



Education Horizon-Scanning Bulletin – October 2018

Compiled by John Gale

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Contents

Medical Education	3
Turning doctors into researchers	3
Helping research in poorer countries	3
'I can't do it while somebody else is watching'	3
What helps medical students show empathy?	4
What helps medical students show empathy – Part II	4
Medical students and empathy – Part III	5
Training doctors to develop healthcare	5
How Imperial are creating all-purpose doctors	6
How to get doctors working with the elderly	6
Flipped classrooms and communities of inquiry	7
Nurse Education	7
'I want to live like common people'	7
Stress, professionalism and performance	7
Why don't more nurses do qualitative research?	8
Stress, self-esteem, collective efficacy and concentration	8
Getting emotions right in palliative care	8
Practice Assessment Records	9
How good are nursing students at diagnosis?	9
Building resilience – what does the evidence say?	10
Getting ready for the anthrax attack	10
Occupational Health Education	10
Keeping people on track with guidelines	10
Paramedic Education	11
When a cup of tea is more important than CPR	11
Physiotherapy Education	11
How much do physiotherapy students know about pain?	11

Medical Education

Turning doctors into researchers

Source: BMC Medical Education

In a nutshell: For reasons best known to themselves doctors tend to prefer being elbow deep in pus out on the wards to sitting in a nice, comfortable office drinking tea and carrying out research. The ideal situation in many people's books is for doctors to combine treating patients with carrying out research so new learning can be transferred onto the wards as quickly as possible and researchers have a good idea about what the pressing issues on the wards are. In an attempt to engender such a situation the University of Queensland developed a Clinician-Scientist Track (CST) with a concurrent MD-Masters that allowed students to undertake a research Masters at the same time as training to be doctors. The rationale behind the programme was to offer an attractive and realistic option to recruit the best medical students into research, with the long-term aim that they then went on to do PhDs. The course – which started in 2010 – was popular from the off and over eight years enrolments have risen sevenfold. 28% of the students who enrolled on the MD-Masters course later went on to do a PhD.

You can read the whole of this article <u>here</u>.

Helping research in poorer countries

Source: BMC Medical Education

In a nutshell: In countries where there are not really enough doctors becoming a researcher or scientist can be even harder. In these countries there tends to be more disease to get to grips with and up to 70% of scientists emigrate for further education or employment elsewhere. In this study Goonaseelan Pillai, from the University of Cape Town in South Africa, led a team of researchers looking into the effectiveness of a new university-accredited, 'immersive,' fellowship programme. The programme had a structured learning curriculum and bespoke research activities tailored to the needs of each fellow. The research projects exposed the scientists to state-of-the-art methodologies and leading experts in their fields while also ensuring that learning can be applied in people's home countries. Fellows run seminars on drug discovery and development that reinforce themes of scientific leadership and teamwork together with practical modules on addressing healthcare challenges within their local systems. More than 140 scientists and clinicians from 25 countries took part over seven years. Evaluation of the scheme revealed strong evidence of knowledge and skills transfer and a beneficial impact on people's research output and career trajectories.

You can read the whole of this article here.

'I can't do it while somebody else is watching'

Source: BMC Medical Education

In a nutshell: Many skills are a bit like going to the toilet – easy enough to do when left to one's own devices but less satisfactory when one has an audience. Sticking tubes into newborn babies is no exception and in this study Brahim Bensouda, from the University of Montreal, led a team of researchers looking into how having an audience affected trainee doctors' performance on a simulated neonatal intubation task. 49 junior doctors took part in the study which measured their success at performing the task and their heart-rate while doing so. The researchers found that although the junior doctors carried out the task equally successfully in the presence of an audience their heart rate was – on average – nearly 12 beats a minute higher. The researchers concluded that "presence of observers significantly increases trainee stress."

You can read the whole of this article here.

What helps medical students show empathy?

Source: BMC Medical Education

In a nutshell: Empathy is a bit like spare time – we'd all like more of it but it's not really clear where it come from, or disappears to. In this study N.J. Pohontsch, from the University Medical Centre Hamburg-Eppendorf, led a team of researchers who interviewed 24 medical students about empathy. Four main themes emerged from the interviews which were:

- Course of studies, hand-on experience, role models, science and theory, and emphasis on the importance of empathy
- Students' insecurities and lack of routine, increasing professionalism, previous work experiences, professional distance, mood, maturity, and personal level of empathy
- Patients 'easy' and 'difficult' patients, including their state of health
- Surrounding conditions time pressure/stress, work environment, and job dissatisfaction

You can read the whole of this article here.

