement in all aspects monitored. Some aspects, while showing improvement since 2009, still need further development. These findings will be reported on in the presentation

Conclusion/take-home message: The quality of PBL facilitation could be improved by means of individual monitoring and ongoing professional development.

Initial outcomes of the Dundee Ready Educational Environment Measure (DREEM) among final-year Clinical Associate students at the University of the Witwatersrand

Lilo du Toit, Abigail Dreyer, Mpumi Mngapu, Ian Couper, Audrey Gibbs

Background/context: The Bachelor of Clinical Medical Practice (BCMP) is a 3-year degree programme leading to qualification as a Clinical Associate. The aim is to produce a mid-level healthcare worker that will work under supervision of the doctor in the team of clinicians in district hospitals. Most of the training takes place in district hospital sites. The ongoing development of the curriculum and of training sites is key in the implementation of the programme. Continuous monitoring and evaluation is necessary to improve quality.

Aim/purpose: To assess the perception of the educational programme and training environment among the first cohort of Clinical Associate students, during their final year at the University of the Witwatersrand (2011).

Methods: The Dundee Ready Educational Environment Measure (DREEM) is a standardised tool used to evaluate students' perceptions of their educational environment. DREEM questionnaires were completed by 22 of the 25 final-year Clinical Associate students during 2011. This data was analysed using Excel to explore initial trends in perceptions.

Results and discussion: The DREEM is a useful tool for evaluating the perceptions of health professional students. Results from the first round of data collection explore issues for the implementation of Clinical Associate training in different educational environments. Collecting such data longitudinally would be invaluable in improving the educational environment, and therefore the learning of Clinical Associate students.

Conclusion/take-home message: A number of interesting issues emerge for consideration at management level. It is envisioned that the DREEM questionnaire will be used for at least 3 years to track and monitor perceptions among students of the learning environment for the BCMP degree.

Reflecting on the quality of teaching and learning in the Internal Medicine module

J M M Koning

Background/context: Obtaining student feedback is one of the ways in which the quality of a module can be measured. Alternatives to the current module evaluation form of the fifth-year Internal Medicine module are being explored.

Aim/purpose: (i) To evaluate the quality of teaching and learning that takes place in the fifth-year Internal Medicine module using a modified Student Course Experience Questionnaire (SCEQ); (ii) To critically reflect on the findings in this pilot study and use them to implement changes.

Methods: An Action Research strategy was used in this study. The SCEQ, which was developed by Oxford University, was modified by Dr Saretha Brussouw for use at the UFS. This 32-question questionnaire was filled out

by the fifth-year students at the end of their rotation at Internal Medicine. The data from 7 different scales was analysed.

Results and discussion: 112 students completed the questionnaire (40 English and 71 Afrikaans). The scores for the Satisfaction, Generic Skills and Motivation scales were high. 70% of the students reported that they were satisfied, but there was a significant difference between the Afrikaans and the English students. The Teaching and Appropriate workload scales had the lowest scores. Almost 20% of the students thought the outcomes were not clear. A large number said that they did not know what was expected from them. 40% said that the workload was inappropriate. Significant differences were found between the 2 language groups in the scales measuring Generic skills, Motivation and Satisfaction.

Conclusion/take-home message: The modified SCEQ is a helpful tool to assess quality of teaching and learning. However, due to the lack of space for explanatory free text, the reasons for negative findings and differences between language groups could not be elucidated. A document which clearly states the expectations was included in the 2012 Module Guide. A programme is underway to ensure that the outcomes are better described.

Nurses' experience of the transition from student to professional practitioner in a public hospital in Lesotho

A M Makhakhe, M Williams, E Bornman

Background/context: Newly qualified professional nurses in Lesotho experience a non-caring environment, marginalisation, negative attitude and lack of support, resulting in questioning their choice of profession.

Aim/purpose: The aim of this study was to identify the experiences of newly qualified nurses and to develop guidelines to support them in their transition from student to professional practitioners.

Methods: An explorative, descriptive, contextual, qualitative research design was chosen. The sample consisted of newly qualified professional nurses who worked in a public hospital in Lesotho for a period of one year or less at the time of the study. Data collection took place by means of semi-structured individual interviews with 10 newly qualified professional nurses and a focus-group interview with 8 newly qualified professional nurses.

Results and discussion: Content analysis of the data in the qualitative tradition was independently done by 2 coders who identified 4 themes and 10 sub-themes. The identified themes included culture shock, competence, vision for the future, competence and support from management with subthemes of emotional reactions, limited resources, knowledge, attitudes and skills. These newly qualified professional nurses felt they were sufficiently prepared with knowledge and skills, but a restrictive clinical environment resulted in feelings of despondency, an attitude of blaming and not applying their capabilities. They viewed themselves as change agents for the future though. Guidelines to ease the transition from student nurse to professional practitioner were developed to address professional expectations and to enhance collaboration between the training institutions, the hospital, the Ministry of Health and Social Welfare and the newly qualified nurses.

Conclusion/take-home message: Clear guidelines and orientation programmes are needed with specific attention to welcoming, addressing expectations, code of conduct, monitoring and mentoring to ease the transition period from student to professional practice in future.

Service learning in Pharmacy: Instilling professionalism through sequential institutionalisation of an undergraduate service-learning programme

M B Akleker, A Bheekie, N Butler

Background/context: At UWC School of Pharmacy, Service learning in Pharmacy (SLIP) was introduced as a pharmacotherapy initiative (2002) directed to final-year pharmacy students. SLIP had a strong service bias and competency component, training students for the roles they would fulfil as pharmacy interns. An independent evaluation of SLIP found that while the course enabled students to be technically competent and prepared for internship, values-based professionalism was lacking.

Aim: To produce pharmacy graduates who are technically competent and socially able. Course expansion to the third and second years was aimed at exploring critical issues that underpin values-based professional practice; including social injustice, cultural competency and poverty.

Methods: SLIP 4, targeted toward final-year students, boasts technical competency as a core focus area. A series of 3 rotational blocks (1 week each) allows service activities. SLIP 3, directed to third-year students, entails students examining issues around social injustice and cultural barriers in the context of medicine use. The course comprises a single exposure to a PHC clinic and informal settlement. Students are assessed by way of a group project to fulfil a community need. SLIP 2, directed to second-year students, focuses on developing professional communication skills.

Results and discussion: The outcomes from SLIP 3 service projects include various community-targeted endeavours, such as drug awareness campaigns at schools, sustainable feeding schemes by way of community driven vegetable gardens, and educational initiatives such as the establishment of learning centres in informal settlements. Students report that these exposures are 'eye-opening,' and that the experience would mould their future professional practice. Early exposure to professional interface (SLIP 2) supports the development of inter-professional communication skills.

Conclusion: Learning opportunities that nurture technical and social and cultural competencies are more likely to produce graduates capable of addressing social injustices.

Community service learning for MB ChB students, Medunsa

Debbie Barnard

Background/context: MB ChB I - IV students learn about interacting with the community, identifying health needs and reacting to it, learning at the same time from that interaction, while simultaneously rendering a service to the community. Successful training takes collaboration and the community

is a highly effective collaborative partner in the training and education of Medunsa's medical students.

Method: By taking the MB ChB I - IV students to the clinics and into the community for facilitated interaction with the community itself, new knowledge/meaning surfaces with each contact period, which enriches the overall learning experience of the students.

Results: This results in learning about the community and its needs while simultaneously rendering a service to the community.

Conclusion: Service to the public/community is the core of the medical profession. Medical students at the University of Limpopo, Medunsa are trained to be committed to rendering humanistic care, improving the health of the community and serving the public (AAMC, 1998). They are taught to have insight into the needs of the community beyond the individual patient in order to serve the community needs, and to address community concerns and involve community partners in addressing these needs. Healthcare is approached as a partnership with the client, where the patients are involved in their own wellness and healing process.

Take-home message: Medical students should receive learning experiences outside of the classroom, clinic room and hospital room, in order to become integral parts of the communities in which they will practise medicine.

How does the community benefit from community-based education?

P Diab, P Flack

Background/context: Community-based education (CBE) has become a primary teaching and learning platform in all health sciences globally. There is a significant body of literature that explores the pedagogy and in particular the benefits of CBE to students. However there is little evidence in the literature from the perspective of the other role players in CBE, particularly the community partners.

Aim/purpose: The aim of the study was to explore how community-based education is perceived by the various stakeholders, in the provinces of Limpopo, KwaZulu-Natal and Western Cape. This paper reports on the benefit to the community and what challenges need to be addressed in order for this to be an effective partnership.

Methods: Data was collected at multiple established training sites, through focus-group interviews with participants identified through purposeful sampling. An open-ended interview guide was used and interviews were conducted in the vernacular, audio-taped, transcribed verbatim and then where necessary translated into English. Data analysis was aided with the use of Nvivo. Ethical clearance was obtained from the participating universities' ethical boards as well as the Provincial Departments of Health and participating healthcare institutions.

Results and discussion: Benefits ranged from reducing work load in the healthcare facilities, promoting more holistic patient care and clinician-

patient interactions to the reciprocal nature of such learning where students could enhance the knowledge of local practitioners as well as gain practical training during their interactions. The tension between service delivery and teaching is an aspect that needed to be addressed in order to balance the needs of the patients, the students and the supervisors.

Conclusion/take-home message: In order for CBE to be beneficial to the community partner, the programme needs to be well structured, the students and community well prepared and student activities more aligned to community needs. Recommendations from this research will be valuable in evaluating existing CBE programmes.

Integration of service learning (SL) into the 2nd-year BSc Physiotherapy paediatric and child health module

A Human

Background/context: Service learning (SL) links the classroom curriculum (theory) with a community need and then collaborate with community members in improving service delivery (Lorenzo *et al.*, 2006). Medunsa's community engagement and SL initiatives include Missionary of Charity (MOC) in Klipgat, a children's home close to the Medunsa campus, run by the sisters of Mother Teresa (Roman Catholic Church). This home serves Klipgat and the surrounding communities by caring for mainly children with physical disabilities and mental disorders, AIDS orphans, and abandoned children.

Aim/purpose: The aim of the study was to determine the effect of SL as an integral part of the 2nd-year BSc Physiotherapy paediatric curriculum. Physiotherapy students can be given the opportunity to apply theory in a practical setting (experiential learning) and gain a deeper understanding through reflection.

Methods: An action research approach has been applied in order to guide the curriculum and assessment of the BSc second-year Physiotherapy students. A structured SL initiative was implemented, with the outcomes of some of the paediatrics modules aligned with the services delivered to MOC. As part of the experiential learning students were divided into groups and had to implement certain physiotherapeutic assessment and treatment principles, write it in the form of a case study, and do a reflection on their active learning experience.

Results and discussion: Students were introduced to the principles of experiential and active learning as well as reflective practice. Reflections of students indicated that this real-life challenge was an overall positive experience despite their initial fear and uncertainty.

Conclusion/take-home message: Implementing and integrating SL at the second-year level seem to have a positive impact on student learning and assists in establishing community service delivery. Integration of SL at junior levels can assist in developing graduates that can become facilitators of change within their communities.

The utilisation of video as primary content delivery medium for staff development of health professions educators

Nico Baird, Marietjie M Nel and Sonet B Kruger

Background/context: We are living in a digital age, and even today with so many tasks being performed by computers, people are still the driving force in every organisation. Staff development can be seen as a continuous process. The development can begin at anytime but if successful will end at retirement or beyond. It encompasses the process in which staff engages to prepare themselves, continuously update themselves, and the constant revision and reflection of their own performance in their daily endeavours.

Aim/purpose: The study forms part of a master's degree in the Health Professions Education programme with the view to determine the value of the use of online video as primary medium for content delivery for staff development of health professions educators.

Methods: A quantitative study was done with minimal qualitative feedback included in the questionnaire. A course was created with 3 sections. Content was delivered to the participants. After the completion of the course sections, the Health Professions Educators complete a short survey, which consisted of multiple choice questions and minimal open-ended questions.

Results and discussion: Findings indicated the value of online video as primary content delivery medium and will be made available as part of the presentation.

Conclusion/take-home message: Staff development opportunities can be improved and expanded through an innovative educational approach.

The impact of podcasting on students and student learning

Gegory Doyle

Background/context: In South Africa the use of technology in teaching and learning does not compare with that in first world countries and new technologies often take longer to implement. The use of podcasting in institutions of higher learning in South Africa is minimal. This study took place at the University of Cape Town (UCT) and explores the impact of this technology among medical students. Podcasting is a technological intervention where lectures are audio recorded which in turn are downloaded by students via a web interface, often to a mobile device. In general podcasts have been found to be useful to students involved in distance learning. Yet there is little evidence on the impact of podcasting at a contact university.

Aim/purpose: This presentation investigates undergraduate student engagement with podcasts and looks at the issue raised most often by lectures – lecture attendance. The fear is that if lectures are podcasted students would no longer attend lectures.

Methods: Educators involved in teaching second-year medical students agreed to have their lectures recorded over a period of 5 months. Students were asked to complete a survey prior to the pilot to determine any pre-conceived ideas and implicit knowledge they had about podcasting. Also they completed a post-survey which focused on how they used the podcasts

and how useful they found them. In addition a log file which automatically kept track when a podcast was downloaded was kept.

Results and discussion: The information provided via the surveys and log file was used to determine how the students viewed, used and interacted with the podcasts.

Conclusion/take-home message: Lecture attendance was not affected. Not all students were interested in the podcasts; it does not cater for all learning styles. Podcasting made no noticeable difference to class performance, but anecdotal evidence exists that it made a difference to individual students.

The usability and benefits of an electronic learning management system in learning clinical skills at Medunsa

H Havenga

Background/context: Blackboard, an electronic learning management system, was introduced in 2011 and became fully operational in 2012. In the Skills Centre the system is being used as repository for learning material and assessment tools as well as for communication and as tool for monitoring and tracking of student activity on the system. It is essential to be aware of how latest technology can be used to enhance learning and therefore vital to monitor not only the students' perceptions on the usability of the system and their actual activity profiles but also to determine the value of the system for their learning experiences in clinical skills learning.

Aim/purpose: To assess the perceived usability, as well as use and benefits, of the electronic learning management system in learning clinical skills.

Methods: The sample comprises 4th-year medical students (Cohort 1) and 3rd-year nursing students (Cohort 2). Prior to each practise session a pre-test is done on relevant learning material. An online survey will be completed at the end of the block to gather data on the usability of the learning management system (ease of access, communication, suitability and quality of teaching material); the value for learning; the usefulness of the tools; transferability of material to clinical practice (Cohort 2 only) and recommendations for using web-based learning tools as learning aids.

A descriptive analysis of the outcomes will be done. A logical regression will be performed with student performance (pass or fail) as the dependent variable and with selected relevant questions in the survey as predictor variables. A correlation between students' performance and their activity profiles and perceptions will be done.

Results and discussion: Results will be discussed at the conference.

Conclusion/take-home message: Conclusions to be discussed at conference.

Alternative teaching method for anaesthesiology residency of third-year students

C L Odendaal, A Hugo, B J S Diedericks

Background/context: The Department of Anaesthesiology investigates alternative teaching methods for a 2-week residency of third-year medical students.

