Project 1: The Development of Audio-Visual Material to Support Understanding of the Mental State Examination

Supervisor: Dr Caroline Donnelly

Project description:

Accurate descriptive psychopathology is an essential diagnostic skill, it involves the description and categorisation of the experiences reported by the patient and the clinician’s observation of the patient. The GMC Tomorrows Doctors (2009) document, includes as outcomes, the performance of mental state examination and the appropriate communication with people with mental illness.

The development of these clinical skills can be challenging for students. The student is required to knowledgeably question and observe the patient, who may present with multiple clinical phenomena some of which can make the clinical interview a challenging experience. The student must then accurately describe and categorise this assessment using phenomenological terminology they have only recently acquired.

Benefits to the student:

- To develop knowledge and understanding of the clinical interview and mental state examination in psychiatry.
- To participate in the development of clinical scenarios to illustrate the relevant components of the mental state examination and the key terminology of descriptive psychopathology.
- To engage in the preparation, co-ordination and editing of audio-visual material to support learning.
- To develop an awareness pedagogical benefits and limitation of this format of clinical material and its function within the overall psychiatry module.
Project 2: Technology Enhanced Learning Assistant: Medical Education Portal

Supervisors: Ms Clare Thomson and Dr Kieran McGlade

Project description:

Following a student survey in the spring of 2014 and follow up focus groups in Winter 2014 plans for a complete refurbishment of the Medical Education Portal are now underway. The upgrade will focus on moving to a fully responsive template which means that it will work smoothly on any device and that all content will be device independent. This represents a substantial project. This is illustrated by the fact that the current system comprises over thirty two thousand files within the portal.

It is planned to involve students throughout this re-design process. However a full time studentship over the summer will mean that the final testing with regards to accessibility and usability will be in an environment whereby the student can work directly with us on a day to day basis.

The key tasks for the student will be to ensure all content has migrated across correctly from the old site, to create a test schedule by which they can systematically test each element on the portal (eg video, electure, tutorials etc) on as many different devices as possible and report back their findings. Finally, if time allows, the student will script and record help videos/screencasts to orientate students and staff to the newly updated portal with regards to its new navigation and layout.

Benefits to the student:

The student will gain an insight into the deployment of technology enhanced learning within a medical education setting. They will:

- Improve their communications skills working with different levels of staff
- Gain an insight into the wide variations of needs from staff and students across the different stages of their course
- Gain an understanding of the difficulties involved with embedding technology in a learning environment; balancing the needs of the students as well as those of staff
- Improve their knowledge of current technologies and learn how to identify the best possible solution to a given problem
- Learn to work within the boundaries of set resources and time
Project 3: Developing an SSC on Human Trafficking

Supervisor: Dr Mairead Corrigan

Project description:

The purpose of this project is to develop a Student Selected Component (SSC) in Human Trafficking. Human trafficking is a global problem and it comes in several forms. The most common type of human trafficking is sex trafficking, the sale of women and children into prostitution. Labour trafficking is the sale of men, women, and children into hard labour for which they receive little or no compensation. There are currently 300 known trafficking victims in Ireland - predominantly for sexual exploitation (approximately 67% of cases in Northern Ireland - though we can never be completely sure of numbers) and they usually present with problems such as PTSD, malnutrition and other significant problems. 33 potential victims of human trafficking were recovered in Northern Ireland in 2011/12. The number of people being trafficked is on the rise and healthcare professionals are increasingly likely to be involved in treating the victims.

Benefits to the student:

It is hoped to recruit a student with a special interest in the topic, who already has a good understanding of the issues and who has developed contacts with relevant organisations. The SSC will provide them with an opportunity to enhance their knowledge and social networks.

- It will also provide them with new skills linked to education and the design of a teaching programme
- It will increase their knowledge of processes linked to assessment
- They will also have an opportunity to contribute to peer teaching
Project 4: Digital Stories

Supervisor: Dr Maeve Rea

Project description:
Nonagenarian numbers are increasing. Approximately 10% have a combination of ‘age span’ and ‘health span’. While science seeks to understand the biology of genetics and lifestyle interactions contributing to increased ‘health span’, we know relatively little about how we feel in very old age.

