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Take-home messages: A student-run course of this nature should be considered at all universities with basic science curricula in early years.

6H Short Communications: Career Choice

6H1 The Cambridge University Clinical Research Society (CUCRS): Fostering interest in Academic Medicine
G M Funston*, A M H Young (School of Clinical Medicine, University of Cambridge, Addenbrookes Hospital, Cambridge, CB2 0SP, UK)

Background: The Walport report gave recommendations to address the ‘perilous state of academic medicine in the UK’, including that medical students should understand the attractions of academic medical careers through exposure to leading clinical academics. The CUCRS is a student led organisation established to promote interest in academic medicine at undergraduate level.

Summary of work: Four lectures were given by internationally recognised medical researchers with a reputation for inspiring speeches. A national conference was held with 65 delegates from 11 Universities presenting their research. Attendees rated their interest in medical research before and after each event on a linear scale of 0 to 10.

Summary of results: Questionnaires from 122 attendees were gathered. The median interest measured prior to an event was 6 (interquartile range (IQR) 3-8, range 0-10). In comparison, the post event median was 8 (IQR 6-9, range 2-10). The mean improvement in interest was measured as 1.61 +/- 0.96 (p= 0.0001).

Conclusions: CUCRS events have significantly increased medical student interest in research.

Take-home messages: Student led events such as inspiring research talks and student conferences are an effective method to increase student interest in research. Such initiatives could play a key role in encouraging students to include academic medicine as part of a future career.

6H2 Career intentions of medical students trained in Africa
V C Burch*, D McKinley, J van Wyk, S Kiguli-Walube, D Cameron, F J Cilliers, A O Longombe, C Mkony, C Okoromah, B Otieno-Nyunya, P S Morahan (Department of Medicine, University of Cape Town, South Africa)

Background: Sub-Saharan Africa (SSA) is the world region worst affected by physician migration. Few studies have investigated medical students’ career intentions and reasons for remaining or leaving the African continent.

Summary of work: Final year medical students attending nine medical schools in SSA were surveyed – four from South Africa and one each from the Democratic Republic of Congo, Kenya, Nigeria, Tanzania, and Uganda.

Summary of results: Of 984 questionnaires analysed, most students (97.4%) were African by birth; the majority (91.2%) intended to undertake postgraduate training and the top three choices were surgery (20%), internal medicine (16.7%), and paediatrics (9%). Few students were interested in family medicine (4.5%) or public health (2.6%) and few (4.8%) intended to practice in rural areas in Africa. Many students (40%) planned to train abroad, and one fifth (21%) intended to relocate abroad. Factors favouring retention included: career and training opportunities, desire to improve medicine in Africa and social conditions. Factors favouring relocation included: remuneration, regulated work environment, access to equipment and advanced technology, career and training opportunities, social conditions and politics of healthcare in Africa.

Conclusions: The career intentions of African medical students are not aligned with the continent’s health workforce needs. Interventions which warrant further attention were identified in this study.

6H3 Solving the GP Shortage: Student characteristics that may lead to a career in general practice
C McMenamin*, N Koehler (Monash University, Faculty of Medicine, Nursing & Health Science, Melbourne, Australia)

Background: Australia is currently experiencing a shortage of general practitioners especially in rural areas. Thus the aim of the present study was to examine which student characteristics, at commencement of the course, are related to medical students’ preferences in pursuing a career in general practice.

Summary of work: Information regarding students’ characteristics and career preferences were obtained from the Medical Students Outcomes Database & Longitudinal Tracking Project database for students who commenced medicine in 2005-2008.

Summary of results: Medical students that were older, female, in a relationship, had dependent children, had dependents other than children, were born in Australia, did not speak a language other than English at home, considered themselves to come from a rural background, attended a rural secondary school, and had a prior degree were more likely to express a preference for general practice than a career other
than general practice at the commencement of their degree.

**Conclusions:** Identification of student characteristics associated with pursuing a career in general practice and targeting these students may assist in alleviating the shortage of general practitioners within Australia.

**Take-home messages:** Specific student characteristics are associated with an interest in pursuing a career in general practice and this may be of value in terms of alleviating Australia’s general practitioner shortage.

