Posters: Curriculum 1

#3EE01 (135756)
Improvement in clinical skills with no change in theoretical knowledge in a new Bologna curriculum

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Background: The Bologna process has served as a catalyst for change in medical education. In recent years, more importance has been given to clinical skills. An objective structured clinical examination is an assessment method to evaluate clinical skills and constitutes part of the end-of-year or final examinations for the medical degree. MIR exam (Internal Medical Resident) is a multiple-choice test which evaluates medical knowledge at the end of degree in Spain. In 2008, the Medical School of the University of Navarra changed its curriculum to adapt to the Bologna Process.

Summary of Work: This is a comparative study to evaluate outcomes of the new curriculum (NC) (med'08) versus the old curriculum (OC) (med'99) through objective clinical skills exam and MIR exam. We recollected the following data: 1) the score obtained of clinical skill exam in 5 sections: simulation, clinical cases, medical report, communication and clinical history; 2) the final place in test MIR; 3) the score from six years of degree, and 4) the score from secondary school.

Summary of Results: Mean scores from four clinical skills sections: simulation, clinical cases, medical report and clinical history, were significantly higher in NC group compared to the OC group. In communication skills section there were no differences. We found no differences between both groups in the results of the MIR exam.

Discussion: Other studies have demonstrated better skill performance with reformed curriculum too. But they were not evaluated using objective measures, or they have considered the fourth year results (not completed curriculum), or the sample size was too small.

Conclusion: New curriculum is more effective than the traditional method to improve the acquisition of required clinical skills of medical students while theoretical knowledge remains unmodified.

Take Home Messages: An improvement in clinical skills can be achieved with a similar knowledge level.
#3EE03 (135018)
Curriculum innovation and evaluation: Case study of anesthesia clerkship for undergraduate students, Faculty of Medicine, Universidad de los Andes, Bogotá, Colombia

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Background: The aim of this research project was to evaluate the curricular system and understand its changes and adaptations with regard to teaching methods and evaluation in accordance with the requirements in Competency-Based Medical Education (CBME).

Summary of Work: For this evaluative research a case study was conducted in 2014/15, with 55 students of 8th semester, 2 tutors and 6 professors of medicine participating. The sources of information were: observations, interviews, focus groups, learning diaries and document reviews. These allowed an approach to the curriculum, the learning processes and the evaluation of the academic program and how it matches with CBME.

Summary of Results: The results show that the curriculum promotes the model of CBME applying teaching strategies, such as problem-based learning, practicing and integrating knowledge in simulation labs and observing in operating rooms of which some are recognized as innovative strategies in education.

Discussion: Despite the CBME oriented teaching the evaluation process is not performed in a corresponding manner, instead acquired knowledge is evaluated in written exams. The results show that the concurrent influence of the traditional model of medical education based on content and the model of CBME in the curricular system creates a situation in which a clear focus of the curriculum is missing.

Conclusion: The implementation of innovative educational strategies should be consistent with the model applied in the curricular system, in this case CBME, to connect learning with evaluation processes, in order to account adequately for the students’ learning progress and performance.

Take Home Messages: The curricular system has to be focused about its educational model to clearly define the academic programs. The evaluation has to reflect the applied teaching strategies and methods using different criteria and measurements in order to fully unfold the possibilities CBME holds.

#3EE04 (131724)
Improving Croatian Health Professionals’ Education

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Background: Development of health studies includes a diverse range of educational programs (with belonging qualifications) that enable to future health professionals to adjust to the needs of health system. Croatian Qualifications Framework is an instrument with a purpose to achieve the convergence between qualifications’ levels in Croatia and European Qualifications Framework.

Summary of Work: Development of the occupational standards/qualifications for the 6th and 7th level of health studies of nursing, midwifery, radiology technology (RT), physiotherapy (PhT) and medical laboratory diagnostics (MLD), as well as designing programs of 7th level of education for midwifery and MLD.

Summary of Results: Information on job descriptions, key tasks and specific knowledge and skills needed in nursing, midwifery, RT, PhT and MLD, were collected in 200 employees in health sector. Based on the findings, expert working groups defined 10 occupational and 10 qualification standards (6th, 7th level and graduate study programs).