Aim/purpose: Sixteen basic anaesthetic subjects are presented the Blackboard e-learning platform. Two groups (8 students) rotate alternatively 2-weekly in (i) theatres for practical demonstration of anaesthesia theory and (ii) Visimed Computer Unit for student centred self-study of anaesthetic theory on Blackboard. Formative and summative assessments (from ~600 subject-specific multiple choice questions) as well as written peer-evaluation assignments form the computer-based learning. The lecturer follows all computer-based learning closely and assesses peer-evaluations to verify the peer-learning process. All computer-based learning generates marks and form part of a portfolio that further includes a log book with 20 confirmed clinical tasks that must be completed and confirmed by an anaesthetist's signature and proof of 3 attended anaesthetic cases logged on a theatre chart.

Methods: An anonymous questionnaire to evaluate the programme is completed by students at the end of residency. Continuous analysis of the questionnaire and outcomes of the programme help to plan interventions and strengthen residency programme.

Results and discussion: Results are reported from one group of 105 third-year students that completed the first rotation of the programme. The enthusiasm by which the students approached the programme was significant. Problems were minimal; the most important issue was limited time to achieve proper clinical experience. Portfolio marks were excellent.

Conclusion/take-home message: Accommodating a 2-week residency needed an alternative approach due to time, staff and theatre space constraints in the Department of Anaesthesiology. The residency relies on student-centred computer-based learning to master anaesthetic theory and a structured exposure to clinical work. The first results and impressions are positive, indicating that the residency is realistic and effective in achieving outcomes as set in the MB ChB programme at the University of the Free State.

Turning an OSCE into a VOSCE

J Lombaard, L de Bruyn

Background/context: The objective structured clinical examination (OSCE) is a performance-based assessment tool which is used to evaluate the medical students' clinical competency in taking a history, performing a physical examination and simple procedures. The OSCE consists of stations through which students rotate and are assessed by lecturers using standardised checklists. It is a widely recognised assessment tool, but does have disadvantages.

Aim/purpose: The aim of this study is to determine whether a videotaped OSCE (VOSCE) can be used as an alternative assessment method and has advantages over a traditional OSCE.

Methods: A sample group of 41 pre-clinical students were assessed in this qualitative explanatory study. During their semester 4 OSCE these students had to perform the procedure of venapuncture. They were evaluated by lecturers using standardised checklists. These students were again evaluated during their semester 5 module OSCE performing the same procedure. This time however it was a VOSCE. The students were asked to complete a questionnaire anonymously regarding the VOSCE station.

Results and discussion: During the semester 4 OSCE, 6 different lecturers assessed these students and their average scores for the station fluctuated between 58% and 85%. The average score of the 41 students was 65%. In the VOSCE the station was assessed by one lecturer who watched all the video recordings. The average score for the station was 70.2%. The majority of Afrikaans students preferred the traditional OSCE station, but the majority of the English group preferred the VOSCE station. The whole group, however, wanted a CD copy of their assessment for learning purposes.

Conclusion/take-home message: A VOSCE has advantages over the traditional OSCE regarding reliability and saving resources e.g. number of examiners. Students' performance was not influenced negatively by the VOSCE station.

Tutoring scientific subject matter in students' mother tongue

A Louw, M De Villiers, M van Heusden

Background: Teaching in a country with different academic languages offered special challenges to institutions that cater for these languages. The languages English and Afrikaans are both used as languages of instruction at Stellenbosch University. However, at the Faculty of Health Sciences, Chemistry for Health Sciences for entry-level students is only offered in English. This could cause understanding and interpreting problems, because some students studied Chemistry only in Afrikaans in the preceding years. Faculty put an intervention into place where all the Afrikaans and other African language speaking students could voluntary attend small tutor groups facilitated by senior students. The primary purpose of the groups was to create a safe space for students to communicate about chemistry in their mother tongue.

Aim: To determine the impact formally structured chemistry tutor groups in the students' mother tongue, have on their knowledge, skills and attitude towards the module.

Methods: A mixed method research approach was used to generate data in an effort to determine the effectiveness of the intervention. Focus groups and individual interviews with students and tutors, were used for qualitative data collection. Data from a questionnaire as well as summative results were also collected and analysed for triangulation purposes.

Results and discussion: Participating students performed very well. Although the objectives of the small group were aimed at translating content of the course into the mother tongue language of the participants, it also offered other benefits. These benefits included the development of essential generic skills e.g. group work, effective communication and peer learning of these students.

Conclusion: Providing space where students can communicate in their mother tongue about specific subject matters, assist in enhancing learning of that subject, as well as enhancing the development of critical generic skills that students need to function at an optimal level at university.

Aligning clinical assessment practices with the Prosthetic Dentistry curriculum

R D Maart

Background/context: Removable Prosthetic Dentistry is a fourth-year module of the undergraduate dentistry programme which consists of a large clinical component. Clinical tests were introduced and implemented as an additional clinical assessment method. The intention of introducing the clinical tests was an attempt to ensure that students were assessed fairly, that their theoretical knowledge and the ability to apply it clinically were properly assessed, and to provide feedback.

Aim/purpose: To compare the relationship between the students' performance in the clinical tests and daily clinical grades with their theoretical performance in this module. The second part of the study explored the academic staff's perceptions of the clinical test as clinical assessment tool.

Methods: This was a case study design with a mixed methods approach. Record reviews of the results of students who completed this module in one year were used, and included 110 students. The data analysis was done with the assistance of a statistician. Three full-time lecturers within the Prosthetic department were interviewed. The analytical abstraction method was used to assist with the qualitative data analysis; first the basic level of analysis was done in the narrative form, followed by second higher level of data analysis.

Results and discussion: There appeared to be hardly any relationship between the students' clinical daily grade assessment marks and their theory marks. It appeared that there is a better correlation of the clinical test mark and the theory mark, than clinical daily mark and the theory mark. This finding related well with the lecturers' views that the clinical tests were more reliable as a clinical assessment tool than the daily clinical mark.

Conclusion/take-home message: The clinical test as an assessment tool is well accepted by the supervisors and they agreed that it is more reliable and accurate than the clinical daily grade assessment method.

Learning approaches used by students in the Department of Emergency Medical Care at the University of Johannesburg

Colin Mosca, Andrew Makkink, Christopher Stein

Background/context: The relevance of identifying different learning approaches used by students lies in how these impact the way that the learner engages with the learning material, and how this in turn impacts the overall learning experience. The main distinction lies in that the surface approach is generally relied upon when the aim of learning is to 'momentarily' perform well in assessments as opposed to the deep approach, where the

aim of learning lies in the understanding and interpretation of the learning material. Understanding the approach used by learners can provide important information on learner adaptation to the learning content and environment, and the learning strategies adopted in each of the specific years of academic study.

Aim/purpose: The aim of this study was to examine learning approaches used by students in a 4-year professional degree programme in Emergency Medical Care.

Methods: The research was conducted using the Biggs R-SPQ-2F questionnaire which was voluntarily completed by registered students of BEMC degree programme. A Likert scale method was used to facilitate the interpretation of the results of the survey.

Results and discussion: Data analysis demonstrated that the majority of students in the BEMC programme use a Deep approach to learning. Of the Deep learners, year-one learners were mostly intrinsically motivated to adopt a Deep approach, while years 2 to 4 were mostly extrinsically motivated to adopt a Deep learning approach. Of the learners that scored as having a Surface learning approach, none were found to be Surface motive learners, meaning that the Surface learners were extrinsically motivated to adopt a Surface learning approach.

Conclusion/take-home message: Although there is no significant difference between learning approaches between years, further research is needed to determine whether or not approaches change during the course of a student's studies.

Does the gender of examiners determine the academic performance of medical students?

D J H Niehaus, E Jordaan, L Koen

Background/context: Final-year medical students in the Department of Psychiatry at the University of Stellenbosch perform oral exit examinations. We had previously reported that the gender combination (female-female) of the examiners predicted ($p=0.029$) poorer student outcomes, but the sample size was insufficient to determine whether specific characteristics of these combinations could account for this finding and we therefore now report on a much larger sample.

Methods: The class and examination marks (from all disciplines) of 685 final-year medical students (2008 - 2011) were analysed. Odds ratio calculations were done based on thresholds identified by Bland-Altman statistical analysis. Group status was determined by the gender distribution of examiners and the additional variables evaluated included the examiner's age, first language, experience in examination and area of expertise.

Results: The majority of examiner pairs was male-female (62.9%), followed by male-male (25.0%) and female-female (12.1%). The mean mark in the psychiatry oral exit examination was 62.3% (SD 9.1) and the overall examination mark was 62.8% (SD 8.8). Twelve students failed psychiatry during the period of observation. The examiner's gender was a predictor ($p=0.015$) for the psychiatry oral exit examination marks.

Conclusion: This study suggests that the choice of examiners in oral exit examinations in psychiatry requires careful consideration in order to ensure a fair assessment of student abilities.

Developing clinical reasoning: reasons for progression and non-progression

T C Postma

Background/context: Third-year dental students engage with case-based pre-clinical clinical reasoning training at the School of Dentistry, University of Pretoria. They are assessed using a standardised case-based progress test, which is repeated in the subsequent clinical study years. Action research shows that some students demonstrate progress in clinical reasoning skills over time while others don't. The reasons for this phenomenon are unknown.

Aim/purpose: This study explores students' perspectives on the reasons for progression and non-progression in developing clinical reasoning skills.

Methods: Two focus groups (8 students each), more or less representative in terms of race, and gender were purposively selected. Individuals in Group 1 achieved at least 9% or more improvement in clinical reasoning scores after one year while individuals in Group 2 achieved little or no progression. The dichotomy between the groups was based on improvement in clinical reasoning decisions over time and not on actual academic performance. The focus groups were voice-recorded, transcribed and qualitatively analysed. The university's Health Sciences Ethics Committee provided ethical clearance.

Results and discussion: Students that had shown progression expressed appreciation for the case-based training. They were focussed on the main outcome of comprehensive patient care and provided constructive criticism to improve the system. Students who had not shown progression expressed less appreciation for the case-based training. Although they provided constructive criticism, they tended to be self-centred in their discussions, complaining about the feedback and a lack of structure, and displayed self-handicapping behaviours such as poor time management. Some were not aware of available learning opportunities.

Conclusion/take-home message: The students who had demonstrated progress in clinical reasoning skills seem to be able to reflect and learn independently. Those who did not demonstrate progress may need more structure and intensive feedback, as well as formative feedback about behavioural aspects such as time management and professionalism.

A board game for medical microbiology and infectious diseases: Do academic members of staff think it can work?

M C Struwig, A A Beyliefeld, G Joubert

Background/context: Innovative teaching and learning strategies have become part of medical training, and educational games are increasingly used to enhance the process of mastering subject content. Students in the

Faculty of Health Sciences, University of the Free State, experience medical microbiology as an exceptional challenge because of unfamiliar terminology and the extensive volume of work. Consequently, many students believe that medical microbiology could be a major contributor to failing an academic year. A board game, Med Micro Fun With Facts (MMFWF), based on Trivial Pursuit™ principles, was developed to stimulate second-year medical students' interest in microbiology, and to expose them to the subject content of an Infections module in an informal way involving active group dynamics.

Aim/purpose: When a novel approach to teaching and learning is considered, evaluation of the instrument or process should not be limited to the students for whom it is intended. Therefore, the purpose of this descriptive study was to corroborate students' positive experiences of the MMFWF game, by having it evaluated by academic members of staff.

Methods: Members of staff participated in direct observation of the play process. The nominal group technique was used to identify their perception of the game as a learning tool. Feedback was analysed to investigate the potential viability of the innovation, and comments were interpreted in terms of the criteria of the diffusion of innovation theory.

Results and discussion: The game itself and the play process generated positive feedback from staff members. Measured against the criteria of diffusion of innovation theory, the game meets the requirements for an innovation to be accepted. Its relative advantage, observability, compatibility, level of complexity, and trialability has been confirmed by the participants' feedback.

Conclusion/take-home message: Supplementary to formal lectures, MMFWF has the potential to enhance students' learning experiences in medical microbiology.

How can I help the students visiting my practice to learn more?

M van Rooyen

Background/context: Each 4th-year medical student from the University of Pretoria visit a primary care practitioner (PCP) for 2 weeks. They submit a reflective photo-story report on their experiences and their personal and academic growth after the visit. To identify whether the objectives of the visit have been met and to describe the experiences of students, the reflective reports are qualitatively analysed. A second purpose of the analysis is to propose strategies that can be implemented by the PCPs to optimise the learning experience of the students in their practices.

Aim/purpose: Using a qualitative analysis of 4th-year medical students' photo-story reflections to propose strategies for physicians hosting these students in their practices, to optimise learning opportunities.

Methods: A qualitative approach to analyse the narratives of the photo-story reports was used. Main and sub-themes were identified in terms of the topics reflected upon. Quotes from the narratives were selected to support the themes. Each quote was scrutinised for evidence of learning taking place.

Results and discussion: The main themes were identified as: the impact the visit had on the student, the emotions they experienced, working with the physician, interacting with patients and the clinical care of patients. Conditions where learning generally happened were identified as when students felt comfortable, confident or happy and inspired, they actively participated, they were challenged, they could see the advantage of learning and they received feedback.

Conclusion/take-home message: Strategies that practitioners can use to optimise the learning experience of students in their practice are proposed. Strategies include active participation, reflection, creating a positive environment, challenging experiences, active learning plans and quality time with patients.

The State of Educational Research at the Faculty of Health Sciences, Stellenbosch University

Juanita Bezuidenhout, Ben van Heerden, Marietjie de Villiers

Background/context: Since its inception in 2006, the Centre for Health Sciences Education (CHSE) has committed itself to the promotion and support of Health Sciences Education research in the Faculty of Health Sciences (FHS) at Stellenbosch University. It played a pivotal role in initiating research, and collaborating with researchers in other disciplines within the faculty, the university, nationally and internationally. Therefore in April 2011 a Research Unit for Health Sciences Education was established within the CHSE.

Aim/purpose: To establish a research framework for educational research in the FHS by firstly determining the educational research that is currently performed within the FHS.

Methods: A document analysis was performed to collect information regarding existing projects. All projects were classified according to programme; research focus; location of research and discipline/division/departments involved.

Results and discussion: There are 106 educational research projects, mostly at undergraduate level, of which 50% are in the MB ChB programme. More than 50% of projects focus on teaching and learning design or evaluation, while very few focus on assessment. All 5 undergraduate programmes are represented in educational research with only 9 medical disciplines focusing on postgraduate education. Although most projects are within the FHS, a number of projects are situated in communities and also national and international collaborations. Only 20% of projects are classified as clarification research; the rest as justification or description research.

Conclusion/take-home message: Educational research appears healthy in the FHS, but it is essential to establish macro-projects with comparative, collaborative and/or longitudinal aspects. These would reinforce the results and interdisciplinary cooperation, lead to better use of current capacity and promote trans-professional and interdisciplinary cooperation. Research projects which are explanatory in nature must be developed. Recommendations are made on how to achieve these aims.

From undergraduate research report to publication

G Joubert, M C Struwig

Background/context: During their second and third years of study in the 5-year undergraduate medical programme at the University of the Free State, students plan, perform and report on a research project in small groups of 3 - 5 students, under the guidance of a clinical study leader.