### 6H4 Context Counts: Educating Doctors in and for Rural and Remote Areas

*Roger Strasser* (Northern Ontario School of Medicine, 935 Ramsey Lake Road, Sudbury, Ontario P3E 2C6, Canada)

**Background:** Canada’s first new medical school for the 21st century, the Northern Ontario School of Medicine (NOSM) has a social accountability mandate to contribute to improving the health of the people and communities of Northern Ontario.

**Summary of work:** NOSM actively recruits students from Northern Ontario or similar social and cultural backgrounds. The holistic cohesive curriculum is grounded in Northern Ontario and relies heavily on electronic communications to support Distributed Community Engaged Learning. In the classroom and in clinical settings, students explore cases from the perspective of doctors in Northern Ontario.

**Summary of results:** 65% of NOSM graduates are training in predominantly rural family medicine. The aggregate score of the charter class in the Medical Council of Canada (MCC) part 1 examination placed NOSM number six of 17 medical schools in Canada. For the section on Clinical Decision Making, NOSM students achieved the highest score of all Canadian medical schools.

**Conclusions:** Already, there are signs that NOSM is effective in enhancing the supply of generalist physicians who are responsive to diverse community needs and are collaborative members of health teams.

**Take-home messages:** NOSM is a successful distributed community engaged medical school.

### 6I Research Papers: Simulation

#### 6I1 From simulation to bedside: Effectivity of undergraduate skills lab training compared to classical bedside-teaching

F Lund1, P Weyrich2, A Werner2, J Jünger1, C Nikendei*2

1University Hospital Heidelberg, Department of Psychosomatic and General Internal Medicine, Heidelberg, Germany; 2University Hospital Tübingen, Department of Internal Medicine, Tübingen, Germany)

**Introduction:** The effectiveness of skills laboratory training is widely recognized1. Yet, the transferability of procedural skills acquired in skills laboratories to actual clinical practice has rarely been investigated. We conducted a prospective, randomised trial to answer the question, if students having received a training of intravenous (IV) cannulation in a skills laboratory are rated as more professional regarding technical and communication skills compared to students that underwent traditional bedside-teaching when assessed 1) subjectively by patients and 2) objectively by independent video-assessors.

**Methods:** The power analysis revealed that n=42 students were required for each study group to detect the expected effect size (α=0.05; power=0.8). 84 volunteer first year medical students were randomly assigned to one of two groups. The intervention group (IG; n=42) trained intravenous cannulation in a skills laboratory receiving instruction according to Peyton’s Four Step Approach. The control group (CG; n=42) received a standard bedside-teaching on intravenous cannulation. Students with previous experience in performing assessed procedures were excluded from the study. Following the intervention, performance of both groups in a clinical setting with volunteer patients was video-recorded. Patients assessed students’ performance by means of the Communication Assement Tool (CAT) and the Integrated Procedural Protocol Instrument (IPPI). Two independent and blinded video-assessors scored students’ performance using a binary checklist and IPPI ratings. Student’s T-Test and Mann-Whitney U-Test were used for statistical analysis.

**Results:** 42 students of the IG (19.86±1.80 years, 16m/26f) and 42 students of the CG (20.38±2.53 years, 16m/26f) agreed to participate. Sociodemographic variables did not significantly differ between groups. Students’ procedural performance and patient-physician communication did not significantly differ between groups (p=0.544 for CAT; p=0.683 for IPPI ratings) when rated by patients. However, practising IV cannulation in a skills laboratory resulted in a significantly shorter time (IG: 595.4±188.1s; CG: 692.7±247.8s; p=0.049) needed for the performance on a patient. Interestingly, students of the IG also completed significantly more single-steps of the procedure correctly (IG: 0.64±0.14 percent of binary checklist; CG: 0.53±0.18, p=0.004). In addition IG scored significantly higher on IPPI ratings (IG: 3.09±0.65; CG: 3.44±0.92; p=0.015). Interrater reliability was 0.910 (p=0.0001) for binary checklists and 0.734 (p=0.0001) for IPPI ratings.

**Discussion and conclusion:** Training of IV cannulation in a skills laboratory is successfully transferable to the clinical setting. It enables students to perform IV cannulation faster, more correctly and more professionally on patients in terms of technique and