What helps medical students show empathy - Part II

Source: BMC Medical Education

In a nutshell: Rather like liking dogs or cats or The Beatles or The Rolling Stones* people can generally be divided into two categories; introverts who don't know how to start a conversation and extroverts who don't know when to shut up. In this study Teresa Schreckenbach, from Frankfurt University, led a team of researchers who studied the links between medical students' ability to recognise other people's emotions and their extraversion/introversion and simulated patients' satisfaction.

245 fourth-year medical students took part in the study which found that students with a combination of high emotion-recognition ability *and* extraversion received more positive ratings from the simulated patients.

You can read the whole of this article here.

*The correct answers, by the way, are, of course, dogs and The Rolling Stones.

Medical students and empathy - Part III

Source: BMC Medical Education

In a nutshell: Also investigating empathy was a team of researchers led by Dongju Li, from Fudan University in Shanghai. 442 medical students, from the first to the seventh year took part in the study which found that there were four components to empathy:

- Perspective taking
- Compassionate care
- Ability to stand in patients' shoes
- Difficulties in adopting patients' perspectives

The students' empathy declined as they went through their course although there was no significant difference between men and women. Students who preferred not to become doctors had lower empathy than students who preferred to become doctors, were undecided or did not want to say.

You can read the whole of this article here.

Training doctors to develop healthcare

Source: BMC Medical Education

In a nutshell: Richer countries sometimes send doctors abroad to develop health services as part of their aid packages to poorer countries. The Chinese do this but for doctors going abroad to build up health services training can be in short supply. In this study Pan Gao, from Wuhan University in China, led a team of researchers evaluating a training programme created by the university called the "Consulting Training Course for International Development Assistance for Health." 25 students took part in the evaluation and more than 85% of them felt satisfied, or relatively satisfied, with the training and the trainees also said that there had been a significant increase in their consulting knowledge and skills due to the course. A follow-up interview revealed that most of the participants applied the acquired knowledge and skills under various circumstances such as consulting programmes, teaching processes, writing reports etc.

You can read the whole of this article <u>here</u>.

How Imperial are creating all-purpose doctors

Source: British Medical Journal

In a nutshell: The NHS desperately needs new GPs but nearly two-thirds of medical students see GPs as having a lower status than hospital specialists and half think the culture of medical school has a negative influence on their views of general practice. To try and tackle this – and produce more generalist doctors who can treat a wide range of patients – Imperial College, London, has adopted a model developed in the U.S. that gives students a group of patients to manage as part of their teaching. Research has shown that these 'longitudinal integrated clerkships,' produce students with more patient-centred attitudes who feel more prepared to face professional challenges, and have developed more holistic medical practices. The college has started offering an integrated clinical apprenticeship to fifth-year medical students, who spend a day a week in primary care with their own caseload of patients. Students see patients at home, do follow-up, accompany them to outpatient clinics and feed back to the GP. They have a mentor supporting their work, have debriefings, and are trained in health coaching. Third-year students at Imperial also follow a 10-week mini integrated clerkship programme that includes designing and implementing a community action project.

If you have access to the *British Medical Journal* you can read the whole of this article <u>here</u>.

How to get doctors working with the elderly

Source: BMC Medical Education

In a nutshell: An increasing proportion of the population are elderly and more geriatricians are needed to look after them. However, there is very little interest among medical students in a career in geriatrics as it's not covered that much in the curriculum, patients don't gratifyingly get better and have lots of other problems to boot, the profession has low status and it doesn't pay well. In this study Ariadne A. Meiboom, from the VU University Medical Centre in Amsterdam, led a team of researchers who spoke to eight people – a mixture of curriculum designers, doctors working with the elderly, and medical students – and got them to brainstorm what would make a career in geriatrics more attractive. The main themes emerging from the discussions were:

- A patient-centred medical curriculum
- A curriculum representative of the patient population
- Geriatrics presented as intellectually-challenging and emotionally appealing
- Senior-friendly role models
- A clear professional perspective

You can read the whole of this article here.

Flipped classrooms and communities of inquiry

Source: BMC Medical Education

In a nutshell: Flipped classrooms are all the rage now, so much so that it's probably harder to find a classroom that's the right way up. In this study Young Hwan Lee from Yeungnam University and Kyong-Jee Kim from Dongguk University (both in Korea) looked into the effectiveness of the flipped classroom in promoting a student-centred, active-learning environment. 55 students took part in the study which found that the students' perceptions of the student-centredness and sense of community of interest of the flipped classroom increased significantly over time.

You can read the whole of this article <u>here</u>.