Aim/purpose: We report the experiences of the module leader, Faculty medical writer, and study leaders in taking undergraduate student research reports to publication.

Methods: In this descriptive study with both quantitative and qualitative elements, the approximately 300 projects completed in the decade since their introduction were reviewed for suitability for publication. The research reports that have already been submitted for publication were reviewed in terms of publication success and comments received by reviewers.

Results and discussion: Approximately a third of the student projects are considered publishable. The main reason for not pursuing publication in the remainder is small sample sizes or low response rates. Forty-three student projects have been submitted for publication and have all been published. The methodology of the student projects is generally sound, as their protocol is evaluated as part of the research methodology module, and is reviewed by the institutional ethics committee. Analysis is done or verified by biostatisticians. What is often lacking in the student reports is an understanding of the topic. As a reviewer has stated: 'The Introduction is rather inappropriate and does not give an adequate picture of the topic.' Similarly, students often lack insight into the meaning of their results, and struggle to write a thorough Discussion.

Conclusion/take-home message: Undergraduate student research reports can be published successfully, if one acknowledges the limited knowledge and insight of pre-clinical students into the specific field. The Introduction and Discussion sections thus generally need to be rewritten, which circumvents problems regarding inadvertent plagiarism and incorrect referencing.

Health professions students' beliefs of and learning strategies for acquiring Xhosa

Philip Lewis, M R De Villiers

Background/context: In keeping with evidence that communication in a patient's mother tongue improves quality of care and patient outcomes, the Faculty of Health Sciences at Stellenbosch University (SUFHS) has embarked on an extensive initiative to implement Xhosa training in the clinical consultation in all 5 of its undergraduate courses. Other than anecdotal evidence, it would appear that little is really known about the preconceived ideas students from different language backgrounds have about Xhosa language learning and in particular, their (i) beliefs, and (ii) the language learning and communication strategies they employ to master the language.

Aim and objectives: The objectives of this study are to gain insight into the nature and identity of SUFHS students' language learning beliefs and the

strategies they employ learning Xhosa; determine whether students from different language backgrounds reflect similar Xhosa language learning beliefs and language learning and communication strategies; and identifying factors that will enhance effective Xhosa language teaching and learning.

Methods: A survey comprising of a 31-Likert scale closed answer options followed by open question options was conducted with 48 students from the divisions Speech-Language and Hearing Therapy and Human Nutrition in the faculty. Statements used in the survey were divided into the following categories, i.e., aptitude, motivation, the nature of language learning, communication strategies and difficulty of language.

Results: The study is currently in progress and it is anticipated that the preliminary findings of this ongoing study will be available from April 2012. These results will be reported in this presentation. We plan to use the results to further compare with other undergraduate programmes envisaged to begin learning Xhosa from July 2012; as well as findings of a post-course survey which will be conducted in October 2012 to determine whether students leaning strategies and beliefs reflected in the pre-questionnaire remain prevalent.

Conclusion: We hope that the findings from this study will provide useful insight into students' Xhosa language learning beliefs and trends which will be used to focus, guide and improve Xhosa teaching and learning interventions at SUFHS.

A novel method of data collection

Alma Snyman, Francois Cilliers

Background/context: The use of group methods to collect data can pose a number of problems. This is especially true when engaging with a group of participants who work together within a specific department or hierarchy. The lack of anonymity is one of the most inhibiting problems in such situations and one that motivates us to search for new methods of facilitating participation. Participlan is a method of facilitation originally used to facilitate meetings, group discussions and workshops in the business world. This method of facilitation uses visual mapping to stimulate group participation and the free flow of ideas in a non-threatening environment.

Aim/purpose: To introduce the Participlan method and share the experience of this novel data collection method with colleagues who want to engage with groups during the data collection process.

Methods: The experience of the presenter will be used to illustrate the possibilities and results of using this novel method of data collection to engage with a group of Health Sciences Educators.

Results and discussion: The Participlan method was recently used with great effect to create a positive, non-threatening and engaging process of data collection in a research project focused on the assessment of professional behaviour in Health Sciences Education. In addition to the issue of anonymity being addressed, equal participation by all group members were also facilitated and a concise visual record of data was generated during the sessions.

Conclusion/take-home message: There are existing methods of group facilitation that offer possibilities in terms of reliable data collection for research purposes. It is possible to guarantee anonymity during a participatory group session for data collection. Participlan is an example of a novel, valuable method of data collection.

Acute Shortage of Faculty at School of Medicine of the Catholic University of Health and Allied Health Sciences, Tanzania

Mange Manyama, Stephen Mshana, Steve Justus, Ralf Graves and Fikile Mtshali

Background: The number of medical schools and student intake in Tanzania has increased 3-fold in the last decade in response to the growing population and health needs. However, there has not been a corresponding increase in the number of faculty, resulting in a critical shortage at these institutions.

Aim/purpose: This study was conducted to determine the extent and nature of the faculty shortage at the school of medicine, Catholic University of Health and Allied Sciences (CUHAS). Results from this study will aid the school in planning future interventions to address the shortage.

Methods: A cross-sectional descriptive survey approach was used to gather information from department heads and university records on the number of faculty and students at CUHAS.

Results and discussion: At the time of this study, the school of medicine had a total of 86 faculty and 700 undergraduate students and residents. Of the entire faculty, 40 (46.5%) work as full time and 46 (53.5%) as part time. The department of surgery had a higher number of faculty while the psychiatry and ophthalmology departments had the lowest. Over 50% of departments had shortages of 30% or more of the required number according to departments requirements/wishes. The extent of the shortage was determined based on department requirements/wishes since there is no existing policy for specifying the faculty required per department. The World Federation for Medical Education (WFME) recommends that the teacher-student ratio should be relevant to the various curricular components and the appropriate number of faculty should be determined by departments implementing the curriculum.

Conclusion/take-home message: The shortage of faculty is likely to compromise the quality of teaching and therefore the competence of future health professionals. Various interventions are recommended including establishment of a residents-as-teachers programme and faculty development programs to help meet the shortage and groom faculty for leadership roles in finding solutions to improve health professions education in Tanzania.

The impact of brief quality improvement projects (QIPs) by medical students

Claire van Deventer, Ian Couper, Nontsikelelo Sondzaba

Background/context: Since 2006 final-year medical students do QIs as part of their primary care block in Gauteng and North West province.

Aim/purpose: To report on the QI reports done in the North West province between 2006 and 2008.

Methods: The triggers, methods and outcomes of the projects are reported.

Results and discussion: Mother and child projects comprised 30% of the QI's, followed by health education (25%), Emergency room, chronic illness and observation (all 13%) and administrative issues (6%). Most of the methods used were questionnaires followed by training sessions and posters or information brochures. The outcomes were mainly short-term knowledge improvement and some systems improvement, e.g. well-organised emergency rooms.

Conclusion/take-home message: Even very short projects can have an influence on clinic staff and patient care as well as helping students to learn particular skills.

Support of HSS-TA in the implementation of National Continuing Education Strategy for the MOHSW

R M Mpemi, S H Phafol, M Theko

Background/context: Lesotho, like many African countries, faces challenges of shortage of Human Resources for Health (HRH) due to migration to other countries. This has led to a grave decline in key health indicators. In an effort to retain the scarce HRH, the MOHSW with assistance from its Health Development Partners (HDPs) has developed a 5-year national Continuing Education Strategy (CES). The Health Systems Strengthening Technical Assistance (HSS-TA) plays a key role in facilitating the implementation of this strategy. HSS-TA is an MCC/MCA funded project, that focuses on 4 main areas of health reform processes: (i) Developing Human Resources Capacities and Competences (HRCD); (ii) Supporting the Ministry's process of decentralisation of health services; (iii) Developing the Health Management Information System (HMIS); and (iv) Strengthening the Ministry's ability to coordinate and oversee health research activities. The poster will focus on the first area – HRCD.

Aim/purpose: To illustrate the support and achievements of HSS-TA in the implementation of the MOHSW national CES, 2010 - 2015.

Methods: Desk review of documents from inception of the project to date, stakeholders' interviews and observations.

Results and discussion: Training activities are coordinated by the HR Directorate of the MOHSW and HDP support one training plan. As of 31 March 2012, 1 212 participants from different cadres of HRH were trained on different health-related topics and a draft Competence-Based Curriculum for Nursing Assistants is available.

Conclusion/take-home message: There are a variety of ways in which HRH could be retained and providing continuing in-service training has proved to be one of the best mechanisms. Retaining HRH needs a concerted effort from both the Ministries of Health and HDP.

Service learning in Pharmacy: Student reflections on changes in the health service

A Bheekie

Background/context: Service learning is institutionalised in undergraduate pharmacy training at the University of the Western Cape (UWC). Strengthened partnerships between UWC School of Pharmacy and the Department of Health, Western Cape initiated service learning across several tiers of the healthcare system. Student objectives were to contextualise learning during service provision.

Aim/purpose: The aim of this investigation was to assess student reflective reports of practice patterns within the health services, that they would consider changing.

Methods: Final-year pharmacy students engaged in routine service activities under the direct supervision of pharmacy service staff for a week, for 3 academic terms. After the session, students offered feedback to the service facilitator, and actively engaged in a guided reflection session on campus with an academic facilitator. The reflective report typically focused on a practice theme that they had experienced or observed during the service session. Students were exposed to different healthcare sites for each service learning week. After the 3rd service learning week (2011), students gained profound insight into the public health service sector. The theme for the reflective report focused on identifying a practice pattern that students felt they would like to change and indicated how that change could be achieved.

Results and discussion: Preliminary qualitative analyses of the reports indicated that students would consider changes in several service aspects. Among others improving staff language proficiency and inculcating a positive attitude, promoting greater engagement on medication therapy management were emerging themes. Service and reflection prompt students towards personal and professional transformation.

Conclusion: Reflection contextualises learning and sensitises students to dissonance between theory and the health service. Pharmacy students can emerge as change agents towards quality service delivery.

Enhancing the inter-professional interface through early exposure of undergraduate pharmacy students to the healthcare environment

N Butler, A Bheekie

Background/context: Senior undergraduate pharmacy students at the University of the Western Cape (UWC) undertake extensive experiential learning within a structured and institutionalised service-learning programme.

Aim: To extend the experiential learning component to entry-level pharmacy students within the context of a module on Primary Healthcare (PHC) and Development.

Methods: Students, within the first month of their first term of pharmacy studies, initiate, arrange and undertake a visit to a PHC clinic. This

telephonic communication is structured and supervised by a staff member; students complete a tracking sheet containing details of the interaction. A prior assignment served to develop specific interview skills. During the visit they compile information by observation and interviews with both staff members and patients, to critically assess the facility in terms of adherence to PHC principles. A current innovation (2012) entails including a reflection session after the visit, intended to introduce students to reflective thinking and to allow a sharing of experiences around their first inter-professional encounter and the impact of the visit on their communication skills and self-identification as a potential healthcare provider.

Results and discussion: Pre-exposure data collection on expectations showed an overwhelmingly positive towards the visit as a potential learning experience; nervousness was the dominant emotion expressed. The strategies of prior development of interview skills and structured, guided and supervised telephone communication both served to overcome their apprehension and enhance their confidence, communication skills and professional identity.

Conclusion: Student development in terms of both embedding knowledge and enhancing professionalism is nurtured through early exposure to experiential learning. This serves to support the notion that it is possible to use an alternative approach to extended classroom-based instruction prior to practice exposure.

Challenges in caring for post-stroke clients in low socio-economic settings: A community health nursing experience

Rosemary Duduzile Mbatha-Ndaba

Background/context: Community health nursing students conduct part of their clinical practice in communities. They go on home visits to work with clients of different health needs. Home visiting to clients who are cared for at home post stroke, has unravelled a number of challenges to students, faculty and home-based care workers. The country (Botswana) has prioritised Community Home-Based Care as a strategy to address the overburdened inpatient care services resulting in the need for additional health manpower to attend to varied health needs of clients cared for at home.

Aim/purpose: This presentation discusses various constraints, repeatedly reported by students, during home visits, in the endeavour to improve the care of a client who has had a stroke, maximise body function, and prevent complications.

Methods: This is a clinical experience while working with community health nursing students in the communities.

Results and discussion: Constraints which students cannot do anything about create anxiety and frustration when evaluating the plan and efficacy of care rendered against the time spent with the client. Some of these clients have been in the same state of health for several years.

Conclusion: It concludes that from the planning process, faculty need to be involved in guiding and supporting the student as he/she implements and evaluates the care. The long-envisioned multidisciplinary home-based

care team is overdue. This may necessitate an increase in the numbers of healthcare professionals and/or creating a cadre which can be 'stretched' to render several care activities which are currently inadequately offered.

The development of inter-professional learning sites at community-oriented primary care (COPC) health posts by multi-professional teams

M van Rooyen, R Jansen, A Reinbrech-Schutte

Background/context: In 2011, the re-engineering of primary healthcare (PHC) was promulgated by the Minister of Health. This innovation involves moving the focus of intervention from institutions (clinics and hospitals) to the community. UP Health Sciences, with collaborators, is setting up health posts in a model. Nine such sites are being established. L-CAS is a medical-education-through-experiential-service-learning initiative that was implemented in the UP School of Medicine. The programme faces logistical challenges, like limited space and resources at the clinics that are threatening to impact negatively on it.

Aim/purpose: The adaptation of L-CAS by supporting the development of learning sites at the COPC health posts, in answer to the posed challenge by the minister, and other logistical difficulties.

Methods: A participatory action research project was initiated to evaluate, review and adopt the L-CAS program. This project includes questionnaires, focus groups and a workshop.

Results and discussion: After the initial round of evaluations a number of proposed changes were identified including the development of inter-professional learning, creating a more diverse learning platform, exploring partnerships with students from other faculties working in the same communities, and continue the research. One of the challenges faced by implementing these proposed changes in the COPC sites, is limited space. Through the community engagement division of the University, a partnership was formed between the Faculties of Health Sciences and Construction Engineering to build physical structures at the sites. These structures could provide an academic meeting place, academic resources, consultation rooms, office space and safe parking facilities.

Conclusion/take-home message: Exposing students through service learning to address the needs of the community, based on the COPC health post model. Medical students will receive exposure through the medical-education-through-experiential-service-learning initiative and construction economics students will receive exposure through the construction-education-through-physical-construction-service-learning.

Connecting the dots: eLearning during Public Health fieldwork

Paula Barnard-Ashton, Dianne Manning

University of the Witwatersrand

Background/context: The 4th-year occupational therapy students attend a 3-week rural community fieldwork placement for Public Health. The

placements are typically under-resourced, and the students are 'virtually cut-off' from accessing learning materials and online library resources. Connectivity during this placement could be facilitated through supplying students with pre-paid data on a tablet-computing device.

Purpose: This study investigated the relationship between use of tablet computing for learning during rural fieldwork and the self-reported perceived knowledge gain of the students.

