Centre for Medical Education:

Research News

‘How medical students become doctors’ - inaugural lecture by Professor Tim Dornan

Richard Conn

Good things come to those who wait, and so it was with Professor Tim Dornan’s Inaugural Lecture, which took place some four years into his Queen’s tenure. In an introduction by Professor Pascal McKeown, we heard how Professor Dornan has squeezed two careers into the space of one – first, as a physician and endocrinologist, and second, as a world-leading medical education researcher. He has an eye-watering research portfolio, spanning the gamut of medical education; but in his inaugural address he chose to focus on what could be considered his life’s work – the subject of how medical students become doctors.

Drawing on his own work on prescribing error, Professor Dornan first emphasised why the topic matters: despite major changes to undergraduate medical curricula, evidence shows that graduating medical students are unprepared to begin work. He then traced the roots of modern clinical education, from William Osler’s archetypal bedside teaching, to Abraham Flexner’s reforms, emphasising basic science through apprenticeship attachments with eminent clinicians. Come the mid-20th century, however, there was a marked shift in educational practice: on a rising tide of behaviourist theory, education became dominated by outcomes. What mattered was demonstrable acquisition of prescribed knowledge and skills; attitudes, values, and emotions were excluded from consideration. Effects of this drive for greater accountability persist today, and can be seen in the now ubiquitous practices of competency-based medical education and objective structured clinical examinations.

The problem with this move, Professor Dornan argued, is that medical students learn to become doctors in the ‘black box’ of clinical workplaces. Much of what goes on there is beyond the control of curriculum writers, and much of what we want medical students to learn is inherently difficult to measure. What results are medical graduates who are signed off as safe, but whose practice in the real world may well be *unsafe*. So what is the alternative? Professor Dornan put forward his theory of Experience-Based Learning (ExBL), developed and refined over the past ten years. ExBL describes how clinical teachers can support students’ participation in patient care, enabling them to develop capability. By adopting its principles, educators can facilitate the crucial relationships between students, doctors, and patients that lead to medical students *becoming doctors*.

Osler said that medicine is learned at the bedside and not in the classroom. While now ‘the bedside’ might often mean the GP surgery or ambulatory clinic, Professor Dornan contended that Osler’s statement is as true as ever. As well as medical education in general, this presents a vital opportunity for us here in Queen’s. We should, Professor Dornan argued, make supporting students’ participation in patient care front and centre in our clinical education, and we should offer faculty development to catalyse this process. In so doing, we can help our students become humane and capable doctors who are better prepared for the challenges of practising medicine in the 21st century.

Anneke van Enk visits CME

Grainne Kearney

In November, the Centre for Medical Education (CME) was delighted to host the visiting scholar Dr Anneke van Enk, from the Centre for Health Education Scholarship, University of British Columbia. The two-day event, held in the beautiful Graduate school, began with a writing workshop, "From Abstract to Conference Presentation." Delegates gained from Dr van Enk's writing expertise in considering how best to disseminate their work at conference. Dr van Enk's Masterclass "Critical discussion of thesis writing" co-facilitated by Dr Helen Reid from CME, used excerpts from the writing of advanced PhD students within CME to engage delegates in consideration of common writing issues. In this interactive session, the emphasis thankfully was on supportive sharing and collective learning, considering some of my personal thesis writing was up for "critical" discussion!

The highlight of the visit was a colloquium entitled "How can medical education research be both rigorous and relevant?" co-facilitated by Dr van Enk and Dr Neil Kennedy (Acting Head, CME.) This event drew delegates from the different Centres within the School of Medicine, Dentistry and Biomedical Sciences, from other Schools within the Faculty of Medicine, Health and Life Sciences, from the Research Impact Office in Queen's University Belfast and even from outside institutions. The lively discussion explored how the scholarly research within medical education could be theoretically and emphatically rigorous whilst still having a positive impact on patients, students and trainee doctors. Prof. Tim Dornan and Dr Hannah Gillespie presented some of their research, which promoted the concept of 'co-production,' to explore possible solutions to this tension. We would like to acknowledge the Graduate School funding which supported this event.

How can tomorrow's doctors be more caring? A phenomenological investigation

Published in Medical Education, doi: 10.1111/medu.13684

Hannah Gillespie

What does it mean to be caring? This seems like a simple question, but it is actually quite hard to answer. We know that it is important for doctors to be caring, and we know when we feel well cared for – but explaining exactly what makes an interaction caring is much harder. In an effort to educate doctors to be caring, a research team from Queen's University Belfast, the University of Huddersfield, and the University of Calgary, Canada set out to answer the question 'What is caring?' by inviting patients to share real-life experiences.

