‘Mirrors to Windows’: Developing a Masters Programme in Perioperative Medicine

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Defining a problem

As a profession we can rightly reflect on our contribution to improved outcomes for surgical patients in modern times. However one group remains elusive to our efforts: a so-called high-risk surgical population, small in number, but accounting for a disproportionate mortality burden. In the last decade we have better characterised deficiencies in care, and are now embarking on wide-scale systems review and a process of quality improvement. It is hoped this will lead to better patient outcomes and satisfaction, and reduced healthcare costs.

Paralleling these activities to improve the science there is a closer look at the education methods required for professional development. In 2012, recognising an increasing call for change, anaesthesia colleagues at University College London (UCL) proposed the development of a new and innovative Masters Programme in Perioperative Medicine.

Institutional buy-in

The process of getting your educational ambitions recognised and fully funded as a course on the UCL postgraduate portfolio is not unlike the submission of a research grant application. What awaits an applicant is a blank eighty-page document, requiring facts and figures to support an argument for institutional investment. Successful courses are able to demonstrate professional justification and to predict market forces, and ultimately the quality of your product design must be assessed for its educational merit.

The professional justification for developing a course in Perioperative Medicine came easily to us. The surgical-patient demographic is changing. Older patients, often presenting with multiple co-morbidities, are now regularly undergoing a wide array of complex major surgeries. A ‘one size fits all’ model of perioperative care is all too often simplistic and reactionary. Failure to adequately identify specific patient needs ‘at the front door’ results at best in ‘catch-up’ interventions, and at worst in a ‘failure to rescue’ and adverse outcomes. This model is recognised as expensive in both human and monetary costs, and a new model of care is considered to be long overdue.

Our application relied strongly on teaching the evidence that supports a proactive, individualised patient-centred model of care. We believed that the profession of anaesthesia was ready to lead the change process, and would actively seek credentials.

Pursuing a novel curriculum

A curriculum may be broadly defined as the totality of student experiences that occur in the educational process, therefore we had big plans! These were:

> ‘to develop the first online Masters Programme in Perioperative Medicine, delivered by experts, for a multi-disciplinary group of healthcare professionals across the world’

What emerged was a course with no venue or start time beyond that which suited the student, taking place in the best lecture hall available – one’s own home. What we sought was a world-community of learners, not restricted by distance, study leave, professional or other commitments, who might sign in, learn and feel part of a community at a time that suited them.

Of course we recognised the potential drawbacks of online learning, not least from our own institution, who were eager not to see the project fall below it’s own world-ranked credentials for teaching and research. The question was raised: how would we get around the fact that if a student doesn’t understand something he or she has nobody to ask? In a conventional teaching environment a student would raise his hand and ask a question

which it might be expected, would be answered by the tutor or one of their classmates. On this course, how might a student in Colombia engage with his/her classmates, seek further tutor help and stay tuned in and interactive with the learning materials?

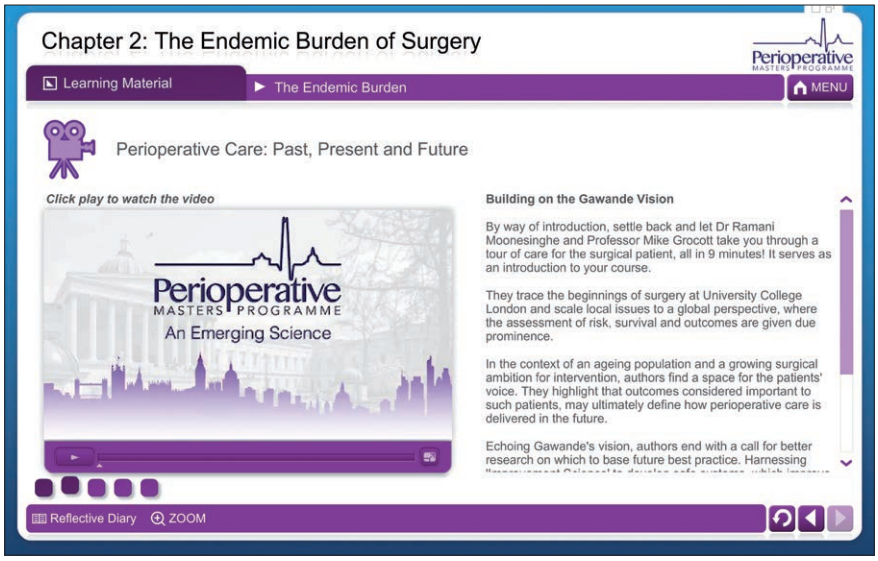
The answer came in the development of our own unique e-learning environment. UCL, like many other universities, uses a traditional learning management system (LMS) – 'Moodle', designed to administer online elements of learning. Moodle is a great way to organise lectures, hold data, administer examinations and provide a platform for learning. Less good however is it's interactivity capabilities, it's visual appearance, and it's ability to have all the learning materials in one place at the click of a button. So we built one, which allowed students to glide between subjects seamlessly, interacting with a rich source of developed multi-media, but importantly still linked by 'hidden' interfacing to the UCL LMS. The student would only engage with an eye-catching 'Perioperative learning page', while their inputs were being captured and analysed in Moodle, which ran it's analytical program in the background. An analogy might be the replacement of MS DOS by the graphical user interface, Microsoft Windows, easier on the eye, simple and engaging to use and our own design complete with logo! (see figure 1).