Methods: Post ethical clearance, a pre- and post-test survey design was used. The students completed an initial survey of their perceived knowledge (on a 5-point Likert scale) for each of the 16 rural fieldwork learning objectives (RO's), as well as 32 other-setting fieldwork objectives (OO's). The survey was re-administered after their 4th fieldwork rotation. Students were assigned to groups by the department. Seven students on rotation 1 and 2 did not take the devices with them on their rural placement (control). The 13 students on rotation 3 and 4 took a minimum of 1 device/ pair, on their rural placement (experimental). The data was organised into 4 clusters: Control Group's Rural Objectives (CGRO); Control Group's Other Objectives (CGOO); Experimental Group's Rural Objectives (EGRO); Experimental Group's Other Objectives (EGOO).

Results and discussion: T-test analysis of the pre- and post-test data for each cluster showed significant difference in all clusters with a highly significant difference for the EGRO's ($p=0.000145$). A greater difference in the perceived knowledge gain was found in the Likert scale of the EGROs (average gain of 0.9), compared with the other clusters (EGOO=0.4; CGRO=0.5; CGOO=0.4). A one-way ANOVA showed this to be significant ($p=0.046$).

Take-home message: There is self-reported perceived benefit to students having connectivity and access to online resources during rural fieldwork place

Technology in Emergency Medicine teaching in South Africa: Are we ready for 2.0?

Heike Geduld

Background: Enthusiasm for web 2.0 and technology usage in medical education is high. In the field of Emergency Medicine there is a move to an increasing and diverse amount of electronic resources. However in postgraduate education students are generally on the wrong side of the 'digital divide' and their focus is primarily on shop-floor learning.

Aim: The aim of the study was to survey technology literacy among the staff and students in the Division of Emergency Medicine at the University of Cape Town/Stellenbosch University, to determine levels of access to technology, confidence with standard software and tools, and the current usage of technology in teaching and learning.

Methods: A Google-form electronic survey was sent to 62 participants (42 registrars, and 20 faculty members). The survey included open-ended questions on attitudes towards technology for learning. Participants had to rate their confidence with search engines, word processing, presentation

and referencing software. Participation in the study was voluntary. All responses were anonymous.

Results and discussion: Forty-eight of 62 (77%) responses were received: 30/42 (71%) registrars and 18/20 (90%) faculty. Two (4%) had no access to a computer and the internet at home. 39/48 (81%) respondents were able to access the internet at work, mostly (21; 44%) using smartphones. Confidence was high with using word-processing programs (45; 94%), presentation software (46; 96%), social-networking sites (37; 77%) and search engines (36; 75%). More people read online journals (38; 81%) compared with printed journals (15; 32%). Respondents were generally positive but emphasised the need for local content. Technology should 'complement not replace' traditional learning.

Conclusion: Technology may provide a means for students to access up-to-date clinical information and an always accessible teaching platform, however mature learners are not necessarily as familiar with or confident in using technology. Training is essential before instituting technology-based interventions.

A needs analysis/situational analysis for professional development distance learning courses for doctors in rural areas of Sudan

Shahd Osman

Background/context: The Continuous Professional Development Centre (CPDC) in Khartoum aims to assist all health professionals in Sudan to use continuous professional development (CPD) more effectively. However, in rural areas difficulties of accessibility, finance and manpower are limitations.

Aim/purpose: The study aims to identify the distance learning (DL) courses needed for doctors in rural areas, and assess the technologies needed to implement and support DL.

Methods: A descriptive pilot study was used. Qualitative data was collected using in-depth interviews with instructors' representative of courses provided by the CPDC and its technical support department. A focus-group discussion with doctors was held in Al Gezira; and a questionnaire was developed and then completed by a stratified sample of forty doctors working in rural areas of Al Gezira province.

Results and discussion: In-depth interviews with CPDC members indicated the need for a material production unit with technical support and instructional designers and a need for co-facilitators in rural areas. The results of the questionnaire indicated electricity was available for more than 12 hours/day for (85%) of participants. Computers were available for (92.5%); and internet connectivity good or excellent for (72.5%). Nearby technical support was available for only (57.5%). Courses which participants considered of greatest need included: basic life support (85%), trauma life support (75%), advanced life support (62.5%), severely ill child (62.5%) and patient at risk (62.5%). Computer skills were important for the professional development of (80%), but only (40%) felt very competent with their skills. Other courses that were suggested the CPDC could offer were ultrasound, and 'when to refer' course.

Conclusion/take-home message: Though CPDC has reasonable equipment to start DL, technical support must be addressed. Courses delivered should target the rural doctors' needs. Courses aimed at improving computer skills may be offered to ensure benefit from DL.

The use of automated integrated management of childhood illness guideline in Primary Healthcare in the Western Cape in South Africa

Hilary Rhode, Bob Mash

Background/context: The IMCI guidelines provide a standardised integrated approach to delivering quality care for children under 5 years of age. Nurses in South Africa are currently using a paper-based guideline. The automated guideline in the format of a convertible personalised computer tablet aims to improve training in IMCI and the quality of clinical decision making in primary care. The automated guideline has been designed to systematically navigate through the IMCI algorithm reducing errors and making it more effective. This study evaluated the use of automated guidelines in improving the training of nurses and use of the IMCI guidelines in primary care settings in the Western Cape.

Aim/purpose: The purpose of this research is to evaluate the use of automated guidelines in improving the training of Clinical Nurse Practitioners (CNPs) in the use of integrated management of childhood illness guidelines in Primary Healthcare setting in the Western Cape.

Methods: A sample size of 30 Professional Registered Nurses was selected from a population of 100 nurses who attended the 1-year Postgraduate Diploma in Clinical Nursing Science at Stellenbosch University. Descriptive study design compared cohorts of CNPs who used and did not use the automated guidelines during training and subsequent practice. The study was conducted in rural and urban primary healthcare centres in the Western Cape.

Results and discussion: Results compare the CNPs' knowledge of the IMCI guidelines at the end of the IMCI training course in those using and not using the automated version; the CNPs' adherence to the IMCI guidelines in practice following the IMCI training course when using and not using the automated version and the experience of those CNPs who use the automated guidelines.

Conclusion/take-home message: The use of automated guidelines shows the potential for improving adherence to IMCI guidelines in the Western Cape.

Evidence regarding information communication technology used by generation Y students in Health Sciences Education

L J Van der Merwe, G J Van Zyl, M M Nel, G Joubert

Background/context: Challenges in Health Sciences Education include effectively engaging the current cohort of so-called Generation Y students (born 1981 - 2000), who are said to display typical characteristics due to

sharing a common place in history. This includes the impact of information technology and a uniquely South African educational context.

Aim/purpose: The aim of this study was to formulate an educational approach for the generation profile of undergraduate students at the Faculty of Health Sciences, UFS, by discovering whether common perceptions describing Generation Y are accurate and how differences in perceptions impact on the teaching-learning environment.

Methods: A mixed-methods research design was used. In phase one, concurrent triangulation, quantitative and qualitative data were gathered simultaneously in a questionnaire survey for undergraduate students and academic staff members respectively. In phase 2, sequential explanatory design, a focus-group interview held with academic staff members yielded qualitative data, followed by incorporation of a literature survey and the results of the questionnaire survey and focus-group interview in order to formulate the educational approach as indicated in the aim of the study.

Results and discussion: Results indicated that there was agreement between undergraduate students and academic staff members with many of the positive characteristics attributed to Generation Y, e.g. confidence, but differences existed regarding perceived weaknesses, e.g. an attitude of entitlement. Their values and behaviour, communication and learning styles, skills and needs, and environment and shaping events revealed an information-communication technology connected cohort with poor interpersonal communication abilities desiring structured guidance and role-modelling. This distinctive profile necessitates a bespoke educational approach.

Conclusion/take-home message: The focus for effective educational practices by well-equipped lecturers should be on the involvement of students by means of teaching-learning approaches that are appropriate and balanced, as well as theoretically sound, within a suitable, relevant environment.

Podcasting lectures for second-year medical students at the Faculty of Health Sciences, Stellenbosch University

S H Walsh, M R De Villiers

Background/context: The podcasting of lectures has been shown to benefit students. Students mostly use them for revision and test preparation. Lectures in the Respiratory Block of the MB ChB II course were converted into podcasts and placed on Webstudies, where students could view or download them as a measure to improve the success rate of the class.

Aim/purpose: The aim of this study was to determine whether undergraduate medical students find podcasting a useful addition to lecture attendance. Further objectives included whether the availability of podcasts influenced the Respiratory Block test scores; and lecturers' experience of podcasting.

Methods: Questionnaires were sent to the students and lecturers at the end of the block. End-of-block class scores were compared with those of the previous year. The marks of the students who downloaded the podcasts were statistically compared with those who did not. A focus-group interview was held with the students who assisted with the podcasting in the class.

Results and discussion: The 82 podcasted lectures were downloaded and viewed 1 737 times (an average of 21 times each). 78% of the students used the podcasts and 88% thought that all lectures should be podcasted. 88% of students used podcasts for clarifying concepts not fully grasped in class. The focus group identified benefits and challenges and ways to deal with it. 70% of the lecturers thought that the process was stress free or extremely stress free and 80% thought the podcasts did not influence class attendance or even showed an improvement. The test marks of the class improved.

Conclusion/take-home message: Our students mostly found podcasts beneficial for clarifying concepts they did not grasp in class. The feedback provided useful pointers for change, including clarification around copyright issues and that we will be continuing to podcast the entire second year's lectures.

Training needs on violence against women in a medical curriculum at the University of Ibadan, Nigeria

O I Fawole

Background/context: Medical practitioners are in an ideal position to be able to mitigate the impact of violence on the health of women. They manage women with various health conditions and are thereby able to educate, screen and treat victims.

Aim/purpose: To determine final-year medical students' knowledge and skills in managing VAW victims and describe extent to which VAW was taught by faculty in the College of Medicine, University of Ibadan, Nigeria.

Methods: Quantitative data was collected from 109 students using semi-structured self-administered questionnaire. Qualitative data was collected by review of documents and modules and interview with one key informant faculty each from 6 departments in the College, namely: Family Medicine, Paediatrics, Obstetrics and Gynaecology, Accidents and Trauma, Dentistry and Public Health.

Results and discussion: Response rate was 85.1%. Mean age was 25.2±3.1 years. Sixty-five (59.6%) were males. Physical, sexual, psychological and economic violence was known by 73.8%, 72.6%, 54.8% and 44.0%, respectively. Majority (77.4%) felt it was part of their duty to ask patients about abuse. Less than half (46.4% or 39) had ever received training on VAW, most of which were formal lectures (83.3%). Students with previous training were more likely to be knowledgeable (OR 1.64; 95% CI 0.61 - 4.42) and skilled (1.27; 0.53 - 3.05). Males had better knowledge and skills than females (OR 2.44; 0.89 - 6.65 and 1.27; 0.53 - 3.05 respectively). The review of curriculum documents revealed that the topic had not been included for teaching. Key informants admitted to not having a formal teaching programme, although Public health, Family Medicine and Obstetrics and Gynaecology stated they occasionally mentioned it at teachings.

Conclusion/take-home message: While most students were willing to ask patients about abuse, they lacked fundamental knowledge and skills to do so. The present teachings should be enhanced to improve knowledge and management skills. Faculty agreed to review the curriculum.

Point-of-care ultrasound in Madagascar: What should be core knowledge? Work in progress

Rabenandrasana Hajasoala Alain, Juanita Bezuidenhout

Background/context: Although use of point-of-care diagnostic ultrasound (DUS) is an increasingly valuable diagnostic tool to the general practitioners (GPs), providing adequate DUS training in Madagascar is difficult due to the lack of standardisation. Detailed international training guidelines for those who are using or wish to use this imaging technique are underutilised.

Purpose: The purpose of this study is to determine the required content for undergraduate clinical ultrasound and training in Madagascar.

Methods: Questionnaires based on the WHO: *Technical Report Series*, 1998 and the *Joint Review Committee on Education in Diagnostic Medical Sonography* (USA) guidelines and addressing content, were distributed randomly to GPs ($n=41$) and all faculty ($n=11$) at University Hospital of Toamasina, Madagascar. The data were collected and were entered on SurveyMonkey® and analysed.

Results: Completed questionnaires were received from 38 GPs and 9 faculty members (90% response rate). They agreed that ultrasound instruction should start with second-year medical students (43% GPs and 36% faculty). Based on their priority rankings, DUS instruction should focus on: physics that underlie ultrasound (92% GPs, 89% faculty) and diseases relevant to Madagascar (79% GPs; 89% faculty). Based on these results, ultrasound training was initiated in 2011. Student evaluation was obtained at the start of in 2012. Based on these results, concomitant video and/or tele-medicine should be used to supplement lectures.

Conclusions: These findings indicated that it is possible to adapt international guidelines for use in Madagascar. Concomitant video and or tele-medicine in addition lectures will be valuable. US educational materials can therefore also serve to advance e-learning, reaching a larger number of health practitioners, resulting in creating a virtual learning environment.

Reflections of graduating medical students: A qualitative study

Lionel Green-Thompson, Patricia Mcinerney, Dianne Manning, Ntsiki Mapukata-Sondzaba, Shalote Chipamaunga, Tlangelani Maswanganyi

Background/context: The 6-year medical programme at the University of the Witwatersrand admits students into the programme through 2 routes – school entrants and graduate entrants. Graduates join the school entrants in the third year of study for a transformed curriculum called the Graduate Entry Medical Programme (GEMP). In years 1 and 2 of the GEMP, the curriculum is structured into system-based blocks. Problem-based learning is applied in these 2 years. The curriculum adopts a biopsychosocial approach to healthcare, which is implemented through spiral teaching and learning in 4 main themes – basic and clinical sciences, patient-doctor, community-doctor and personal and professional development. In 2010 this programme produced its fifth cohort of graduates.

Methods: We undertook a qualitative, descriptive and contextual study to explore the graduating students' perceptions of the programme. Interviews were conducted with a total of 35 participants who volunteered to participate in the study. The majority of the participants interviewed participated in focus-group discussions. The interviews were transcribed verbatim and analysed using Tesch's 8 steps. Ethics approval for the study was obtained from the Human Research Ethics Committee of the University of the Witwatersrand.

Findings: Six themes were identified – 2 separate programmes, problem-based learning and Garmin's (navigation system), see patients for real, being seen as doctors, assessment: of mice and MCQ's, a cry for support and personal growth and pride. Participants were vocal in their reflections of experiences encountered during the programme and made several insightful suggestions for curriculum transformation. The findings suggest that graduates are exiting the programme confident and ready to begin their internships.

Conclusion: Qualitative methods provide a valuable tool for the evaluation of programmes. Participants felt adequately prepared by the programme for their internship. Concerns were raised about variability in learning opportunities as well as assessment.

A survey of the conditions treated by 3rd- and 4th-year physiotherapy students at the University of Cape Town during placement in general hospitals

Lunelle Pienaar

Background/context: Clinical practice is the mainstay of training of physiotherapy students. The HPCSA requires that students spend at least 1 000 hours in the clinical arena. What is unclear is how students spend their time while in the hospitals.

Aim/purpose: This study aims to document the most common conditions treated, the intervention techniques used, and the time spent on administration and patient treatment respectively.

Methods: Students were asked to complete an on-line questionnaire regarding their practice. As this was initially planned as a simple audit, no ethical approval was sought.