Discussion: Standards’ development enables improving the quality of higher education and qualifications, defining competencies and increasing multidirectional mobility of health professionals. Standardization of the competences with laboratory equipment for MLD and midwifery design curricula (adapted to current needs in health care), will improve the offer of higher medical education in Croatia.

Conclusion: Through the standardization of the professions and qualifications, the Croatian system of higher medical education becomes balanced with the standards and guidelines of quality assurance of the EQF, while the educational offer is adapted to current needs of the health system in the Republic of Croatia and other countries.

Take Home Messages: The evolving needs of the health sector are a challenge for the competences of health professionals, while the need for synchronization and continuous improvement of the educational offer is the most important requirement.
Self-directed and internationalized scopes among participants in the Free Course Student Doctor system - a unique student-selected bedside training program at Jichi Medical University

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Yasuko Noda (Jichi Medical University, Shimotsuke, Japan)

Background: Jichi Medical University (JMU), a medical university for training students to practice as general physicians in rural areas of Japan, has developed the Free Course Student Doctor system (FCSD), a unique student-selected bedside training program. Through this program, eligible students can study any subject they like at any institution for 6 months and be exempted from didactic lectures and paper tests for organ-specific subjects in the sixth school year. Students are selected based on their scores on the comprehensive knowledge test administered at the end of their fifth school year.

Summary of Work: To evaluate the efficacy of FCSD in broadening perspectives and fostering self-directedness, we examined the learning experiences of 39 JMU students who participated in the course from 2011 to 2015.

Summary of Results: Over 5 years, 36 male and 3 female candidates participated in the FCSD. Twenty-seven participants (69%) studied general internal medicine (GIM), and 17 (44%) studied infectious diseases. Other popular subjects were emergency medicine and ultrasound examination, and only six students chose organ-specific subjects. Of the 33 (85%) participants who studied abroad, 12 visited institutions specializing in GIM, 10 went to institutions specializing in family medicine, and 5 participated in public health projects in developing countries.

Discussion: Although difficulties in establishing self-directedness and low rates of choosing international electives have been reported among Japanese students, FCSD participants spontaneously selected specialties requiring systemic clinical approaches relevant to their future clinical work and actively studied abroad. Course flexibility created variations in the learning environment, with settings ranging from clinics to international organizations, and this experience might broaden learners’ perspectives.

Conclusion: The FCSD at JMU provides opportunities for eligible students to foster self-directedness and internationalized perspectives.

Take Home Messages: Eligible Japanese students utilized the FCSD, which helped them engage in self-directed learning and internationalized medical education.

Curriculum reform using a student-centered pedagogy improves licensure exam performance

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Background: There has been a substantial shift from passive, lecture-based pedagogy to a student-centered approach. The long term effectiveness of these strategies is not clear.

Summary of Work: The College of Medicine at the University of Arkansas for Medical Sciences made a major reform of the preclinical curriculum. This included substantial reduction in contact hours and use of traditional lecture, and the addition of a variety of student-centered pedagogies, including team-based learning and problem-based learning. The aim of this study was to compare student performance on the United States Medical Licensing Exam (USMLE) Step 1 before and after this reform.

Summary of Results: Students in the class of 2013 and 2014 (n=319) had the previous lecture based (old) curriculum; students in the classes of 2016 and 2017 (n=324) had the (new) student-centered curriculum. There were no significant differences between classes on mean Medical College Admission Test scores. The mean USMLE step 1 score for the old curriculum group was 215.5 and for the new curriculum group 220.5 (p<0.0036). The table below shows the mean Step 1 scores stratified cumulative GPA. New curriculum mean Step 1 scores in all quartiles were higher, but the lowest quartile was statistically significant (p<0.001). Mean Step 1 Scores

<table>
<thead>
<tr>
<th>Quartile</th>
<th>Old Curriculum</th>
<th>New Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>210.8</td>
<td>213.1</td>
</tr>
<tr>
<td>Q2</td>
<td>214.1</td>
<td>215.4</td>
</tr>
<tr>
<td>Q3</td>
<td>218.7</td>
<td>220.7</td>
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<tr>
<td>Q4</td>
<td>224.4</td>
<td>225.4</td>
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</tbody>
</table>

Discussion: This work demonstrates that a student-centered curriculum with a variety of engaged learning strategies results in improved performance, particularly in the lowest quartile group.