The research team found that, above all else, caring doctors are genuine. They allow their own individuality to interact with patients' individuality. This makes patients feel recognised as individuals, not just diseases. Caring doctors listen and speak carefully, encourage expressions of emotion, are accessible and responsive, and form relationships. These factors empower patients to be actively involved in their own care. Little things like smiling, shaking hands, admitting uncertainty, asking a colleague for advice and phoning a patient unexpectedly at home show that doctors are prepared to 'go above and beyond'. This is caring.

The study, recently published in Medical Education, built upon previous research from the group, which showed that healthcare professionals', rather than patients', opinions dominate the research landscape about caring – as professionals, doctors are much readier to say what caring is than let patients tell them. The findings of this research provide the medical profession with an interpretation of caring that is truly patient-centred. Coupling medical skill with human qualities – being genuinely empathic and respectful – within doctor–patient relationships is the essence of caring.

The research team urge curriculum leaders and teachers to emphasise the importance of basic relational skills, alongside all the paraphernalia of contemporary technical medicine. They suggest that curriculum leaders should give 'little things' such as smiling or shaking the patient's hand, as much emphasis as prescribing powerful drugs and performing elaborate tests and surgical operations. Educators should repeat relentlessly that neither competence nor caring is, alone, sufficient. Both are necessary, and integrating the two into a genuinely caring medical identity should be every (student) doctor's aspiration.

Link to article published in the Journal Medical Education:
Gillespie, H. , Kelly, M. , Gormley, G. , King, N. , Gilliland, D. and Dornan, T. (2018), How can tomorrow's doctors be more caring? A phenomenological investigation. Med Educ, 52: 1052-1063. doi:10.1111/medu.13684

Making Insulin Treatment Safer (MITS) 2

Tim Dornan

Achievements
In order to improve foundation education and insulin safety, MITS ..

- Devised and implemented a highly original way of educating FTs.
- Developed a collaboration between NIMDTA, the five HSC Trusts, and QUB.
- Trained 58 doctors, pharmacists, nurses and service users to educate FTs.
- Provided 1-to-1 education to 113 FTs, including 40% of FY1s in NI.
- Developed a novel set of audit measures.
- Disseminated the findings to service users, lay people, and professionals.
- Identified features of the healthcare system that compromise patient safety.
- Educated professionals to safeguard patients by identifying such threats.

External recognition
MITS won the Royal College of Physicians Clinical Excellence Award in Education and was a finalist (and runner-up) in the National Patient Safety Awards

Future plans – exciting news
We have assembled a consortium and secured funding to continue MITS *(but exact details are embargoed until Jan 2019)*

Quality improvement recommendations
From its analysis of patient safety threats, MITS has been able to make evidence-based recommendations that could improve insulin safety immediately at minimal cost. These are:

- Current FTs to learn from the commitments to behaviour change made by their peers in the feasibility stage of MITS.
- Pharmacists to give feedback to FTs as part of their routine practice.
- FTs to involve patients more in prescribing decisions.
- All professionals involved in insulin management to manage patients proactively, rather than postpone prescribing decisions for others to make out-of-hours.
- Diabetes professionals to promote wider use of well-designed guidelines, charts, and other tools that support good practice.
- Senior doctors, nurses, and pharmacists to ensure all relevant guidelines are readily accessible on all wards and encourage all staff to make greater use of these.
- Providers of off-the-job foundation education to teach FTs about insulins and their safe use.
- FTs to find out what happened to patients whose insulin prescribing decisions were difficult or otherwise significant.
- A reflective approach to learning from experience that:
    - Questions and improves upon other people's actions rather than uncritically replicates these
    - Encourages active and critical information-seeking, as opposed to seeking and uncritically following advice.
- Senior and middle-grade doctors (including educational supervisors), pharmacists, nurses, and service users to help FTs make changes they have committed to.
- A more positive attitude towards patient involvement.
- A more reflective approach to prescribing amidst the unavoidable pressures of contemporary NHS practice.
- A more positive attitude towards insulin, which emphasises its benefits as well as its risks.
- Behaving supportively towards front-line staff to reduce their stress and encourage them to collaborate with greater understanding of each other.

We acknowledge, with thanks, support from:

HSC Public Health Agency Research and Development

QUEEN'S UNIVERSITY BELFAST

Meet the new Student Reps

Hi. My name is Gail Davison and I have recently started my PhD at QUB, CME. I am a paediatrician by trade. My research topic is children and young people's experiences of healthcare. I am pleased to be able to contribute to the CME student voice. My role is to make our voices heard so that we can better fulfil our academic goals. Let me know how I can help...best wishes, Gail.