Results and discussion: Seventeen students who completed the survey were included in the study. One hundred and ninety new patients were recorded; most common conditions were respiratory (75) and orthopaedic (38). The 4th-year students treated more respiratory conditions (30%) compared with 3rd years (13%). Third-year students had more orthopaedic conditions (13%) compared with 4th years (10%). Third-year students included technique of gait re-education (51%) in treatment whereas 4th years included chest physiotherapy (43%). Third-year students spent more time on 219 treatments (37.1, SD 13.2). Fourth-year students spent less time (28.7, SD 19.0) on their 460 treatments ($t=5.8, p>0.001$) and significantly more time writing up patient records (15.2, SD 12.2) than 3rd years (10.0, SD 6.5) ($t=6.0, p<0.001$).

Conclusion/take-home message: Further work is needed to explore the influence of conditions students encounter in clinical practice and the application of practical skills.

Problem-based learning at UKZN – pedagogy, people and paradigms

T E Sommerville

Background/context: Some forty-odd years after problem-based learning (PBL) was introduced to higher education, its strengths and weaknesses and its widespread application have been documented. Most evidence emanates from first world settings, in quantitative terms, making comparisons with traditional teaching methods.

Aim/purpose: Ten years after PBL's introduction in UKZN's medical school, I examined the form of PBL pedagogy practised in a diverse, multi-racial, multi-cultural, multi-lingual, multi-educational, developing-world setting, through the eyes of students, staff members and institution.

Methods: Qualitative study using interviews with 19 students and 6 staff members, analysed using Nvivo and compared with institutional statements, using Bernstein's theory of classification and framing as an analytical framework.

Results and discussion: Faculty documents reflected a conventional type of PBL: student-centred, self-directed, collaborative learning in response to a 'problem'. Interviews, in contrast, revealed a picture of a strongly classified and framed pedagogy. The boundary between everyday and medical knowledge was significant (in slightly different ways) for both students and staff, who had differing views of inter- and intra-disciplinary boundaries. Seven different conceptions of 'integration' were voiced. Local perceptions of PBL differ from the theoretical view of a weakly classified and framed pedagogy. The everyday-medical boundary is delineated chiefly by differences in discourse, rather than by the language of pedagogy. Differing perceptions of inter- and intra-disciplinary boundaries can be related to curriculum and faculty structures. The range of conceptions of 'integration' probably relates to conceptions of the knowledge structure of medicine. The field has been regarded as akin to the natural sciences – in Bernstein's terms, a hierarchical knowledge structure.

Conclusion/take-home message: Medicine is largely a horizontal knowledge structure, comprising a number of distinct regions with minimal overlap. This leads to dissonant perceptions of 'integration'. The pedagogy applied should strive actively to assimilate disparate areas of knowledge.

Breaking bad news: public health electives for medical students

Liz Wolvaardt, David Cameron, Vanessa Burch

Background/context: The HPCSA has decided to include public health in the medical curriculum. This headline intention is difficult to implement: lack of clarity of content; lack of interest by students and an overloaded

curriculum remain challenges. At our University one opportunity is the one-month elective in the third year.

Purpose: As students self-design their elective, few design one in public health as students cannot choose what they do not know. Students also lack the social capital to identify meaningful learning opportunities in the community. Simultaneously medical schools should demonstrate social accountability that considers the priority health concerns of the community for education, research and service. This elective could address the goals of learning and social accountability.

Methods: Post ethical clearance, an action research study used a voluntary 10-item online student-needs survey to inform the development of an inner-city elective. The elective was marketed and a review of actual choices conducted.

Results and discussion: 106 students participated and 25 (28.1%) showed interest with another 44 interested but needing details. The majority ($n=66$) preferred to do an elective that would deepen their knowledge of something already in their curriculum. Proximity to home ($n=38$) and public transport access ($n=18$) were unimportant. Open-ended responses revealed 3 themes that influence elective choice: institutional factors that support learning; the setting and opportunity to practice. Two named public health topics as an interest. The bad news is that no students enrolled for this elective. The 230 elective forms showed that 33.5% ($n=77$) of students divided their electives into 2 or more activities. Possibly this group includes those who expressed interest, so a one-month elective (irrespective of the number of activities included) is inappropriate.

Take-home message: It seems like public health electives should be like miniskirts. Long enough to cover the topic but short enough to be interesting.

Computer-based simulation as e-learning tool

M J Labuschagne, M M Nel, G J van Zyl, P P C Nel

Background/context: Computer-based simulation and game play are new emerging e-learning tools. The use of computer-based simulation can be an e-learning tool that can be utilised to add a new dimension to e-learning. Computer-based simulation can be used to assess higher order skills.

Aim/purpose: (i) List e-learning tools; (ii) Describe the tools for the different e-learning categories; (iii) Explain the uses, advantages, disadvantages and assessment possibilities for computer-based simulation and game play.

Methods: A literature review, semi-structured interviews with international simulation experts and focus-group interviews with lecturers of the clinical phase of the undergraduate medical programme at the UFS were conducted, analysed and interpreted.

Results and discussion: The author will give as background, some of the e-learning tools that are available to develop online lectures and activities. The aspects that will be discussed include: content/course or learning management system (CMS/LMS); synchronous collaboration applications;

computer tools/applications (including asynchronous collaboration applications); game play or game simulation software. The tools for the different categories will be discussed and the author will elaborate especially on computer-based simulation options, the uses, advantages and limitations and the options that are available for developing flat screen simulation to use in simulation centres and online.

Conclusion/take-home message: Computer-based simulation and simulation games can be useful tools to be added to the e-learning toolbox. Computer-based simulation and virtual games can be used to assess higher order skills.

Developing an e-Learning platform to complement Xhosa and Afrikaans language teaching and learning: a Stellenbosch University Faculty of Health Sciences initiative

Philip Lewis, Leandra Khoury, M R De Villiers

Background/context: Communication problems experienced between healthcare professionals and patients are well documented and perceived as a major barrier to quality healthcare. Stellenbosch University Faculty of Health Sciences (SUFHS) has embarked on a range of innovative roll-out initiatives to empower students with the necessary Xhosa communication skills to improve patient quality care. This presentation demonstrates a novel e-learning platform, specifically designed to complement formal lectures and to enhance students' Xhosa language skills.

Aims: This project aims to develop and design a range of task-based activities and interactive assessment procedures to assist students in learning Xhosa for use in the clinical consultation, and prepare them for their simulated OSCE's. The implementation is informed by a study investigating students' perceptions and application of the e-learning platform for Xhosa.

Methods: The presentation describes the application of the Xhosa e-learning platform design as well as the development of the course material consisting of various interactive text-to-speech language learning activities and assessment procedures. The e-learning course is designed to be hosted on *Blackboard*, which is SUFHS's Learning Management System (LMS), and will be in the format of a Sharable Content Object Reference Model (SCORM) module.

Results: Currently 20 students from the division of Human Nutrition are appraising the effectiveness and application of the e-learning material. These findings will be made available from October 2012, and will lend itself to further analyses to improve the application of future e-learning-related developments as well as further ways to support and reinforce future students' Xhosa communication skills.

Take-home message: South Africa is faced with huge language barrier challenges in the healthcare sector. The SUFHS e-learning course is not only designed to complement Xhosa lectures to improve language proficiency but also to prepare students in clinical communication contexts. We trust that by developing this novel e-learning course material we will be able to greatly enhance the learning of an African language for health professionals in order to improve patient care in our health services.

Fostering lecturer-student engagement using the social network (Facebook) in an undergraduate Radiography course S Mdletshe

Background/context: Engagement with the students in higher education (HE) is critical to their success with their studies. In Radiography engagement is more critical because the students spend half of their academic time in the clinical environment for work integrated learning (WIL). This implies that they only have direct access to the lecturer during half the academic time which negatively impacts on effective student engagement. Effective engagement is enhanced by communication with the students.

Aim/purpose: This presentation reports on an intervention to address the challenge of student engagement based on the use of Facebook (FB) as a communication tool with the third-year radiography students at the University of Johannesburg (UJ). The presentation focuses on the experience of the author in using this tool and how it impacted on student engagement.

Methods: The author noted the lack of communication with the students and the negative impact this had on engagement. In response to this, the author decided to use FB as a communication tool with the students by creating a FB page and called it 'Radiography Thirdyr Diagnostic.'

Results and discussion: The use of this tool showed enhanced communication between the students and the lecturer, which positively affected student-lecturer engagement.

Conclusion/take-home message: Student-lecturer engagement can be greatly enhanced by using the various platforms of currently available social networking tools.

What academic advisors need to provide better student support – lessons from a Malaysian medical school C P L Tan, J Bezuidenhout, J J Blitz

Background/context: Academic support programmes have an important role in addressing the needs of students experiencing difficulties. A quality assurance exercise by the national accreditation body highlighted that academic staff involved in non-academic counselling had no prior training.

Aim/purpose: The purpose of this study was to investigate the current practice(s) of academic advisors in a Malaysian medical school in order to determine their needs and to make recommendations for a faculty training programme.

Methods: Focus-group discussions (FGDs) involving 10 academic advisors were conducted using a semi-structured interview schedule.

Results and discussion: Study participants demonstrated some instinctive understanding of their role (especially as role models in their professional development) although they did not have clear guidelines. They strongly expressed a need for training in counselling skills and better administrative support. There was some reluctance to undertake the task of academic advising as there were no perceived rewards or incentives.

Conclusion/take-home message: The training of academic advisors needs to be addressed in faculty development programmes. Strong institutional administrative support is important with efficient channels of communication to academic advisors on student performance and other relevant information. Teaching activities need due institutional recognition and reward.

A pilot study on the validity and reliability of an assessment using R-Type MCQs

Lunelle Pienaar, Gregory Doyle

Background/context: The Faculty of Health Sciences at the University of Cape Town uses a problem-based learning medical curriculum which focuses on developing problem solving abilities rather than recalling facts. It is therefore best that the assessment instruments should focus on problem solving. More R-type MCQs asking students to solve problems based on information provided in a clinical case-based scenario have been included. R-type MCQ or extended matching items (EMIs) have approximately 8 options and 2 or more items. The extensive list of options reduces chance of guessing and recognition of correct answers. Literature sees this as a better alternative to A-Type MCQs where the limited number of options (usually 4 or 5) encourage guessing. Application of theory and problem solving can be tested in the same EMI as it allows greater range higher order reasoning to be tested.

Aim/purpose: To determine whether using EMIs rather than A-type MCQs will result in a more reliable and valid assessment instrument based on the difficulty and discrimination.

Methods: One of the fifth-year medical papers was analysed. The 193 students answered a paper containing 5 EMI sets with 34 items and 16 best of 4 A-Type MCQs. The item difficulty and discrimination for the EMIs and A-type MCQs were determined.

Results/discussion: The EMIs' mean discrimination and difficulty was 0.2 and 78% respectively. Whereas the A-type MCQs mean difficulty was 70% and the discrimination the same, 0.2.

Conclusion/take-home message: The small sample of test items made it difficult to demonstrate validity and reliability. A larger study with more items needs to be conducted to determine which MCQ type results in a more valid and reliable assessment.

Do you know your brain dominance status? A participatory action research project in the School of Healthcare Sciences, University of Limpopo, Medunsa Campus

A Human, H Pitout, A M Wium

Background/context: Multi-disciplinary teamwork is considered best practice and is essential for the efficacy of service delivery. The 3 disciplines of physiotherapy (PT), occupational therapy (OT) and speech-language pathology and audiology (SLPA) are therefore expected to work together as

team during service delivery. The intention of this research was to enhance collaboration between these 3 professions by using the Herman Brain Dominance Instrument (HBDI) to determine the learning preferences of each discipline in an effort to create a better understanding of each other.

Aim/purpose: A collaborative action research project was conducted by 3 facilitators of learning (FOL) to compare the brain dominance profiles and learning style preferences within and between these disciplines. In each discipline, the brain dominance of second-year students and the FOL was determined to improve teaching and learning practices as well as collegial collaboration.

Methods: Within a participatory action research approach the brain dominance and learning preferences of second-year students ($n=82$) from the various departments were determined as baseline data by using the Hermann Brain Dominance Instrument (HBDI) (Herrmann, 1996). The data was quantitatively analysed. The findings informed changes to be made to the teaching practices and collaboration of the respective FOL.

Results and discussion: Similar brain profiles and learning preferences were noted across the 3 disciplines as the majority preferred learning primarily in the B Quadrant (Sequential/Organised), and secondary in the A Quadrant (analytical/intellectual), which is predominantly left brain. The results obtained enhanced teaching and learning practices and contributed towards the professional development of the FOL.

Conclusion/take-home message: The knowledge accrued contributed towards improved communication, collaboration and understanding on various levels (individual, departmental and School). It is therefore recommended that similar studies be conducted at other tertiary institutions in South Africa.

An educational approach for the generation profile of undergraduate students in the Faculty of Health Sciences, University of the Free State

L J Van der Merwe, G J Van Zyl, M M Nel, G Joubert

Background/context: Challenges in Health Sciences Education include effectively engaging the current cohort of so-called Generation Y students (born 1981 - 2000), who are said to display typical characteristics due to sharing a common place in history. This includes the impact of information technology and a uniquely South African educational context.

Aim/purpose: The aim of this study was to formulate an educational approach for the generation profile of undergraduate students at the Faculty of Health Sciences, UFS, by discovering whether common perceptions describing Generation Y are accurate and how differences in perceptions impact on the teaching-learning environment.

Methods: A mixed-methods research design was used. In phase one, concurrent triangulation, quantitative and qualitative data were gathered simultaneously in a questionnaire survey for undergraduate students and academic staff members respectively. In phase 2, sequential explanatory design, a focus-group interview held with academic staff members yielded

qualitative data, followed by incorporation of a literature survey and the results of the questionnaire survey and focus-group interview in order to formulate the educational approach as indicated in the aim of the study.

Results and discussion: Results indicated that there was agreement between undergraduate students and academic staff members with many of the positive characteristics attributed to Generation Y, e.g. confidence, but differences existed regarding perceived weaknesses, e.g. an attitude of entitlement. Their values and behaviour, communication and learning styles, skills and needs, and environment and shaping events revealed an information-communication technology connected cohort with poor interpersonal communication abilities desiring structured guidance and role-modelling. This distinctive profile necessitates a bespoke educational approach.

Conclusion/take-home message: The focus for effective educational practices by well-equipped lecturers should be on the involvement of students by means of teaching-learning approaches that are appropriate and balanced, as well as theoretically sound, within a suitable, relevant environment.

The usefulness of a tool to assess reflection skills in service-learning in the Department of Speech-Language Pathology and Audiology, Medunsa

A M Wium, S Du Plessis

Background/context: Service-learning is a credit-bearing educational experience which requires students to reflect on the service activity in order to develop a deeper understanding of course content and relate these to the scope of practice within the discipline, as well as to develop a sense of social/civic responsibility. Reflection following a clinical learning experience helps to organise the students' thoughts, provides them with a permanent record of their experiences, allows them to talk about their experiences to each other, and share their thoughts and feelings. Second-year students in the Department Speech Language Pathology and Audiology are engaged in service learning at a rural site on a weekly basis and reflect on their experiences. The researchers had a need to assess reflection skills to monitor the students' personal and professional growth and therefore developed an assessment tool to this purpose.