In the ‘Beyond-90-Together’ CAP project-IMR, nonagenarians told their life-stories, answered structured questions about ageing and had photographs taken.

Objective:
In the summer studentship, the student will edit materials from the Beyond-90-Together-materials, linking auditory responses with visual images to produce digital stories on DVDs, focusing on each structured question.

1. What do you think has helped you live so long and well?
2. What makes you happy about your life?
3. How do you view the future?

Methods:
Digital stories will be prepared in collaboration with Dr Maeve Rea and Mr Matthew Blain-AgeNI who has IT multimedia expertise for AgeNI website. The software used will be First Cut (Macintosh) or Windows Media Maker with students having training and supervision in necessary methods.

AgeNI has agreed to provide technical support for this project which is intended to be used as 1) teaching materials for medical and nursing students and 2) for use on the AgeNI website for interaction with the public.

Benefits to the student:
- Engagement and education of student in the research process
- Opportunity for student to develop and complete a research project
- Opportunity to be involved in learning and applying new skills in digital editing
- Opportunity to develop an online teaching tool for Ageing and Health Module and for the Centre of Medical Education
- Opportunity to learn about the work of an outside charity AgeNI
- Help student develop a positive and affirmative attitude to ageing
- Help AgeNI to empower older people through their voices and images
- Help AgeNI to portray and celebrate the diversity of older people’s lives.
- Opportunity for student to present completed digital material for conference presentation and/or online archive
Project 5: “Mind Your Mind” – Developing a Smartphone App to Promote Good Mental Health in Students

Supervisors: Dr Ciaran Mulholland and Dr Kieran McGlade

Project description:

This project aims to carry forward work completed during a summer studentship last year which explored ways in which CME, and the wider University, could promote resilience in students (informed by a recent GMC document).

A literature review, and a scoping exercise examined the use of apps as applied to mental health problems and resilience and demonstrated the viability of a further project aiming to develop a student specific app to increase resilience.

A workshop and computer “Hack” held in October 2014 in conjunction with computer science resulted in the development of a number of ideas about building a smart phone app that would promote mental health in students.

The purpose of this summer studentship is to work with a small team of computer science students to produce a prototype smartphone app which will help promote student mental health. The summer student will be embedded in a computer science design team and will provide the “medical input”. In so doing the student will have the support of a psychiatrist and a general practitioner. As well as contribute to the student-friendly design of the App the student will develop resource materials which the App can link to including short video clips, check lists, psychological exercises as well as points of reference. The student will also liaise with the student counselling service and third party providers such as Samaritans.

Benefits to the student:

The student will acquire interdisciplinary team working skills and will gain valuable experience in the issues to do with the diagnosis and management of mental health problems. The student will gain insight into how mental health can be promoted through various types of agency and advocacy. In terms of technical skills there will be an opportunity to acquire skills related to video recording and production as well as developing organisational skills and learning how to go about designing Apps.
**Project 6: Online Learning Materials for Neurology**

**Supervisors: Dr Ailsa Fulton and Dr Kieran McGlade**

**Project description:**

This project aims to develop a set of online learning resources for neurology. They will be designed to not only supplement the taught third year neurology course but also to act as a learning resource throughout the curriculum where there will be many other opportunities for students to learn about neurology and hone their neurology skills during other attachments. The resource will also be useful for revision.

In conjunction with the supervisors the student will develop a plan for the educational content, work out a learning design and will be responsible for liaising with consultants to create and record the relevant materials.

The planned approach would be to consider the current online paper based cases, which have recently been reviewed and updated, and the neurological and neurosurgical aspects of the curriculum and develop the current cases as an interactive learning tool. We would plan to encompass video clips of examination technique and relevant clinical findings particular to each case. In addition supporting evidence such as brain or spinal imaging, neurophysiological results, CSF analysis, histological and serological results would be included in the standard format used in a clinical setting. The opportunity to link relevant neuroanatomical material would be taken with each case. Once the existing cases had been developed the second part of the project would be to add new material to cover any identified gaps in the curricular requirements. The hope would be that presenting the information in this way to students will make neuroscience teaching and revision available in bite sized chunks that encompass both clinical and scientific aspects of the five year curriculum. The hope would be that this change in approach may help address the tendency to ‘neurophobia’ in medical students and junior doctors which would ultimately lead to better patient care for the 30% of patients admitted acutely to hospitals with neurologically related issues.