Conclusion: This study supports pedagogy which is student centered and promotes engagement in medical school preclinical curricula. This approach seems to improve performance mostly for students in the lower performing portion of the class.

Take Home Messages: The use of a student-centered approach in the preclinical phase of medical student education promotes better performance on major summative examinations.
Developing a “clinical manifestation” framework: the first step towards reforming medical clerkship curriculum

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Background: Undergraduate medical education in the Tehran University of Medical Sciences (TUMS) is changing. Reform committee and the Clerkship Directors planned to develop and disseminate a new model curriculum for the medicine core clerkship that was designed to enhance the learning of generalist competencies and to reduce factual overload through the definition of a core curriculum. This Committee decided to determine Common Clinical Manifestations (CCM) that a general practitioner need to learn how to approach them, as a part of the clerkship core curriculum. The purpose of the study was to determine CCM that all students are required to master in approaching them.

Summary of Work: We used a combination of methods including, qualitative and quantitative approaches. Triangulation method was used in the first phase; literature review, a survey of experts from different clinical disciplines and a survey of general practitioners. In this phase initial list of common clinical manifestations was prepared. The second phase of the study was characterized by identifying clinical presentation of the patients who were visited by family physicians and gathered via the health system network. We have used this information in finalizing the CCM list. Finally, information extracted from phase I and II were available to the experts and finalized in an expert panel.

Summary of Results: After these phases, we obtained a list of 100 CCM (such as palpitations, fever, and nausea, etc.) as the most important content to be included in a minimal clerkship core curriculum in undergraduate medical education. Based on the finding, we have classified this list into different disciplines and allocated them to core clinical departments.

Discussion: Our process can benefit medical schools that offer outcome-based medical education, especially for clinical clerkship course. They will be able to focus on topics chosen by the Iranian expert panel as being the most important issues in such a situation to drive effective clerkship, a supportive system including assessment should be implemented.

Conclusion: General practitioner need to learn how to approach Common Clinical Manifestations as core curriculum to enhance outcome-based medical education and learning of generalist competencies. Take Home Messages: Common Clinical Manifestations should be considered as clerk’s core curriculum.

A Medico’s Dilemma

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Background: Admissions into Medical College in South India depends upon the Summative Assessment of the students in School. This assessment is based on a rot memory system, which suppresses the passion and innovative capacity of the students. This study is based on HOW Professional Aspiration can be developed during Medical studies.

Summary of Work: With the support of the faculty members, new teaching and learning techniques were exposed to 500 undergraduate students of Shree Balaji Medical College, Chennai, India. The Feedbacks were obtained by a medical unit validated questionnaire.

Summary of Results: The Results showed that 172[34.4%] students preferred more of community oriented programs and clinical studies. 113[22.6 %] opted for Shadowing techniques. 99[19.8%] fancied Jigsaw Studying technique .81[16.2%] appreciated faculty’s guidance and support. 35[7%] sought for peer support.

Discussion: The above result suggests that the students with less passion craved for more community based practical exposure and clinical oriented studies when compared to theoretical studies. The students of this generation expect more of innovative teaching methods and guidance from the faculty than the current existing methods.

Conclusion: This kind of learning and increase in passion prepares the students for the broad challenges they will face in their career as physicians. Take Home Messages: Passion is the Only Bridge to inspire the indecisive individuals to being more determined. The evolution of passion will be a revolution for the future of medical studies.
Attaining Competence and Developing Capability in a new UK Postgraduate Physician Associate Programme – The Evolutionary Challenges and Solutions.

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**Background:** Physician Associates (PAs) are established in the USA and Australia. UK population growth places unprecedented demands on the healthcare system. The appetite to train PAs comes from a shortage of some medical specialties. The regional commissioner invited this University to develop/deliver a 2-year Postgraduate Diploma (PGD) expeditiously, using a medical education model.

**Summary of Work:** Deconstruction of the Faculty of PA’s (FPA) non-modularised core documents was undertaken by a multi-professional expert group. Programme design was complicated since ‘students’ were full-time employees of the healthcare system; consequently compliance with employment law was integrated into curriculum design.