Aim/purpose: The aim was to determine the usefulness of a tool to assess students' reflection skills in the Department Speech-Language Pathology and Audiology, Medunsa.

Methods: The data was obtained retrospectively from the reflection diaries of the students. These reflections were analysed and scored with a matrix. Scores were compared over the course of the academic year to measure change.

Results and discussion: The assessment tool proved to be useful in documenting change in reflection skills over time. The reflections portrayed an increased sense of social responsibility, problem solving and insight.

Conclusion/take-home message: Guided reflection conducted on a regular basis is key to the service-learning experience and contributes to

professional and personal growth. Reflection is an integral part of effective practice and meaningful service delivery.

Infection prevention and control practices in SA revealed through teaching and assessment strategies

M Theron

Background/context: The National Infection Prevention and Control (IPC) Policy & Strategy for Healthcare Facilities was introduced in 2007. Research conducted by the Department of Health in 2011 showed that there are only 253 IPC practitioners in South Africa, not all of them trained. Policy states that there should be one practitioner for every 200 occupied beds. This shortage of trained IPC practitioners in the country led to the development of a theory and practice integrated IPC Short Learning Program. Training programmes could also lead to the identification of shortcomings in IPC practices.

Aim/purpose: To highlight the shortcomings of IPC practices through reflection on a Short Learning Programme.

Methods: The IPC Short Learning Program, based on unit standards (NQF level 7) was presented during 7 contact sessions. Facilitation of the programme comprised teaching and assessment strategies such as group work, class activities, reflection reports and assignments. Narrative information and records were obtained from the participants' written learner activities, reflection reports and conversations in class. The main shortcomings of IPC in practice were identified and the needs of the candidates were revealed.

Results and discussion: IPC was viewed as an additional task, added to the daily work load of most of the candidates. Policies, Protocols and Hospital acquired infection statistics were not available. IPC teams and committees were absent at most Healthcare Facilities.

The learning experience and quality assurance projects of the candidates improved IPC practices in their healthcare settings.

Conclusion/take-home message: The Short Learning Program equipped IPC practitioners with the knowledge and skills needed to provide high quality care through appropriate implementation, evaluation and improvement of IPC practices in Healthcare Facilities.

Teaching medical students quality improvement in health

Claire van Deventer, Nontsikelelo Sondzaba

Background/context: 6th-year medical students involved in a 6 week integrated primary care block are expected to do a facility audit and based on that or other observed problems initiate a quality improvement (QI) project.

Aim/purpose: To assess the QI reports of 6th-year students from 2005 - 2010. **Methods:** An observational study of QI reports done by students.

Project reports assessed and compared to site marks, indicators of learning assessed and individual and group marks compared.

Results and discussion: Of 274 projects undertaken, 223 (81.4%) were available for evaluation. Geographical placements and QI themes were categorised. Management issues were most frequently identified as being problematic followed by chronic illnesses. Understanding and applying the principles of QI was partially achieved and gaps were identified for future projects. The most common intervention was training of personnel and design and distribution of posters or pamphlets.

Conclusion/take-home message: Most QI projects were well thought out and relevant to the chosen setting. In the majority of cases, a great deal of effort and creativity went into the process and skills other than clinical skills were employed such as writing, presentation of data in graphs and tables. Integration of theory and practice was achieved only partially.

Emergency Medical Care student opinions of a reflective journal

Andrew Makkink

Background: Students in the first year of study of a 4-year Bachelor's degree in Emergency Medical Care at the University of Johannesburg are required to complete a reflective journal in which they reflect on a number of various situations and skills that they have been exposed to within the clinical learning environment. Information of student opinions of this tool may provide important strategies at improving the format and structure of the reflective journal, and potentially also the reflection process.

Aim/purpose: The aim of this study was to examine student opinions of the reflective journal and to assess a number of areas related to its relevance within the learning environment.

Methods: A questionnaire containing open-ended questions, forced-binary and Likert-type scales was developed wherein students registered in their first year of study were able to assess various aspects of the reflective journal. Data was captured and analysed using Microsoft Excel and reported on descriptively.

Results and discussion: Most students understood what the purpose of a reflective journal was and assigned a positive value to the reflective journal. Interestingly, many students did not regularly make entries into their journal as was expected with most leaving their entries to the last minute. There were a number of interesting trends observed when analysing whether students would prefer an online or written format for the journal. Although students are often observed discussing cases, most students did not read other students' journals, nor allow others to read their own.

Conclusion/take-home message: The reflective journal has an important place in the Work-Integrated Learning (WIL) environment. The challenge is to use it to encourage reflective thinking in our students by ensuring their active involvement in developing their skills as reflective practitioners.

Illuminative evaluation of the final-year prosthodontic component of the Oral Health Science curriculum

P D Moipolai

Background/context: A hybrid problem-based learning curriculum was introduced in the early 2000s in the School of Oral Health Sciences, and since its inception no evaluation of the innovation had been done. It was felt necessary to undertake such a project to adjudicate the worth of the reform. This was to determine whether goals were being achieved and that the programme remained relevant and did what it set itself to do.

Aim/purpose: The aim of the study was to use a qualitative evaluation approach to assess the impact of curriculum change at classroom level and to evaluate how a department had reformed its teaching and learning strategies. Additionally, it was to evaluate how this curriculum operated in its own terms. This approach was employed to illustrate how an evaluation strategy was used to assess classroom practices following institutional curriculum reform.

Methods: Illuminative evaluation as a research method in the qualitative paradigm was utilised. From July through October 2007 small-group teaching involving problem-based learning, led by 2 faculty from the department of prosthodontics were observed. Six 2-hour long small-group sessions, were observed. In-depth follow-up interviews with students and faculty were conducted. The plan, as outlined in the instructional system, was held up against the reality through observations in the classroom.

Results and discussion: By and large the findings illustrated that much of what was planned was realised, with the more experienced staff member teaching more or less to the plan. However, from the themes that were inductively derived from analysis of the data, it was clear that integration of content knowledge and critical thinking necessary to assist in the comprehensive management of dental patients was not as robust as would be expected from the students at this level during their training.

Conclusion/take-home message: This finding illustrates the importance of using qualitative evaluation approaches as a mechanism to assess curriculum change efforts.

Development of a specific approach to facilitate knowledge in augmentative and alternative communication across two learning contexts

A M Wium, M Mophosho

Background/context: HPCSA exit level outcomes specified by the HPCSA, requires that students in speech-language pathology and audiology are competent to provide services to clients who require augmentative and alternative communication (AAC). Such clients present with severe communication problems and their assessment and intervention, as well as management is complex. To ensure high quality teaching and learning 2 facilitators of learning at 2 universities collaborated to develop a specific teaching approach for AAC. Such an approach accommodates all learning preferences and therefore consists of multiple teaching methods, of which assessment (as teaching method) is one.

Aim/purpose: To determine the outcomes of a specific approach that facilitates learning of final-year students in AAC.

Methods: The students at both campuses received similar learning experiences, learning material and assessments. In both instances the process of facilitating learning was evaluated by both students and a peer to increase the validity of the findings. The results obtained from assessing the students were compared and factors were identified which could have affected the results.

Results and discussion: The results obtained showed that learning was facilitated by using a multi-method approach but that the specific context had to be taken into account.

Conclusion/take-home message: A 'one-size-fits-all' assures effective learning and teaching but that this approach is not necessarily the best option to ensure quality in teaching. Specific factors need to be considered, especially for students in a semi-rural context.

Peer teaching at the University of Zimbabwe: Understanding the learning needs

Chiratidzo E Ndhlovu, Jose Frantz

Background/context: At the University of Zimbabwe (UZ), clinical skills training occurs during the 3rd year of a 5-year undergraduate medical curriculum. The clinicians providing the bedside training are 'content experts' but most are not trained medical educators. Given the declining senior clinician numbers, it is proposed that interns and Masters in Medicine (MMed) students be formalised as clinical teacher assistants (CTAs).

Purpose: To determine the experiences of the third-year medical students and the learning needs of interns and MMed students.

Methods: A mixed qualitative and quantitative design using 2 focus-group discussions (FGD) and self-administered questionnaires was employed. The target sample was 60 interns and 32 MMed students. 12 participants were purposively selected per FGD. All data were entered into Microsoft Excel. The qualitative data were analysed using the broader themes of strengths, weaknesses, opportunities and threats. The quantitative data was analysed using Stata 10 (Stata Corp LP). Ethics clearance was obtained from the institutional review board.

Results and discussion: The response rate was 21(35%) interns and 7 MMeds (22%). Nine (75%) medical students and 8 (67%) interns turned for the FGD. From the FGD, using 'real' patients was a strength; weaknesses included the classes being too large and students feeling 'ignored' by their trainers. 10 (48%) interns perceived themselves as <5% of their time teaching. Both groups (100%) reported 'high or some confidence' in teaching the medical students. Clinical load was a major barrier to teaching. Only one of the MMeds and none of the interns felt they 'belonged' to UZ.

Take-home message: There is urgent need to address the sense of 'not belonging' to the training institutions as well as balancing teaching and service delivery if clinical skills training by peers is to be introduced.

Students' perception of their readiness for the clinical area

B Masava, T Munangatire, C N Nyoni, M M Shawa

Background/context: Paray School of Nursing in Thaba Tseka, Lesotho was established in 1977. The school then offered the Certificate in Nursing Assistant which was a 1-year programme. The institution operated with one permanent faculty member and part-time teachers from within Paray Hospital. Over the years the institution has grown, it had its first intake of the Diploma in General Nursing in 2009. However, the institution is facing challenges in the training of future nurses for Lesotho. The current enrolment is 97 against a staff faculty of 6 nurse educators and 2 clinical instructors. These staff members are responsible for the 2 programmes being offered by the institution. Notably there is over burdening of the Nurse educators who can teach up to 6 courses per semester. This compromises the quality of pre-clinical training of students. The school does not have fully equipped clinical skills laboratory, that may aid the learning of vital nursing skills necessary in the clinical area. In addition to these challenges, the clinical area where the students are mostly attached has several noted shortcomings, namely; lack of variety of both patients and departments, unavailability of material to use in nursing care and poor supervision as majority of staff in the hospital are Nursing Assistants who profess difficulty in supervising a student for senior position. These challenges then prompted the researchers to then determine the perception of the students regarding their preclinical preparation and whether they perceive themselves to be ready for clinical placement in spite of all challenges they are meeting.

Aim/purpose: To improve preclinical training of nursing students.

Methods: Self-administered questionnaires in English or Sesotho to be given to 30 second-year students. Questionnaire will be analysed utilising descriptive statistics, in determining frequency among variables. Data is to be presented in graphs and tables.

Results and discussion: In progress.

Conclusion/take-home message: In progress.

Improving Objective Structured Clinical Examinations (OSCE) practice in Kampala International University (KIU)

A O Ogah, E M Kiguli

Background/context: Kampala International University (KIU) Medical School was established in 2007, and adopted the OSCE as a form of clinical assessment in 2010. Since then, there has been effort to improve the quality of the examinations to meet with international standards.

Aim: To describe OSCE practices and examination outcomes at KIU teaching hospital and to assess faculty knowledge on conducting OSCEs.

Methods: Both quantitative and qualitative methods were used. The study was conducted in 5 clinical departments (Internal medicine, Paediatrics, Obstetrics and Gynaecology, Surgery and Psychiatry). Thirty examiners and 17 graduating medical students at the July 2011 exit examination were involved. The examiners' knowledge was assessed using a self-administered

semi-structured questionnaire. The OSCE setup and process was observed using a checklist. Five key informant interviews were conducted with Heads of Departments.

Results and discussion: Examiner response rate was 86.7%. Surgery declined to conduct OSCE. Only 16 (61.5%) examiners could correctly write OSCE in full. Fourteen (53.8%) had heard about OSCE only from the faculty. Twenty-four (92.3%) had never heard of blueprinting nor of standard setting. OSCE was highly accepted but 23 (88.5%) examiners believed that OSCE alone was not sufficient for clinical assessment at the exit examination. Prior organisation was fairly done. Examinations were delayed for 2 hours and information sharing was common. There was neither a blueprint nor standard setting. The manned and unmanned stations ratio: >1:1. The differences in the mean marks and pass-rate between the manned (62.2%, 100%) and unmanned (45.8%, 35.3%) stations were significant (t -test and $p < 0.005$).

Conclusion: Faculty knowledge and practice of OSCE were poor. Examiners' scores probably overrated the students' performance. There is need to set up an OSCE committee to conduct OSCE training workshops, encourage all departments to participate and develop guideline for the faculty.

Developing clinical reasoning: Pre-clinical case-studies or lectures? – student feedback

T C Postma

Background/context: Pre-clinical case-based training was introduced as a teaching method for third-year dental students at the School of Dentistry, University of Pretoria in 2009. The aim of the case-based training is to develop the students' clinical reasoning skills as part of a Comprehensive Patient Management (CPM) module. The module stretches over 3 years and the skills that are acquired pre-clinically are applied in the subsequent 2 clinical years. Prior to 2009 the pre-clinical course was lecture-based.

Aim/purpose: This study explores differences in course feedback between students who received pre-clinical case-based training (CBT) and those who received lecture-based instruction (LBI).

Methods: A standardised student feedback questionnaire was administered (100% response rate) at the end of the fourth and fifth study years (2009 - 2011). Students were asked to rate the course relevance, training alignment with course outcomes, assessment's contribution to learning, faculty competence, knowledge integration, their own clinical reasoning ability, and the extent of the gap between the pre-clinical- and clinical years, using a visual analogue scale. T -tests were used to compare the feedback of the CBT and LBI groups.

Results and discussion: Fourth-year students who received CBT ($n=99$) rated the relevance of the course, training alignment with course outcomes, assessment's contribution to learning, faculty competence, and the knowledge integration between subjects in the same study year significantly ($p < 0.05$) higher compared with those who received LBI ($n=51$). The CBT group also perceived the jump to the first clinical year to be significantly ($p < 0.05$) smaller compared with the LBI group. Fifth-year students in the CBT group ($n=43$) gave similar feedback. The fifth-year LBI group ($n=95$)

scored the course organisation, knowledge integration between subjects of different study years, and their self-perceived treatment planning ability significantly ($p < 0.05$) lower compared with the CBT group.

Conclusion/take-home message: According to student feedback, pre-clinical case-based training is more effective to prepare students for the clinical setting compared with a lecture-based approach.

Student support initiatives in the Department of Internal Medicine

J M M Koning

Background/context: The undergraduate students often perceive the fifth-year Internal Medicine module as extremely difficult to pass. Over the last few years 3 challenges were identified which contribute to this perception, namely a negative attitude towards the module, underlying emotional challenges and surface learning among the students. Utilising the process of transformative reflection, a variety of student support initiatives has been introduced by the Department to try to change these perceptions.

Aim/purpose: To identify the different initiatives undertaken in the undergraduate Internal Medicine module.

Methods: An audit of all student support initiatives in the undergraduate programme of the Department of Internal Medicine was undertaken in 2011. The results of the audit will be described.