Nurse Education

'I want to live like common people'

Source: Nurse Education Today

In a nutshell: In 'Common People,' Jarvis Cocker famously took to task people from more fortunate backgrounds who engage in 'poverty tourism.' Nothing daunted Melanie T. Turk and, from Duquesne University in Pennsylvania, Alison M. Colbert have been researching the effectiveness of a poverty simulation for first-year nursing students. 170 students took part in the simulation which was designed to 'sensitise participants to the experience and realities of living in a typical low-income family.' The study showed that there were improvements in the students' attitudes towards poverty, their empathy for those faced with poverty and their recognition of the societal and structural barriers encountered by poor people. The researchers concluded that the "poverty simulation contributed to building empathy among freshman, BSN students and preparing them, early on, to provide more sensitive care to economically-disadvantaged populations."

You can read an abstract of this article here.

Stress, professionalism and performance

Source: Nurse Education Today

In a nutshell: Virtue can be a bit like sugar. Sweet in small doses, it tends to dissolve as soon as it's owners find themselves in the soup, leaving an unpleasant taste in the mouth. In this study Yansheng Ye, from Sichuan University in China, led a team of researchers looking into the links between stress, professional values and clinical performance in practice nursing students. 435 Chinese students took part in the study which found that perceived stress led to a decrease in clinical performance. Professional values – the presence or absence thereof – led to an improvement in

clinical practice and reduced the deleterious effects of stress on the students' clinical performance.

You can read the abstract of this article here.

Why don't more nurses do qualitative research?

Source: Nurse Education in Practice

In a nutshell: Research can be broadly divided into two camps. Quantitative research deals in facts and figures while qualitative research deals in words and aims to explore people's feelings and thoughts. Postgraduate students are more likely to choose to do quantitative research than qualitative and in this study Fan-Ko Sun, from the University of Ulster in Taiwan, led a team of researchers who asked 16 nursing students why. The researchers' conversations with the students elicited the following three themes:

- Students' personal and professional backgrounds
- Myths about quantitative research
- Misperceptions about qualitative research

You can read an abstract of this article here.

Stress, self-esteem, collective efficacy and concentration

Source: Nurse Education Today

In a nutshell: 'Flow,' can be defined as absolute immersion in what one is doing to the exclusion of everything else; it can be found in pleasurable activities such as ballroom dancing and less pleasurable ones such as negotiating a ring road or inserting a catheter. Students' ability to feel a sense of flow can affect their performance on simulation tasks and in this study Mi Young Kim and Soohyun Park, from Eulji University in South Korea, looked into some factors which might affect students' flow as they carried out a simulation. The researchers found that flow during simulation practice was positively correlated with self-esteem and collective efficacy - people's shared belief in their collective power to produce desired results – but decreased as stress increased. However, only collective efficacy was a significant predictor of flow during simulation.

You can read an abstract of this article <u>here</u>.

Getting emotions right in palliative care

Source: Nurse Education in Practice

In a nutshell: 'Affective elements,' is an ugly phrase for what makes people human: feelings, emotions, values, beliefs, empathy, compassion and emotional intelligence.

They're increasingly being recognised as important for nurses and doctors, no more so than when they're looking after dying people. In this study Annina Kangas-Niemi, from the Karolinska Insitutet in Sweden, led a team of researchers who interviewed six experienced clinical supervisors working in palliative care. The affective elements were seen as essential for learning, clinical supervision, and professional competency. Four main themes emerged from the interviews which were:

- Building a relationship
- Creating space for learning
- Creating a pedagogical environment
- Mirroring

You can read the abstract of this article here.

Practice Assessment Records

Source: Nurse Education Today

In a nutshell: Student nurses who go out on placement have to fill out a practice assessment record. In this study Richard Williams, from Edge Hill University interviewed first-year nurses to assess their understanding of the importance of recording achievement of practice competence and to identify the factors that influenced them when prioritising completion of their practice-assessment record. The study found that the students experienced wide variation in learning opportunities, availability of mentors and mentor engagement in the assessment process and that "some levels of resistance from mentors are unavoidable influenced by clinically-orientated priorities which is not always fully appreciated by first-year student nurses." Mr Williams concluded that "the importance of practice learning experiences, the acquisition of competence and the subsequent recording of those achievements was understood by students, but not always by mentors."

You can read an abstract of this article here.

How good are nursing students at diagnosis?

Source: Nurse Education Today

In a nutshell: Being able to make accurate clinical decisions about people's health problems is an important part of providing good health care but nursing students generally have difficulties in identifying nursing diagnoses accurately. In this study Vanessa E.C. Sousa Freire, from the University for International Integration of the Afro-Brazilian Lusophony Health Sciences Institute, led a team of researchers comparing the ability of junior, senior and graduate-entry students at using the NANDA-1 taxonomy of nursing classification. 130 students took part in the study and the researchers found that the average accuracy was 64.4% and that there was no statistical difference between the groups of nurses. Scenarios belonging to health

promotion, self-perception and growth/development were the ones in which students had a higher number of incorrect answers.