**Summary of Results:** Analysis identified 3 principal themes, subsequently embedded. An integrated, modular clinical curriculum compliant with legal, QAA and FPA requirements was constructed, using a spiral, systems-based approach with emphasis on the ‘learning community’ (Lave and Wenger 1991). The PGD met the complex requirements of many external influences, whilst retaining academic rigour.

**Discussion:** The PAs sit a national exam (NE), OSCE/MCQ, before employment; both criticised. We developed a domain-based assessment (DBA). Standard MCx was reconstructed, 34 domains; satisfactory achievement mandatory in each. Competence is first post. An academic obligation exists to build capability through scaffolding, experiential learning and critical reflection, to prepare PAs for their challenge. Evidence is captured in a dynamic e-portfolio.

**Conclusion:** Modularised curricula can be established mapped to non-modular professional frameworks. University curricula must ensure students are adequately prepared for the NE. NE currently does not include work-based assessment and as such assessment of competence is only addressed through the University e-portfolio Completion of defined core competencies provides some reassurance that exiting P.A.s have attained an acceptable level for their first post. However, engendering additional skills which will allow them to further develop their capability to operate safely and effectively in a multi-disciplinary health care team is essential. Beyond competence is capacity and capability. Modularised curricula, although challenging, can be designed to map to complex, non-modular professional frameworks, further complicated by external influences. Encouraging students to implement their own projects enhances the curriculum’s quality whilst developing students’ professional capabilities.

**Take Home Messages:** Competence is first post. Beyond competence is capability.

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Student initiatives in France: a pathway to enhancing the curriculum’s quality whilst developing students’ medical expert skills

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Quentin Del-Valle
Jerome Etienne

**Background:** CanMEDS’ competency-based framework suggests six skills for a medical expert: communication, collaboration, leadership, professionalism, promoting health, and academic skills. Medical studies in France are sanctioned by a national ranked exam that determines students’ residency and their future career. This exam focuses almost solely on academic skills. Lyon Est Faculty of Medicine thought of ways to develop the other skills, including stimulating student-initiated projects.

**Summary of Work:** In 2013, the Faculty created a structure that enables students to explore and develop projects. A few students supervise this structure to ensure initiatives are relevant, effective, and durable. All students can suggest ideas and participate in their development. If necessary, the Faculty provides financial help or teachers’ support. Once the project is launched, its effectiveness and usefulness are evaluated. It is then passed on to new students who continue to improve it each year. To this day several projects have seen the light of day: tutoring systems, learning resources, conferences on learning methods, etc.

**Summary of Results:** Students master many new skills by developing and participating in this positive dynamic. Most projects require an important workforce, teaching students to communicate, collaborate and lead a team. Working with Faculty members also develops students’ professionalism.

**Discussion:** Though student-initiated projects cannot develop all the skills suggested by CanMEDS’ framework, they contribute to diversifying the skillset of an otherwise strongly academic-focused curriculum. Students are encouraged to participate, but projects are not mandatory, thereby, creating disparities in students’ training.

**Conclusion:** Encouraging students to implement their own projects enhances the curriculum’s quality, and develops students’ skills. Thus, student initiatives should have their place in the curriculum.

**Take Home Messages:** Making room for student initiated projects enhances the curriculum’s quality, and develops the competencies students need to become medical experts. Teachers, make room for student initiatives! Students, drop your books, make your dream projects come true!
Diversity in Health Professionals Education: Creating a Training and Education roadmap for Paramedics in Singapore

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Background: In the 1980s, ambulance services in Singapore were operated by nurses who were deployed by the Singapore Fire Brigade Service. The Singapore Armed Forces Medical Training Institute (SMTI) started providing paramedical training for both combat medics and civilian paramedics in 1996. Although a formal training structure was established, paramedical training remained at the vocational level, offering only basic to intermediate-level life-saving skills. Until now, paramedics only possess a vocational certificate and there were no local higher education programmes for aspiring paramedics who wish to seek professional growth.

Summary of Work: Recognizing the need to bridge this gap, inter-agency collaboration between educational institutions and industry partners such as the Singapore Armed Forces (SAF) and Singapore Civil Defence Forces (SCDF) began. This paved the way for consultative work in the area of paramedic professionalism and training. A workgroup was formed to establish national standards and training requirements for all paramedics. Various educational institutions also worked closely with the workgroup to establish industry-recognized and relevant Higher Learning Programmes (HLP) for paramedics who wish to upgrade themselves.