Results and discussion: A departmental education committee drives these initiatives. All departmental staff, and those of Departments of Cardiology, Neurology and Dermatology, give their input at an annual strategic planning meeting, which focuses on teaching and learning. The Internal Medicine module has a year group tutoring system in which the tutor has weekly meetings with the students. Students' photographs are taken and circulated to encourage staff to know the students. Extensive feed-back is sought from students and taken into consideration when planning any changes. Students with attitude or emotional problems are seen by the year group tutors. These students are referred to Kovsie counselling or a private psychologist. Since 2011 Internal Medicine is also part of the University's NATP programme.

Conclusion/take-home message: Having a structured student support programme in a clinical department is extremely beneficial. As a result of these initiatives the general attitude of students towards Internal Medicine has improved. The support rendered contributed to the academic success of a number of students who had been identified with emotional challenges. From January 2012 the support programme was expanded to include workshops on stress management, self-esteem and time management.

The UFS School of Medicine transport project

Anne-Marie Nel, Scarpa Schoeman

Background/context: The clinical training component of the University of the Free State's medical curriculum is presented at 5 different hospitals in

the greater Bloemfontein area. Previously, our underprivileged students and many international students, who do not have access to private transport, had to rely on the costly and often dangerous public transport system (taxi's) in Bloemfontein to commute between these hospitals. This placed enormous pressure on the students' time, monetary resources and most probably their academic performance.

Aim/purpose: This need and challenge was recognised by the medical school and a plan was made to address the issue and provide assistance to the students. A business plan was developed and, with gracious corporate sponsorship, the School of Medicine Transport project was implemented in April 2011.

The main aim of the project is to support the underprivileged medical students' academic performance and study efforts by removing a logistical hurdle and enable them to focus more on their studies and be successful. By providing daily and regular dedicated transport for them, they do not have to stress about making use of expensive, untimely and unsafe taxi's.

Methods: The students buy semester tickets, currently at a cost of R1 350 per semester, to make use of the service. This money, together with the sponsorship money, is used towards covering the operational costs. Regular trips each day are carried out by 2 dedicated drivers, committed to ensuring that the students arrive safely and on time at their different destinations.

Results and discussion: The appreciation of the students benefitting from this project cannot be expressed in words. It is clear from the student's day-to-day testimonies that the project is certainly having its desired impact and effect on their educational experience. The satisfaction of their thankfulness and overwhelmed gratitude is definitely worthwhile.

Conclusion/take-home message: Coming together is a beginning; keeping together is progress; working together is success.

Training needs assessment for a group of medical educators at Al Neelain University, Sudan

Sara L Brair

Background/context: Quality of teaching practice is an important determinant of graduating doctor competency. In order to achieve this, special emphasis has to be put on the educational development of teachers. Al Neelain University does not offer Medical Education courses to teachers; therefore, there is a need to offer such courses and to train teachers in order to improve the quality of education being offered to undergraduate and postgraduate students.

Aim: Al Neelain University decided to start a programme of regular training in medical education to all staff working in the institution. The aim of the study was to find out needs and priorities of medical educators at Al Neelain University regarding such a medical education training programme.

Methods: Medical educators had to rate a predetermined list of medical education topics so as to start their training programme according to the topics most important to their educational practice.

A questionnaire containing a list of all medical education topics was circulated among full time academic staff. Answers were rated on a 5-point Likert scale of importance. The mean results were calculated for each topic and topics were arranged in a descending order of importance.

Results: Response rate was 77.50%. Analysis of the questionnaire showed that among the 'most important' topics was student-teacher relationship with a mean value of 4.45. Among the 'important' topics was microteaching with a mean value of 4.22. 'Moderately important' topics were philosophies of learning and concept learning with a weighted mean of 3.36. Among topics rated as 'of little importance' was qualitative research with a weighted mean of 2.59. No topics were rated as 'not important'.

Conclusion: The study showed that among 'most important' topics is student-teacher relationship, therefore it was recommended to start the training programme with this topic.

Improving health professions education in sub-Saharan Africa: What are the needs?

Elsie Kiguli-Malwadde, Francis Omaswa, Fitz Mullan, Seble Frehywot

Background/context: The US Government through the Presidents emergency plan for AIDS Relief (PEPFAR), Health Research and Systems Management (HRSA) and National Institute of Health (NIH) awarded grants to 13 African institutions in 12 countries. The aim is to increase numbers and quality of Healthcare Workers and retain them where they are most needed, strengthening medical education system infrastructure and improving locally relevant research capacity in Africa.

Results/Findings: The grants are unique in that the schools identified their needs and addressed them accordingly. Some emergent themes were identified. Most school projects are focussed on Curriculum development, faculty development and improving the learning environment through skills laboratories and ELearning. The greatest numbers of efforts are aimed at undergraduate training. In the area of curriculum development, schools are reviewing the competencies for their graduates and also the methods of delivery. This is aimed at producing graduates that can meet the needs of their communities. Many schools are focussing on training teachers mainly in the basic sciences subjects where there is a great need. All schools are embracing the use of technology in teaching so as to improve access to the internet and educational resources.

Schools are also establishing research support centres to help improve research. These are aiming at training faculty and students in research methods and ethics, mentoring young faculty and students in conducting research.

Conclusion: The aim of all this is to try to combat the human resource crisis which though global is worst in sub-Saharan Africa. The Health Workforce is an important integral part of health systems strengthening. It is hoped that strengthening the component of training will lead to improvement of population health.

Expert tutors' role in capacitating educators in health training institutions in Lesotho

M C Earle, R M Marck-Katumba, J E Chikuse, M M Tlapu, N E Mabitle, S H Phafoli

Background/context: The Ministry of Health and Social Welfare (MOHSW) of Lesotho is faced with a challenge of shortages human resources and inadequate continuous professional development of educators in health training institutions. The MOHSW with assistance from its health development partners developed a 5-year National Continuing Education Strategy to address these challenges. The Millennium Challenge Corporation/Millennium Challenge Account (MCC/MCA) contracted the National Institute of Health and Welfare, Finland (THL), functioning in Lesotho as Health Systems Strengthening Technical Assistance Project (HSS-TA Project), to recruit 6 expert tutors. The role of the expert tutors is to capacitate the National Health Training College and the Christian Health Association of Lesotho Training Institutions. The main terms of reference for the expert tutors are: curriculum development, training programme development and implementation, training programme management, quality assurance in training, and monitoring and evaluation.

Aim/purpose: To illustrate the role of the expert tutors in capacitating educators in health training institutions in Lesotho.

Methods: The needs were identified through focus-group discussions and individual interviews, self-administered questionnaires, as well as review of documents and observation.

Results and discussion: Areas identified for capacitating were: Curriculum development, Teaching skills, Quality assurance, Assessment and measurement, Mentorship and preceptorship. Induction of tutors, Research, Management structures, Strategic planning, Clinical laboratories and Student support. Workshops and mentoring activities were conducted. Educators at the training institutions were also exposed to conferences, symposiums and special educational capacity building events.

Conclusion/take-home message: It is evident that a pool of experts can contribute positively to maximise the quality of human resources for health. Recommendation is made for countries with scarce resources to have a pool of experts to be used nationally for capacity building in health education.

Factors influencing recruitment and retention of faculty at Catholic University of Health and Allied Sciences (CUHAS) – Bugando, Mwanza, Tanzania

Stephen E Mshana¹, Mange Manyama¹, Steve Justus¹, Ralf Graves², Enoch Kwizera³

1. Catholic University of Health and Allied Sciences-Bugando, Mwanza, Tanzania; 2. FAIMER, Philadelphia, USA; 3. Walter Sisulu University, Mthatha, South Africa.

Background/context: Attracting and retaining faculty is essential for success of any higher learning institution. This has become a major challenge for

higher educational institutions, especially in the newer Medical Institutions in Tanzania.

Aim: This study was conducted to determine factors favouring recruitment and retention of faculty at CUHAS – Bugando.

Methods: Using standardised self-administered questionnaires developed after focus-group discussion; a cross-sectional survey was conducted. Respondents were asked to rank each factor that might influence recruitment and retention on a 4-point Likert scale of: 'very important', 'important', 'less important' or 'does not apply'. Data were analysed using SPSS.

Results and discussion: Of the 55 questionnaires distributed, 42 (76%) were returned and analysed. The ranks of faculty surveyed were Tutorial assistants (16) Assistant lecturers (3), Lecturers (16), Senior lecturers (5) and Associate Professors (2). Opportunity for professional growth, support from colleagues for creative ideas, opportunities for promotion, financial support for scholarly activities and staff collegiality were the top 5 factors which made faculty take up CUHAS positions; and the same factors were cited as very important or important determinants of respondents remaining at CUHAS. The most important factor for the faculty to accept a CUHAS position and remain at CUHAS was the opportunity for professional growth. Salary was the most important factor for recruitment and retention in only 7.1% of the faculty surveyed.

Conclusion: The majority of academic staff surveyed were junior and their opportunity for professional growth was the most important factor cited by them in favouring recruitment and retention at CUHAS. The University should focus on providing such opportunities to create a favourable environment to attract and retain more academic faculty. Further study in relation to other academic ranks is warranted to generate additional recommendations for the owners of these Universities in Tanzania.

Stress in medical students in a problem-based learning curriculum

S S Naidoo, J M Van Wyk, K Moodley, S Higgins-Opitz

Background/context: An unintended consequence of any educational programme is the development of maladaptive stress in students. Many studies have shown that this can impact on students' health and their academic outcomes.

Aim: This cross-sectional study was conducted to explore the prevalence of stress in a diverse cohort of final-year medical students in a problem-based curriculum.

Methods: A qualitative study was conducted among 94 students representing 66% of the final-year medical cohort in 2008. Semi-structured interviews were conducted. Data was thematically analysed.

Results and discussion: Seventy eight per cent ($n=73$) of the participants experienced stress during the programme. Of these 49 (67%) were female and 24 (33%) were males. Differences were identified between the different racial groups of students. Participants identified the following as the main

sources of stress: academic-related issues, time management, language difficulties and financial problems.

Individual lifestyle adaptations, family support and religious structures and study groups were reported strategies used by students to cope with stress.

Conclusion/take-home message: Maladaptive stress is a serious problem in medical students. Curriculum designers need to take cognizance of this and take appropriate action to minimise this. All students (including seniors) need guidance and support to manage their time and workload effectively.

Factors influencing nursing students' absenteeism from scheduled learning events

K Kgasi, M Randa

Background/context: Student absenteeism creates a negative classroom environment that makes students attending class uncomfortable and the lecturer irritable. It also disturbs the dynamic teaching-learning environment and adversely affects the overall well-being of classes. Absenteeism is seen as a waste of educational resources, time and human potential. It causes repetition of teaching, wasting lecturers' and students' time. Student absenteeism in undergraduate studies is a concern as it results in inefficient or inadequate learning and poor academic performance in certain instances.

Aim/purpose: To explore the factors resulting in absenteeism among undergraduate nursing students.

Methods: A qualitative, descriptive explorative research design will be conducted at the University of Limpopo, Medunsa campus. The focus groups will be held in May 2012. Voice recording and field notes will be made during the interviews. The voice recordings will be transcribed and exported to a qualitative data analysis package. Content analysis will be done to conclude valid inferences from the data. Coding of qualitative data, content analysis and development of themes will be done. The factors influencing undergraduate nursing students' class attendance will be determined.

Results and discussion: The data will be presented in the form of graphs, tables and statements. Recommendations will be made to improve class attendance.

Conclusion/take-home message: Conclusions to be discussed at conference.

Using impulse reviewer training sites to engage students in basic research

S Smith, M Barkhuizen, P D Theron, D J Joubert, I Seale, L Jones

Background/context: One option to expand student understanding of basic research is by mentoring and training students as reviewers for the journal IMPULSE. IMPULSE is an international, online neuroscience journal for undergraduate publications. Submissions are reviewed by students

worldwide under faculty guidance, and articles are immediately published online, as they are accepted.

Aim/purpose: As the Faculty Advisor of a Review Training Site with IMPULSE, many of the concepts of basic research can be introduced through the experience of reviewing primary submissions to the journal. The online journal has been publishing undergraduate neuroscience articles since 2003. Currently, the international team of reviewers comprises students that have come from over 65 universities and 10 countries (one in SA – the first site outside US). Most reviewers are affiliated with Reviewer Training Sites, where they receive formal training on reviewing. However, the particulars of that training vary from site to site.

Methods: Dr Stephanie Smith (MB ChB), lecturer at the Department of Basic Medical Sciences, UFS (SA), was introduced to IMPULSE in October 2010. Dr Smith acts as Faculty Advisor for a Review Team consisting of Marizna Barkhuizen (Associate Editor), PD Theron, Daniël J Joubert and Inge Seale (current 4th-year medical students). These students have completed an undergraduate research project as part of their curriculum. Dr Smith meets with the review team to discuss their comments on submissions as they arrive. The Associate Editor compiles the final comments of the team, sends it to the Editor-in-Chief, who merges all the comments from the different teams into the final review, again, under the guidance of a Faculty Advisor. This process assures both maximal involvements of as many reviewers as wish to participate as well as professional quality. This final review, commented on by as many as 50 reviewers world-wide, is then sent back to the corresponding author.

Conclusion/take-home message: Faculties are encouraged to consider ways they might enhance the research experience of their undergraduates by hosting a Reviewer Training Site at their institution.

Evaluation of a workshop to teach techniques for large-group teaching

L P Green-Thompson, P McInerney

Background/context: The South African higher education environment is characterised by teaching in large groups of lectures. This is particularly significant in the health sciences environment where there is a growing pressure to increase the numbers of students trained for these scarce skill professions.

A 2-hour workshop was conducted by the authors using many of the techniques described in the literature as encouraging active learning. These included buzz groups in pairs, feedback during presentation, automated responses (clickers) and minute papers.

Aim/purpose: To describe the process used in this faculty development workshop on large-group teaching and comment on the evaluation of this workshop.

Methods: An evaluation of the workshop was conducted using the minute paper (a recognised technique to enhance active learning). Participants were asked to list what they had learnt and what they would use in their ensuing

lecturing practice. A second evaluation will be conducted as a second part to this process.

Results and discussion: All 30 participants completed a minute paper and had a positive response to the workshop. The participants commented positively on the use of the minute paper as the means of evaluation. The learning by the faculty attending the workshop covered a range of areas – new ways of engaging students (20%), active learning techniques (43%), different theories of learning (10%), effective use of power point (30%) and use of clickers (17%).

The workshop evaluation has demonstrated that faculty members need training at different levels for large-group teaching. Many respondents commented that seeing active learning techniques in action was important.

Conclusion/take-home message: When conducting Faculty Development activities, it is important that the theory being taught is also experienced by the participants.

WORKSHOPS AND SYMPOSIA

Teaching and learning a clinical skill

Dason Evans

Objectives: This workshop aims to explore how educational theory can inform teaching within medical education. By the end of this interactive workshop, participants will: (i) understand the key choices required in planning clinical skills teaching; (ii) review the major factors affecting student learning; (iii) apply these factors affecting learning in order to critique traditional and more modern approaches to teaching a clinical skill.