**Benefits to the student:**

The student will have the opportunity of working with a number of neurologists throughout the 8 week studentship to acquire a range of materials including guidelines, video demonstrations of clinical presentations and examination techniques. In so doing the student will acquire skills relate to video recording and production as well developing organisational skills and learning how to go about designing materials for effective learning. In addition to these technical skills the student will learn a lot of neurology!
**Project 7: Developing an On-Line Induction Package for First Year Students**

**Supervisor: Ms Mairead Boohan**

**Project description:**

As part of the Academic Year Review it is proposed to integrate Induction and Welcome Week activities into the Semester One Year One Time-Table. This will take place from September 2016.

This project proposal outlines a two year plan designed to produce a suite of on-line induction resources to replace some material currently delivered face to face. Each on-line resource will have a self-assessment quiz and Certificate of Completion which students will have to include with their end of year portfolio.

**Benefits to the student:**

Experience in the following teaching and assessment skills:

- planning and designing teaching resources (identifying content, writing learning outcomes, structuring learning resources)
- the development of on-line learning resources
- developing short MCQ questions for self-assessment

**Phase 1 (Summer 2015)**

- The following on-line resources will be developed:
  - Referencing and academic writing skills (on-line lecture, demonstration and self-assessment test)
  - Use of Excel (on-line demonstration and self-assessment test)
  - Use of PowerPoint (on-line demonstration and self-assessment test)
  - Professionalism and Social Media (on-line lecture and self-assessment test)

**Phase 2 (Summer 2016)**

- The following on-line resources will be developed:
  - Study Skills (on-line demonstration and self-assessment test)
  - Learning Styles (on-line self-assessment)
  - Using QOL (on-line demonstration)
  - Virtual tour of campus and Medical School (on-line tour)
Project 8: Patient Safety

Supervisor: Ms Mairead Boohan

Project description:

Following the publication of the Francis Report there is an increased focus on Patient Safety training for undergraduate medical students.

The Institute of Healthcare Improvement (IHI) have developed a suite of on-line teaching resources covering key Patient Safety topics. Some of these resources are currently used during the Assistantship. Other components of this suite of resources are appropriate for inclusion in the years 1 to 4 curriculum. It is proposed that in future students will be required to work through these resources as part of their e-portfolio. This model of delivery mirrors some aspects of postgraduate medical training and will further enhance student preparation for the transition to the workplace.

The aims of this project are to:

- Review the IHI on-line resources
- Identify IHI resources appropriate for inclusion in the undergraduate curriculum

Benefits to the student:

The student will learn about some aspects of curriculum review and development.

The student will have an opportunity to acquire the following knowledge and skills:

- enhanced knowledge about Patient Safety
- an understanding of the processes involved in incorporating external resources into an established teaching programme
- evaluation and analytical skills
Project 9: Teaching resources for epidemiology and public health

Supervisor: Ms Mairead Boohan & Prof Frank Kee

Project description:


The Summer Student will examine current course content (Med 1020 and Med 2015) and assess it against the desired learning objectives as devised by FPH and best practice, and, where appropriate and in collaboration with supervisor, devise ways to augment or improve current lecture or lecture note material that will enhance to the learning experience of the class.

The student will also examine and make recommendations for coherent vertical integration of public health themes and content across the curriculum.

Benefits to the student:

Acquisition of curriculum development and review skills.