Syllabus design

Eager not to re-invent the FRCA examination, or any other existing professional examination syllabus, we elected to start our program from the beginning. We wanted to tell a story that a Consultant in Northampton may enjoy as much as the CT2 in Leeds. The former would bring a depth of experience to the course; the latter would not be shackled by old-style paradigms. Together we hoped they would bring a fusion of ideas and enthusiasm.

We enlisted a faculty of expert authors, some from around the world, but many on our own doorstep. We were grateful that each gave their efforts freely and generously. Together, each prepared a 'chapter,' and we set about preparing it as a blended piece of learning which included prose, key reading materials, film, podcasts, vodcasts, interviews and much student interactive work.

Figure 1 Our bespoke learning platform designed specifically for the UCL Masters Programme in Perioperative Medicine



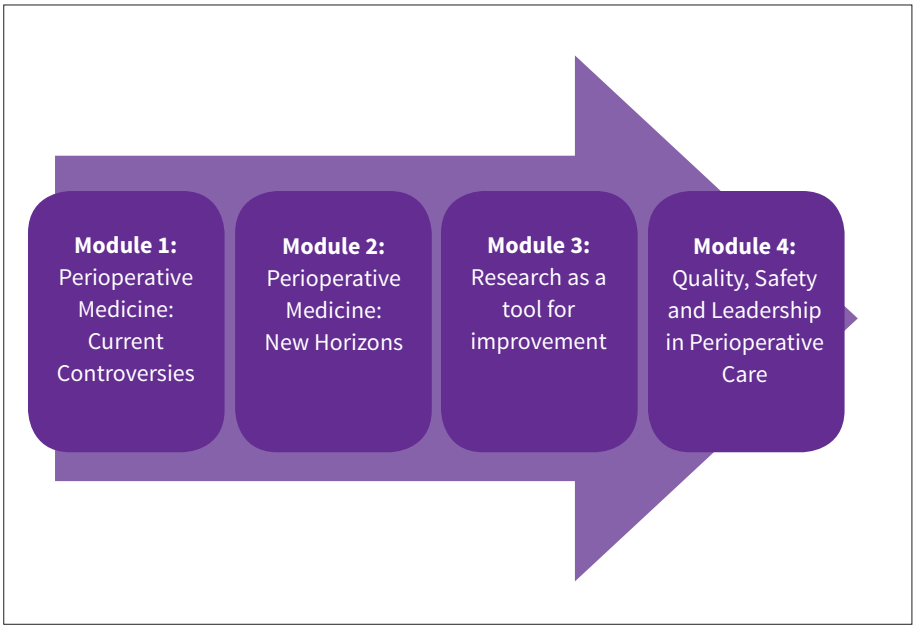
Eager to develop the course syllabus in line with the emerging professional zeitgeist, we aimed to tackle only broad themes of care, electing not to get bogged down in the minutiae of what we considered inconsequential detail. We were keen to focus on measurement, process and analysis. We began the story by trying to understand the problems associated with major surgery, and moved on to systematically provide solutions, led by the work of international experts and a robust evidence base. The course has revisited old favourites such as risk assessment and surgical outcomes, but through new eyes, and looking beyond the horizon to the evolving themes of shared decision-making, improvement science and clinical leadership.

Central to the learning experience has been 'interactivity', where alongside traditional assessment tools such as essays and case-based discussions, we encourage informal group interaction through a blog, a so-called 'Perioperative Chat'. We extended this interactivity into formal student assessments where it became compulsory to engage discussion on some aspects of the course, students being able to review each other's contributions. Each student was allocated a group of 15 classmates, with a faculty member mentor with whom to interact. Each chapter would contribute to a discrete themed module, four modules taken over a year to complete a UCL Certificate (see figure 2 on the next page); four more in the second year for the UCL Diploma, culminating in a 10,000 word dissertation project for completion of the MSc.

Marketing a new course

We elected to limit our early ambition for the course, agreeing to accept 15-20 students in year one. While course faculty members were all anaesthetists, our course ethos was to broaden the offer of core skills and learning in perioperative medicine to any physician/surgeon – after all, this was a course on perioperative medicine and not anaesthesia. We hoped for a UK audience only in our first year, so that we might learn to provide focus on one healthcare system and a common medical parlance, before broadening the scope of learning to look at other healthcare services. What resulted however was a course that began with 70 students from four continents,

Figure 2 UCL Masters Programme in Perioperative Medicine, Postgraduate Certificate Level Modules



and in hindsight we don't regret it! Each has brought an enthusiasm and a refreshing personal take on surgical care, with cross-cultural fertilisation of ideas ensuring a vibrant first term. We have regretted having to turn down so many applicants, and will of course be reviewing this in the next academic year.

Going live

When eventually the course went live, it was with a sense of both pride and relief that the faculty were able to watch students interact firstly with the learning materials, then with us and finally with each other. Essays came in, feedback went out and grades were allocated. Suddenly we were up and running with a course we had been dreaming of for almost three years.

Early course reflection

Early days of course! But if we permit ourselves a brief reflection, it would be fair to say that we did not expect the project to be so personally rewarding; 64 chapters, 8 modules, 180 learning hours, and a great sense of achievement. International students, faculty authors from four continents and collaborations with ten internationally renowned institutions will, we hope, make a contribution to an extremely important professional development. Our job now will be to capitalise on a promising start and maintain the high standards already set.

Interested in the UCL Masters Programme in Perioperative Medicine? Find out more at www.ucl.ac.uk/surgery/periopmed and feel free to contact us at periopmed@ucl.ac.uk. Follow us on Twitter @PeriopMedUCL.

Conflicts of interest

Dr Ramai Santhirapala and Dr David Walker are faculty members of the UCL Masters Programme in Perioperative Medicine.

References

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