Summary of Results: The cross-ministerial/agency collaboration involving 4 ministries and 9 agencies culminated in the National Paramedic Training and Education roadmap. Paramedicine in Singapore will be transformed from a vocational trade to an academic discipline, complete with its own faculty and progression pathways, encouraging all paramedics to seek lifelong learning and professional upgrade.

Discussion: There should be multiple pathways for paramedics to succeed regardless of educational background.

Conclusion: The training and educational development of paramedics is crucial to the professional growth of paramedicine in Singapore. This will raise the standards for pre-hospital emergency care and translate into better patient outcome.

Take Home Messages: Paramedics, being the first responders to emergency calls, should be adequately trained and credentialed.

The Effects of New Community Health Course on the Second Year Medical Students

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Surasit Chitpitaklert, Maharat Nakhon Ratchasima, school of medicine (MNRHMEC), Thailand
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Background: Fundamental community health course in new 2013 medical curriculum was designed based on context-based and experiential learning concept. Course design and preparation engaged stakeholders in health care services and community. Students were divided into 4 teams in each batch (16th-18th). The effectiveness of this course needs to be explored.

Summary of Work: Students got essential concept and planed before going to live 8 days in community. Reflection, line and visits from teachers were set. Group presented and shared learning experiences. The questionnaire was constructed from themes in 2013 with .866 of Cronbach’s alpha. Pre-posttest was applied and analyzed by pair t test.

Summary of Results: There were statistically significantly improvement of five predominant themes of batch17th and 18th with p-value for Feeling both batches were < 0.001, Understanding were < 0.001 and 0.004 respectively, Awareness both batches were < 0.001, Skills both batches were < 0.001, and Inspiration were < 0.001 and 0.004 respectively.

Discussion: Decrease traditional lecture and increase experience resulting in comprehension and appreciation of the context which they live, study and they will work in the future. However, this course may not ensure sustainability of those results.

Conclusion: Fundamental community health course is effective course for increase of the positive felling, understanding of themselves, diseases and illnesses, roles of rural doctors, context, and community health, awareness of health determinants and community health, life skills and communication skills, and inspiration of learning and being a doctor.

Take Home Messages: Provide student through experiential learning in real context is important for professional training.
#3EE13 (134283)
A Study on Direction for the Development of Global Health Education

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Background: As a result of globalization of diseases and the delivery of health care, physicians today are required to understand global health (GH) such as the global burden of disease, the health inequities, effective medical aid, and so on. Also, interest in GH among medical students has significantly increased. Despite significant interest among medical students, Global Health Education (GHE) programs are poorly established in medical schools of Korea.

Summary of Work: For developing GHE programs, proposed GHE curriculum frameworks were reviewed and core values, guiding principles and GH competencies were identified in the context of current literatures.

Summary of Results: To meet medical students’ needs and to reflect an increasing focus on social accountability in medical education, GHE should be provided in Korean medical schools, and the core values of GHE can be summarized as follows: health equity, social justice, solidarity, responsibility, accountability, respect, openness, humility and sustainability.

Discussion: Korea’s Official Developmental Aid (ODA) volume almost tripled from 2006 to 2011. Korea has committed to double its ODA/Gross National Income (GNI) ratio over the next three years. With these increases, interest in GH among medical students has significantly increased, and medical schools should prepare a new curriculum on GH.

Conclusion: For building key themes essential to the development of GHE programs in Korea, these provided frameworks should be significantly focused on in a global context and should be taught from the perspective of the social, political and economic causes of ill health.

Take Home Messages: Medical educators should include the perspective of the social, political and economic causes of illness and the core values of GH as a starting point for developing GHE curriculum in Korean medical schools.

#3EE14 (134625)
How to implement a curriculum reform? Academic Year Coordinators as a task force

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Eeva Pyörälä

Background: Medical schools are going through an era of reforming curricula, due to changes in the society, challenges in healthcare, rapid increase in medical knowledge and technological advances. The medical curriculum at the University of Helsinki has been revised, and now we are facing the challenges of implementing the reformed plan.

Summary of Work: Two working groups evaluated the previous curriculum, under the leadership of the vice dean of education. A project manager was recruited to enhance the development process, and six Academic Year Coordinators (AYC) were recruited to promote, monitor and further develop the reform process in each of the six academic years.