Enhanced understanding of the role of Public Health in medical education and clinical practice.
Project 10: Designing an Insulin Prescribing Module for Final Year

Supervisor: Dr Una Graham, Dr Karen Mullan

Project description:
The purpose of this project is to address the clinical need for improved undergraduate training in insulin prescription. Approximately 15% of inpatients in Northern Ireland have diabetes. A recent National Inpatient diabetes audit highlighted a number of concerns regarding unsafe insulin prescribing. The role of insulin prescribing often falls to the F1 doctor, particularly during out of hours shifts and on non-medical wards. The aim of this project is to design an online insulin prescribing module for F0 students. This will address common insulin prescribing scenarios and prompt them to use regional guidelines for the management of common emergencies in diabetes.

The studentship will involve:

1. Identifying areas of poor practice through review of trust incident reports and results from the National Inpatient diabetes audit
2. Working alongside a consultant diabetologist and diabetes specialist nurse to identify practical teaching scenarios which address the areas identified in (1)
3. Reviewing regional guidelines and working alongside the diabetes team to construct clinical scenarios which test the F0’s understanding of each guideline. The guidelines will include:
   - diabetic ketoacidosis (in adults and juveniles)
   - hypoglycaemia
   - peri-operative fasting
4. Working alongside an elearning developer to construct an online training module in insulin prescribing.

Benefits to the student:
This project offers a number of excellent opportunities, including:

1. Excellent clinical training in diabetes care through carefully examining current guidelines and constructing scenarios under the supervision of a consultant diabetologist and diabetes specialist nurse.
2. An awareness of the patient safely checks present in hospitals and opportunity to act on them.
3. Designing an online module which both targets patient safety and ensures that undergraduate education is “fit for purpose” in relation to inpatient diabetes care.
4. Reviewing the National Inpatient diabetes audit results subsequent to introduction of this module and presenting results at a medical education conference.
Project 11: Compassion, Sympathy and Empathy. What’s in a Name?

Supervisor: Prof Tim Dornan

Project description:

What does that mean for a medical student or doctors to be “caring”? Peabody said “the secret of the care of the patient is in caring for the patient”. Ninety years later, “caring” has turned into quantitative measures of professionalism, empathy, emotions, and the like. Smajdor(1) wrote that measurement might lead us towards “a McDonald’s type of compassion, a travesty of the real thing”. She doubted “the real thing” could be delivered in today’s NHS and advocated efficient, if unemotional, care. The goal of the studentship - part of a larger programme of research into emotions in patient care - is to find out what patients want. Its objectives are to explore:

- What previous publications tell us about patients’ wishes
- How patients experiences being “well cared for”

The methodology is phenomenology. The proposers will obtain ethics approval. The student will identify empirical publications about the qualities patients want from doctors. The proposers will train the student to do relatively unstructured, in depth phenomenological interviews (which, it has been suggested, doctors could use in their practice) and help him/her recruit a purposive, maximum variation sample of 10 primary care patients, explore their lived experiences of caring, and conduct a simple data analysis.

Benefits to the student:

The student will gain rich insight into the values and behaviours of caring doctors, which will complement their training in interpersonal communication, ethics and clinical skills and encourage a patient-centred focus. The student will learn literature searching, interviewing, and qualitative data analysis skills. The student will also learn about how social science theory can illuminate medical practice. We anticipate that the student will present the research at a conference (e.g. INMED 2016) and hope that the student will co-author a paper.
Project 12: The medical-dental interface: how can undergraduate education help to promote better understanding?

Supervisor: Dr Sue Morison (Professor Pascal McKeown and Ms Vicky Adams)

Project description:

This project incorporates 2 studentships – 1 for a dental and 1 for a medical student.

The students will work together to develop a research study that will identify the key areas where the dental and medical professions overlap and where it is important for dentists to understand medical practice and doctors to be familiar with dental practice.

The students will collaborate to:

• undertake and write a literature review
• design a research study to identify key areas where medical and dental practice overlap and to answer the question ‘How can undergraduate education help to promote better understanding of the medical-dental interface?’
• develop a questionnaire for practitioners
• design an interview schedule for key informants
• pilot the questionnaire and interview schedule

Benefits to the student:

Research skills

• conducting and writing a literature review
• research design - including qualitative and quantitative methods
• questionnaire design
• interview design

Generic Skills

• teamwork and collaboration
• oral and written communication

Knowledge

• understanding of the overlap between the medical and dental professions