You can read the abstract of this article here.

Building resilience – what does the evidence say?

Source: Nurse Education Today

In a nutshell: Resilience is an important characteristic for a health-care worker to have; one might argue that however good a nurse or doctor you are you're no use without it. In this study Michelle Cleary, from the University of Tasmania, led a team of researchers reviewing the evidence on interventions designed to improve resilience. Eleven of the studies showed interventions leading to a significant improvement in resilience scores. The researchers concluded that "resilience training may be of benefit to health professionals but that "not all interventions enhanced resilience, with training volume being more effective."

You can read the abstract of this article <u>here</u>.

Getting ready for the anthrax attack

Source: Nurse Education in Practice

In a nutshell: There is a strong relationship between how likely something is to occur and how worthwhile it is to prepare for it. Most of us, for instance, have house insurance, but few people hang a clove of garlic on their front door to repel vampires. It's a moot point which category bioterrorism falls into but, nothing daunted, Manu Sharma, from New-York-Presbyterian Hospital-Columbia University Irving Medical Center, led a team of researchers looking into the effectiveness of a curriculum on 'introductory bioterrorism concepts.' After consultation with experts the researchers developed a four-hour training session. Nurses who went on the course showed a rise in scores on a test about bioterrorism knowledge – from 53.1% to 74% and all the respondents strongly agreed that "information … would be useful," and "influence my patient care," in a bioterrorism event.

You can read the abstract of this article <u>here</u>.

Occupational Health Education

Keeping people on track with guidelines

Source: BMC Medical Education

In a nutshell: Guidelines are meant to make sure that everyone gets the best possible treatment for their condition. All well and good but not everyone sticks to

them. In this study Marloes Vooijs, from the University of Amsterdam, led a team of researchers looking into the effectiveness of a training programme designed to facilitate occupational health professionals' (OHPs) use of knowledge and skills provided by a guideline. 38 OHPs took part in the training programme which they thought was relevant, increased their capability, adhered to their daily practice and enhanced their guidance and assessment of people with a chronic disease. The OHPs found that it was feasible to implement the programme on a larger scale but foresaw barriers such as 'time,' 'money,' and organisational constraints.

You can read the whole of this article <u>here</u>.

Paramedic Education

When a cup of tea is more important than CPR

Source: BMC Medical Education

In a nutshell: Paramedics are often drawn to a career full of excitement, flashing lights and lives being saved (a bit like Curry's on Christmas Eve, in fact). However, when they come across older people the job can be as much about recognising psychological, social and support issues as carrying out CPR. In this study Linda J. Ross, from Monash University in Australia, led a team of researchers looking into the effectiveness of a course designed to improve the way paramedics related to older people. 124 second-year paramedic students took part in the study. 64 formed a control group while the other 60 took part in a two-hour workshop on geriatric respect, awareness, care and compassion (GRACC). The workshop included a smallgroup activity to discuss and answer 10 multiple-choice questions on demographic and biopsychosocial factors pertinent to older people. It also included watching footage of older people telling their stories, followed by discussion about their physical and emotional needs and the effect of listening and being heard. The workshop concluded with some small-group role-playing exercises simulating paramedics attending older patients. Following the workshop the participants were asked to seek out an older adult for the community for four one-hour visits to get to know people, find out what made them tick and what was important to them and what communication strategies worked best with them. The researchers found that the students who had been on the course understood the patients' perspectives better although knowledge and attitudes (which were good to start with) remained similar for both groups. Women were more likely than men to be assessed by clinicians as understanding the patients' perspectives better.

You can read the whole of this article <u>here</u>.

Physiotherapy Education

How much do physiotherapy students know about pain?

Source: BMC Medical Education

In a nutshell: As scientist have begun to understand what goes on in people's brains – some more than others one might suggest – their understanding of what goes on when people are in pain has improved substantially. In this study Faris Alodaibi, from King Saud University in Saudi Arabia, led a team of researchers attempting to assess how much physiotherapy students knew about pain neurophysiology. 202 students from 18 different universities in Saudi Arabia took part in the study. The average score on a standard questionnaire was 52% and there was no difference between men and women. As the students went through their course their knowledge of pain showed a statistically-significant but very small improvement. The researchers concluded that there is a "need for more emphasis on pain science in the physical therapy curriculum."

You can read the whole of this article here.