Summary of Results: The learning outcomes of the new curriculum have been defined and core curriculum has been scrutinised. The role of the AYC’s is to ensure that the change process advances, the courses are described, delivered, evaluated and necessary revisions are made. They also control the quality of the new elective courses.

Discussion: While implementing the new curriculum, the most challenging task is to foster and evaluate the reform process in different units and disciplines. Recruiting experienced and rewarded faculty members with pedagogical training as AYC’s for each medical year has been an effective tool for putting the planned changes into practice.

Conclusion: The vice dean and project manager cannot alone lead the implementation of curriculum reform. It requires leadership at a level, which enables a dialogue with the educational community of practice of teachers and students. The AYC’s have proved to be a valuable task force in promoting this type of change.

Take Home Messages: Recruiting experienced teachers with a solid pedagogical content knowledge as Academic Year Coordinators is an effective tool to implement and foster curriculum reform.
Do they teach what they need to? Impact of curriculum mapping on content of a lecture series in surgery

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Background: Learning objectives are substantial for student’s learning. The Surgical Working Group on Medical Education of the German Association of Surgeons defined a competency-based catalogue of learning objectives for surgical undergraduate training. However, students at our faculty report that important learning objectives are not taught sufficiently. At the same time, lecturers mention that they do not know the learning objectives of the other lectures in the surgical lecture series. Aim of the present study is to map the learning objectives of the lecture series in surgery for undergraduate students and to increase the number of correctly taught learning objectives.

Summary of Work: All lecturers in the lecturer series were observed. Their learning objectives and their taught level of competence were documented. After the lecture series, the results were visualised within the catalogue of learning objectives using a color code. Learning objectives that were taught in more than one lecture were tagged with the title of each lecture and the name of each lecturer teaching the specific learning objective. In the following lecture series learning objectives were documented correspondingly.

Summary of Results: In the first lecture series 53% of the learning objectives were not taught. After the mapping the number of not taught learning objectives decreased on 41% (p<0.0001). The average duration of the lecturers did not change. This could be measured in all surgical disciplines and all levels of competency.

Discussion: Following work should focus on mapping the whole surgical curriculum including bedside teaching.

Conclusion: The presented way of mapping a curriculum has been shown as effective to increase the number of taught learning objectives.

Take Home Messages: Curriculum mapping is useful to increase the number of taught learning objectives.

Perceived value of the intercalated BSc in Medical Education

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Rajiv Wijesuriya (Barts and the London SMD, London, UK)

Background: There is a clear requirement at postgraduate level across specialties for formal teaching experience and educational qualifications. With one-third of medical students opting for intercalation, can we determine whether these educational interventions can provide diverse and ingrained benefits to doctors’ skill sets at postgraduate level? The primary purpose of this research is to explore how graduands from the BSc in Medical Education perceive the value of their degree in their subsequent careers, specifically within academic pursuits at a postgraduate level such as teaching. These findings are compared to findings from graduands who have completed other BScs offered at the school.

Summary of Work: Graduands from Barts and the London SMD who have an intercalated BSc from 2007 and later were selected to participate in this study. Data was collected via a questionnaire and a series of semi-structured interviews to further ascertain their perceptions.

Summary of Results: Analysis suggests the perceived benefits and failings of an academic educational intervention in terms of teaching, publishing, undertaking research and confidence in reflecting for portfolio purposes. Differences between the educational intercalated degree and ‘wet bench’ scientific equivalents are highlighted. A summary of the results from the data analysis will be presented at the conference.

Discussion: Through deliberating the perceived value of a BSc in Medical Education and other BScs, the differences can be determined and considered for changes to both the intercalated as well as the medical curriculum.

Conclusion: This data contributes directly to determining what aspects of intercalated degrees are found to be valuable in the medical profession at a postgraduate level.

Take Home Messages: Medical Education degrees offer great value to participants in their future careers in a variety of ways. These benefits should be enshrined within the medical curriculum to ensure all trainees benefit from the increased confidence and skills sets described by participants.
Medical education in Sweden, time for a change
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Summary of Work: The results of the investigation were published in 2013 and submitted for comments to the government. The election 2014 resulted in a new government, the submission was put on hold. Later in 2015 the investigation was submitted again and new discussions followed. Different parties had the opportunity to be involved in this process, including the Swedish medical association.