Hi, my name is Clare Howie and I am the deputy student representative for the Centre for Medical Education. I am a second year PhD student, with my project focused on individuals at-risk of developing psychosis in schools. I am also the student representative for postgraduate psychologists in Northern Ireland. I look forward to representing the views of the PGR students in the Centre over the coming year.

CONGRATULATIONS/WELCOME

Congratulations, Finbar

Finbar McGrady attended the 5th World Congress of Dermoscopy in Thessaloniki, Greece in June 2018. There were 2500 delegates for the 3-day event. Of 431 e-posters submitted, Finbar was awarded the "Best e-poster" for 'The evaluation of a short Teaching Session on Dermoscopy to General Practitioners.' Finbar stated that '71 GPs attended an introductory session on dermoscopy. GPs knowledge of lesion recognition was tested before and after the teaching. We were able to show a significant improvement in lesion recognition skills and dermoscopy skills after a 90 minute teaching session'. Nigel Hart was co-author on this

Title: EVALUATION OF SHORT TEACHING SESSION ON DERMOSCOPY TO GENERAL PRACTITIONERS

Authors & Affiliation: Dr Finbar McGrady, Clinical Teaching Fellow, General Practice, Centre for Medical Education, Queens University Belfast; Dr Nigel Hart. Senior Lecturer, General Practice, Centre for Medical Education, Queens University Belfast.

Background
Dermoscopy has been shown to improve the ability of General Practitioners (GPs) to diagnose skin lesions as benign or malignant (1) and is recommended by NICE guidance to aid referral in cases of suspected melanoma (2). As a relatively new clinical tool, few UK & Irish GPs have had formal training in dermoscopy. There is an urgent need to upskill GPs in the use of dermoscopy.
This study evaluates a 90-minute face-to-face education session, based on the Chaos & Clues (3) algorithm, to GPs without prior dermoscopy training.

Methods
71 qualified GPs attended training over two events.
Following an introduction on how dermoscopy works, lists of common benign and malignant skin lesions were briefly described to the attendees.
A 16 case 'Quiz' was then completed anonymously.
Following training, the quiz was repeated. In total 24 questions were asked and each question given a weighting of 1 mark. A diagnosis was asked for in each case and in 8 cases further description was requested e.g. dermoscopic pattern, symmetry, action. Questions were categorized by diagnostic and descriptive skills.
In order to avoid bias by the tutor, a description for each case was read out from a prepared statement for both iterations of the quiz. No images used in the quiz were used in the training.

Results
A two variance equal sampled T-Test was used for analysis. Scores following the training were higher for Total (Pre-11.38/24 vs Post- 19.97/24; p<0.001).
Diagnosis (Pre- 8.47/16 vs Post- 13.27/16; p<0.001) and Description (Pre-2.91/8 vs Post- 6.84/8; p<0.001).

Conclusions
This 90 minute training session to GPs on dermoscopy using the Chaos & Clues algorithm has potential to improve GPs diagnostic and descriptive skills of skin lesions.
Further study might evaluate the long-term retention of knowledge and skills and the impact on clinical decision-making).

References
1. Argenziano G, Puig S, Zalaudek I et al. Dermoscopy improves accuracy of primary care physicians to triage lesions suggestive of skin cancer. J Clin Oncol. 2006 Apr 20;24(12):1877-82.
2. Suspected cancer: recognition and referral. NICE guideline. Published: 23 June 2015 nice.org.uk/guidance/ng12
3. Rosendahl C, Cameron A, McColl I, Wilkinson D. Chaos and Clues. Dermatoscopy in routine practice. Vol 41. No 7. Pages 482-487

QUEEN'S UNIVERSITY BELFAST

Congratulations, Carl

Congratulations to Dr Carl Brennan (pictured on the right with Prof Gerry Gormley) – who graduated on the 14th Dec with an MPhil. Carl was a recent General Practice Academic Research Trainee (GPART). His research explored laterality errors in health care.

Welcome to our new students

This year we are delighted to welcome six new members to the CME team. We have three new Postgraduate Research Students; Gail Davison, Linda ni Chianain and Freddie Speyer. We also have three new GPart students; Paula Houton, Lucy Hodkinson and Jonathan Stewart. Welcome to the team, we look forward to hearing more about your research over the coming months.

CALL FOR CONTENT

We would be delighted to feature a wide range of topics in this newsletter. If you would like to contribute a recent success, interesting development, future event etc, please forward to Deborah.millar@qub.ac.uk

Merry Christmas and Happy New Year from the team in CME