Methods: This interactive workshop will have 2 main components. Firstly, participants will teach a simple skill in small groups (no prior knowledge required) and observers within each group will be asked to deconstruct the main choices that were made in doing so. From this the participants will identify some of the key principles to consider when planning and delivering clinical skills training, and these will be related to the literature. These are likely to include aspects from the competency model (Purnell, 1998), level of skill (Simpson, 1972); instructor behaviour including scaffolding, just in time information (van Merriënboer and de Croock, 2002), timing of feedback etc; and training design choices including Part task vs Whole task training, overtraining, spacing and duration (Patrick, 2002) The second half of this workshop will ask the participants to identify the key factors affecting student learning through a snowballing exercise. We will use this framework to critique 4 models for clinical skills teaching and learning – the 4-stage/ACLS approach (Peyton, 1998), Cagne's instruction events (O'Connor, 2002), the Evans-Brown approach (Evans and Brown, in press) and the Michels' framework (Michels *et al.*, 2012).

Outcomes: This workshop will be of interest to those with some experience of teaching clinical skills who would like to know more about how educational theory may validate and help them improve their practice. It will also be relevant to those involved in clinical skills curriculum design and in staff development around clinical skills.

Transforming your 'working' environment into a place of learning: How to do the job and learn/teach

D Murdoch-Eaton

Working in a busy clinical environment with the immediacy of pressing and urgent tasks can leave health professionals with a feeling that they never have time to 'learn' on the job. Contributing to this frustration (and perceived workloads) are the needs of students, also wanting help, guidance and teaching in the clinical environment. This workshop will look at how to facilitate your working environment to become a more effective 'learning' environment, utilising the expertise and experiences of the workshop participants together with development of contextually workable ideas integrating workplace learning with adult learning theories and principles.

Using adult learning theories to plan assessment

David Taylor

When students learn they follow a clear sequence of 4 learning domains, recall, elaboration, organisation and reflection. One of the difficult aspects of designing assessment is working out which learning domains we are testing with each type of question or activity. Another is ensuring that we are not only testing recall. The final problem is determining how to give meaningful and useful feedback to the students following or during the assessment. Based on a simple plan of adult learning we will work in pairs or small groups to either develop or improve our assessment strategies, to meet each of these objectives.

Abuse: Acknowledgement and action in the medical curriculum

Theme: Ethics

Veronica Mitchell

Background/context: Abuse exists in the South African health system. It occurs in diverse forms at health-care facilities and students frequently confront examples in their clinical contacts. When they witness unprofessional behaviours they face dilemmas, often not knowing how to respond. At the University of Cape Town, the Department of Obstetrics and Gynaecology has created spaces in the curriculum opening opportunities to explore these difficult issues.

Aim: This workshop aims to empower participants to initiate conversations about the reality of human rights violations in the clinical teaching platforms. By sharing our experiences in using interactive tutorials, we plan to raise awareness on these challenging matters and to promote change. This workshop will allow participants to learn how these issues have been successfully addressed in a medical student environment. It will provide the attendees with techniques and skills to introduce similar methods in their own environments.

Methods: At the workshop we will use a participatory methodology to initiate a collective dialogue among educators. The methods and the results from our facilitated student workshops will be explored by attendees so

that techniques may be successfully employed in their own situations. Existing literature underpinning abuse causes and an innovative reflective framework will be shared.

Results: The learning outcomes will be tabled and the students' feedback after the teaching sessions will be presented so that participants can judge their usefulness and applicability to their circumstances.

Discussion: Moving from silence to dialogue on issues concerning abuse requires innovative approaches and trusting relationships. By collaboratively exploring the realities of practice into which students are immersed, transformative practices can be promoted.

Take-home message: Abuse is a difficult topic to address in a training curriculum. Innovative methods have contributed towards developing students' awareness and ability to respond in a sensitive and appropriate fashion to abuse in the workplace.

Student support ... What a challenge ... ?

Theme: Selection/Support/Retention

Aziza Bawoodien

Background/context: Student support forms an integral part of endeavouring to optimise student success and throughput. Stellenbosch University has a multi-, trans- and interdisciplinary approach to student support. The core team consists of an educationalist, family physician, and clinical and educational psychologist. We also utilise the services of speech and language therapists, psychiatrists and university social and financial services. Much experience has been derived from working with students and the interventions implemented, with many successes and some failures.

Aim/purpose: To generate discussion between participants. Best practice methodologies utilised by peer faculties could be determined, and the development of a network of student supporters could be fostered.

Methods: A workshop by means of case studies, hold with fellow student supporters to create and stimulate group discussions. The case studies will be representative of the different modalities of support or interventions utilised. All attempts at maintaining confidentiality of the cases under discussion will be ensured by removing all characteristics that could serve as identifiers of the cases. Attempts will also be made to minimise marginalisation or stereotyping of characters based on language, religion or cultural groups unless specific reference has a pertinent influence on the discussion of the case.

Results and discussion: The discussions generated may identify evidence-based pedagogical and psychological theories and practice, on which student supporters can build to enhance own practice and to develop further research in this field.

Conclusion/take-home message: It is the moral obligation of institutions to enable students selected into programmes in the Health Sciences to succeed and progress back into society to fulfil societal commitments and service delivery.

The design, implementation and evaluation of the New Academic Tutorial Programme in the School of Medicine at the University of the Free State with a view to improve throughput rates and student retention

M Jama, M Koning, L Damons

Background/context: Student retention has been and is still a challenge for universities internationally and nationally. In an effort to improve throughput rates and student retention, the School of Medicine at the University of the Free State (UFS) has, in collaboration with the Centre for Teaching and Learning (CTL), among other strategies designed and implemented a New Academic Tutorial Programme (NATP). This is a structured programme designed to increase mastery of content in 'high-risk' modules. The programme was first implemented in the Pre-Clinical Phase of the MB ChB Programme in 2007 and extended to the Clinical Phase in the Department of Internal Medicine since 2011.

Purpose: The purpose of the symposium is to describe and discuss how the NATP has been customised and how it has contributed in improving the throughput rates and student retention in the UFS School of Medicine.

Type of workshop/symposium: Presentation and discussion of the NATP by the 3 authors.

Intended outcomes: (i) explain the design, implementation and evaluation of the NATP; (ii) elucidate how the NATP has contributed towards the academic performance of students; and (iii) share the views of the tutors who have been involved in the NATP.

Healthcare students' inter-professional learning in a Skills Centre

I Treadwell

Background/context: An outcome for newly graduated healthcare workers highlights the importance of teamwork and the understanding and appreciation of the roles, responsibilities and skills of other care workers. The majority of students are however not exposed to formal inter-professional learning (IPL) events in order to form realistic expectations of each others' roles and scope of practices. Since studies indicate that IPL is facilitated by experiential learning, the Skills Centre at Medunsa introduced inter-professional trauma simulations using high-fidelity simulators and SPs. Senior medical, nursing and occupational therapy students are scheduled to take part in these events.

Aim/purpose: At the end of the workshop participants should be able to develop events for IPL learning in their respective institutions.

Structure: (1) Share with participants our experience in: (i) simulated management of a traumatised patient in the pre-hospital, initial in-hospital and outpatient phases by an inter-professional team of undergraduate students; (ii) effect of IPL on students' attitudes towards and perceptions of roles and responsibilities of a profession other than their own. (2) Individual identification by participants of feasible opportunities in their own institutions. (3) Facilitation of small groups in the development of a (i) tool to prepare

for selected IPL events, based on a template comprising the scenario and sequence of events, pre-requisite skills and knowledge, expected outcomes, problem identification, equipment, SP training, moulage, preparation of students, management of problems based on the model of clinical judgment; (ii) mark scheme for technical and non-technical skills.

Constructing high quality Multiple Choice Questions (MCQs) **Scarpa Schoeman**

Background/context: Although the use of MCQs is a popular and cost-effective method of assessment in healthcare education, the *quality* of the questions can sometimes be problematic. This adds more variables to the eventual outcome of the assessment and increases the inherent difficulty of the assessment. To maximise the advantages and reduce the technical disadvantages the National Board of Medical Examiners (NMBE) have written a manual on the lessons they as a body have learned in the last 20 years of running large scale MCQ licensing exams for medical students in the USA. The valuable tips and pitfalls they highlight in their manual will form the basis for this workshop.

Aim/purpose: The aim of this workshop is to facilitate participants in the writing of high quality MCQs, based on the 2003 NMBE manual. This will be done by explaining which types of MCQs are the most appropriate to use in assessing clinical knowledge of medical (or other healthcare) students. Apart from some general guidelines on writing good MCQs, the presenter will focus on how to write MCQ that will assess clinical application of medical knowledge in particular.

Methods: During the first component of the workshop, the basic concepts and principles of writing high quality MCQs will be shared (summarising the NMBE manual). In the second component the participants will have the opportunity to build new or modify their MCQs under the guidance of the presenter. Participants are requested to bring a charged laptop to the workshop with the idea to work on their own MCQs electronically. The presenter will provide examples and templates for the different MCQ formats.

Diagnostic reasoning – how can we help?

Janet Grant

This workshop will look at the nature of clinical problems and the challenges of making a diagnosis. The importance of the content, organisation and accessibility of information in the clinician's memory will be stressed. Common errors will be reviewed.

Participants will be invited to complete the Diagnostic Thinking Inventory to analyse their own thinking, as well as undertaking a variety of teaching and learning exercises that can be used to help students and trainees to improve their own clinical reasoning and diagnostic processes.

Social accountability: Crafting the southern African definition

L P Green-Thompson

Centre for Health Science Education, University of the Witwatersrand

Background/context: A global consensus on the social accountability of medical schools was achieved at the end of 2010. There is a growing international trend towards the development of health professions education which are responsive to the needs of the society's in which the education occurs. The author is embarking on postgraduate studies in the area of social accountability; in particular, looking at the nature of the professional who a society identifies as socially accountable. The workshop will assist in defining the role players/stakeholders in the local health environment.

Purpose: The aim of this workshop will be to examine what social accountability means in the Southern African context. Establishing and re-enforcing networks to reflect on the characteristics of a socially accountable health professional.

Type of workshop: Interactive with small-group discussion.

Intended outcomes: At the end of this workshop, participants will have (i) developed a common understanding of social accountability; (ii) reflected on the characteristics of the individual health professional and the features of their practice which make them socially accountable.

Now that I believe in simulation, where do I start (without excessive costs)?

Bosseau Murray

This workshop will present methods to introduce cost-effective simulation based on a Needs Analysis, i.e. identifying weak areas in the present curriculum? What do the trainees not 'get'? Many concepts of simulation focus on videotaping a crisis event with a full human, robotic simulator, and then debriefing (reflecting with) the participants, using the videotape. Such a system typically requires a financial investment in a full human simulator (US\$25 000 – 250 000), plus a high fidelity simulation facility (US\$ millions). However, there are alternatives based on an understanding of (a) the very broad range of simulators (e.g. part task trainers and flat-screen simulators starting at US\$100s - 1 000s) and (b) the 'Strategies to Use Simulators' (see introductory Plenary Abstract).

Description of the workshop: The workshop participants will be introduced to various cheaper simulator alternatives (including home-grown equipment, flat-screen simulators, and commercial lung simulators.) The participants will also be given an outline of the elements of a simulation session. The participants will then split up into smaller groups. Each group will plan and develop (under guidance) a training session appropriate for a specific level of trainee, based on an identified need. The simulators selected for each group will include: a homemade simulated lung using endotracheal tubes and anaesthesia reservoir bags (cost US\$25); a flat-screen simulator programme (AneSoft) to practise drugs and dosages needed during crisis (\$100); a simple resuscitation mannequin with an electrocardiogram (ECG) and pulse oximeter simulator producing vital signs (many bio-medical departments have ECG and pulse oximeter simulators to test equipment,

and most healthcare training institutions already own resuscitation mannequins). After reconvening, the various newly developed scenarios will be discussed and further developed. An open question-and-answer period will encourage further specific discussion. Examples of successful (published) scenarios will be given, as well as inter-professional education (IPE).

Conclusion: Based on the needs of the trainees, there are multiple innovative and cost-effective ways to start using simulation to gain experience with this teaching modality.

Using experiential learning in your teaching practice – a practical workshop

J Brown

Experiential learning is a popular way of teaching and learning in medical education; it is particularly helpful to skills and professionalism learning, and can be applied to any topic that requires students to try out new behaviours or skills in small groups and receive feedback on performance. This workshop will provide participants with an opportunity to take part in an experiential-learning group and try out facilitation skills in a practical way. By the end of the workshop participants will: (i) have explored a working model of a roleplay session including the importance of feedback; (ii) have taken part in a roleplay session as either a learner, facilitator or simulated patient; and (iii) have reflected on the use of experiential learning as part of the teaching repertoire.

Teaching teachers to teach large groups

L P Green-Thompson, P McInerney

Background/context: There are increasing numbers of students being taught in health science faculties across the country. While many institutions have espoused small-group learning as ideal, there are many situations in which teaching a large group of students can be both effective and appropriate.

Purpose: The aim of this workshop will be to explore the techniques of active learning which may be employed in a large-group teaching environment.

Type of workshop/symposium: Skills workshop, in a large venue, which will encourage the participation of all those attending.

Intended outcomes: At the end of this workshop, participants will be able to (i) reflect on their own learning styles and link these to dominant theories of adult education; (ii) reflect on the use of lectures as a means of learning knowledge; (iii) evaluate a range of active teaching strategies and situations in which these may be applied; and (iv) use an automated response system.

Engaging with the challenges of small-group learning

Lorna Olckers, Lindiwe Dlamini

Background/context: The education of health science students has undergone significant change. In keeping with the principles of the Primary Healthcare Approach, graduates must be able to work effectively in dynamic diverse multi-professional teams. In order to facilitate this type of learning, teaching methodologies have shifted from didactic to student-centred small-group techniques. Small-group facilitators therefore need to be able to work with both 'task' and 'process' and understand how groups function including group processes, phases and dynamics. They also need to be able to balance the needs of individual group members against those of the student group itself. This can be extremely challenging.

Purpose: The purpose of this workshop will be to explore and further develop understanding and experience in small-group facilitation techniques.

Type of workshop/symposium: This workshop will be experiential and participant-centred. Educational and group theory will be used to explore small-group learning techniques including 'task' and 'process', group dynamics and processes. Participants will be asked to draw on their own experiences.

Intended outcomes: Small-group learning is about more than achieving outcomes. This workshop will explore this complex but exciting process and assist educators with techniques in small-group facilitation.

Clinical skills teaching in a medical environment

Lin De Bruyn

Clinical Skills Unit, School of Medicine, University of the Free State

Background/context: Clinical skills facilities where preclinical medical/nursing students are taught to manage patients. Activities include teaching and practising procedures, taking a patient's history, examination of patients. Problems encountered are related to: numbers of students, assessment, 'patients' on whom to practise skills related to managing a patient, selection and procurement of manikins, care of manikins and equipment etc.

Purpose: To identify and discuss mutual challenges and possible solutions/strategies to resolve the problems related to clinical skills teaching.

Type of workshop/symposium: Open round-table discussion of matters submitted by attendees, lead by representatives from the various clinical skills teaching facilities.

Intended outcomes: To be able to use the information gathered to the advantage each clinical skills facility.