Summary of Results: The investigation suggested remodeling the medical education to six years, with licensing upon examination. To become familiar with the health care system the physician will enter an introduction year that can be included in the medical specialization.

Discussion: In many other European countries, the students receive their license upon completing 6 years of medical school. These physicians have difficulties working in Sweden since they need an introduction. The suggested change would reduce flow times of becoming a specialist as well as conform to the system of many other European countries, thus making it easier to work internationally.

Conclusion: A reformed education would greatly reduce flow times towards becoming a specialist, as well as ease the introduction of foreign physicians.

Take Home Messages: Sweden is in need of a new and improved medical education.

Real-time online timetabling improves student satisfaction and tutor attendance on hospital placements
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Mark Vella (RAH, Paisley, UK)

Background: Most students on hospital placements receive paper timetables and endless e-mails about teaching changes. The aim of this evaluation was to determine whether the use of the google calendar timetable was a suitable and sustainable alternative.

Summary of Work: 31 medical students used the google calendar timetable over 20 weeks. Students were supplied with login details for the google calendar app which was split by specialty. They were advised how to install and use it on their smartphones at the beginning of the block. Teaching presentations were uploaded to the google drive. Tutors received automatic reminder emails from the calendar at 1 week and 1 day prior to teaching. At the end of the block, the students filled in an evaluation form.

Summary of Results: 18 surgical and 13 medicine students used the google calendar app over 4 blocks of 5 weeks. 93.55% found it easy or relatively easy to set up and 90.32% found it easy to use. 93.55% found that changes in the timetable were obvious. 61.29% preferred the app to emails when changes were made to teaching. 93.55% found google drive easy to access. Overall, 80.00% rated it as excellent. Tutor attendance was 90-100% in each surgical block.

Discussion: Introduction of the online timetable improved overall student satisfaction with 100% rating the hospital block as excellent or good, having been rated poor the year prior. Free text comments included ‘easy to see changes’, ‘really good resource’ and ‘easily the best way of organising the block’.

Conclusion: Google Calendar is easy to use and is a great method of alerting students to timetable changes in real time. Teaching presentations are easily accessible and automatic reminders can be sent to tutors.

Take Home Messages: Google calendar is an excellent medium for online timetabling of hospital placements. In future, use of a healthcare based app might offer further advantages.
The student’s learning outcomes of Integrated Patient-centered Care Module

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Background: Our new general practitioners have been uncertain to deal with difficult patients, break bad news and do home health care. These situations made them unhappy to live in Community Hospital. To promote a positive attitude for Patient-centered Care in our medical students, a module of Integrated Patient-centered Care was added into 5th year medical program.

Summary of Work: 5-days Integrated Patient-centered Care Module was implemented to all 32 medical students. This active learning module included action method (psychodrama), flipped classroom, teaching others, role play with standardized patient, group discussion, home visit, and everyday self-reflection. All these learning experiences were facilitated by study guide. Their knowledge and attitude were assessed before and after taking the module. Psychomotor skills were also determined at the end of the module.

Summary of Results: Learning outcomes of Integrated Patient-centered Care Module revealed that knowledge domain was increased by 29.7% (95% CI 21.94-37.44, P<0.001), attitude domain was increased by 19.3% (95% CI 11.08-27.50, P<0.001). All students passed home visit and teamwork skills assessments with 93 ± 3.1% and 89.7 ± 3.6% respectively. However, there was no significant correlation between GPA and all learning outcomes. Some students reported that their learning outcomes were better than taking the traditional classroom (2 weeks period in 4th year) in all domains. Many students satisfied with the “study guide” as it is very beneficial. All students confirmed that their communication skills have improved. In sum, they all appreciated this module and requested it to be continued.

Discussion: This Integrated Patient-centered Care module was an active learning strategy. All activities challenged the students for creative thinking, dealing with complexity, and mastery their learnings.

Conclusion: This Integrated Patient-centered Care Module can improve all 3 domains of learning outcomes in 5th year medical students.

Take Home Messages: A five-day Integrated Patient-centered Care module helps improving learners’ outcomes because of 1) student’s recognition of the program beneficial to their patients and themselves 2) a good “teamwork” among all instructors.