

WHAT PRICE EDUCATION?

The Department of Health's decision to give the royal colleges money to develop the tools for the recertification of doctors and to develop online learning programmes has been controversial, as **Nigel Hawkes** reports

Who will keep tomorrow's doctors up to date? Everybody talks about the need for continuing medical education, but its actual delivery has so far lacked coherent organisation. The long promised advent of revalidation in the United Kingdom has sharpened a debate about the roles of the medical schools, the royal colleges, the drug companies, and the private sector in ensuring that doctors are given opportunities, throughout their careers, for maintaining and enhancing their skills. But who is to set the standards, judge the outcomes, and, most important, pay the bills?

Without announcement—and without seeking competitive tenders—the Department of Health has decided to give the royal colleges a key role. Revalidation and its enthusiastic pursuit by the chief medical officer, Sir Liam Donaldson, have provided new opportunities for the colleges to expand their remit. Cash from the Department of Health is lubricating the process.

The latest accounts of the Academy of the Royal Medical Colleges show that its income, after ticking away for years in the range of £200 000–£300 000 a year, soared to over £2.5 million in the year ending September 2007. Since then it has received a further £2.4m from the department, with the hint of more to come, should it be needed.

From this pool, the royal colleges are each entitled to claim £50 000 as of right, and to bid for more, either alone or in partnerships. The money is intended to help them develop tools for the recertification of doctors, but not to cover actual implementation. The role of the academy is to act as a clearing house and to coordinate spending so as to achieve the best return on the investment.

A much bigger programme has been launched by the department under the title e-Learning for Healthcare. This has provided cash to individual royal colleges for the development of online learning programmes. The colleges involved include the Royal Colleges of General Practitioners, Physicians, Radi-

ologists, and Anaesthetists and the College of Emergency Medicine. Once again, these projects were not put out to tender.

Dr Edwin Borman chairs a task force on continuing medical education (CME) for the European Union of Medical Specialists. “I find it surprising that the government, without going out to formal tender, gave a substantial amount of money to the royal colleges” he said. “There is a lot of disquiet about that. It is very unusual, both in the national and the international context, to award contracts like this. The government has chosen to fund the royal colleges preferentially, and not the other providers. There are quite strict rules about tendering when this sort of money is involved.”

Tim Ringrose, medical director of doctors.net.uk, which provides online training, said that he welcomed the department's investment in online learning. Doctors.net has itself been involved in producing programmes on pandemic flu, substance misuse, and hospital acquired infections. But he said it is important that the money is spent in the most cost effective way.

He fears that the programmes commissioned from the colleges are too narrowly focused, with little cross-benefit between one programme and another. He added that they have been commissioned “behind closed doors” and in a way that is not transparent. “It feels like the DoH is convinced that e-learning has a lot to contribute and it is has sloshed a whole lot of money down this particular route, through the royal colleges,” he said. “I'm pretty sure it wasn't put out to tender. We would have been actively interested if it had been.”

Dr Kamran Abbasi, the chief executive officer of OnMedica, said: “Funding of e-learning, like all education, must be transparent, but a deeper question is why government funding has been directed towards developing new e-learning platforms when there are existing technologically advanced providers that doctors are familiar with. It would be faster, cheaper, and more effective

to work with existing e-learning platforms, especially as the government has a poor track record in developing new technologies and the expertise of the royal colleges in this area is unknown.”

Since conflicts of interest are best declared early, it is only right to point out that the *BMJ* has a substantial interest here through its sister product *BMJ Learning*, the largest supplier of curriculum related CME in the UK.

Exemption from tendering rules

When asked about the programme, the Department of Health gave the following explanation for its failure to follow normal tendering rules, which under EU law apply to any project worth more than €133 000 (£90 319). A spokesman said: “Department of Health e-Learning for Healthcare works in partnership with professional bodies to create e-learning content. No content is paid for and the content remains the property of the relevant professional body.

“DH's options were to ‘make or buy’ content, and the DH policy decision was to ‘make’—develop e-learning in house, with central funding used to augment in house resources. Once the decision was taken to develop content in house, there is no requirement to procure services from external providers of e-learning content.

“Over time, content delivery may expand beyond the scope of the DH team. At that point, procurement of content may become necessary and all relevant commercial providers will have the opportunity to tender.”

It remains unclear how much has been spent, or is committed. The academy says that the £3.9m it has received was exempt from tendering rules because there is an opt-out clause which applies when only one organisation could deliver the desired result. For cash earmarked for revalidation, the academy was that organisation, it says.

But the department's explanation for the e-Learning for Healthcare programme makes no such claims. On the one hand, it says that the programme is being developed

in house, so no procurement has taken place. On the other, it says that content will remain the property of the royal colleges that have developed it with the aid of DH cash. Why private companies with a record in the field were not offered a chance of such a sweet deal is not explained. Nor would the department say how much is being spent: one private provider guessed £8m; another said it might be “tens of millions.”

A further aspect worries the private providers. Thanks to the department's programme, the royal colleges now have a hand in every stage of the game. They develop content, set standards, provide examinations, and accredit the content of events and online courses provided by commercial competitors—whose success it is not in their interest to encourage.

CME in the United States

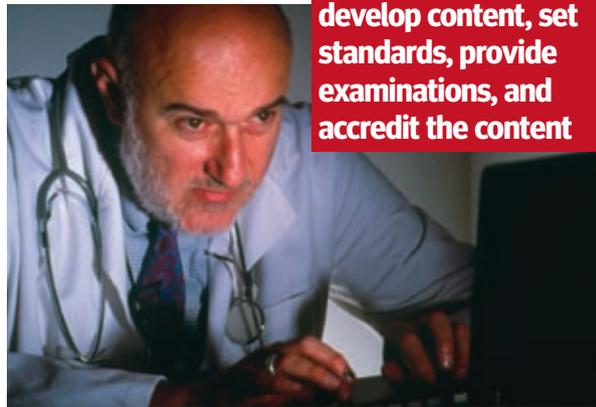
Conflicts of interest in CME are hardly new, as experience in the United States makes plain. There the CME market is underpinned not by government but by the huge and growing involvement of the pharmaceutical and medical device companies. Commercial support for CME quadrupled between 1998 and 2006, fuelled by the evidence that CME is a very effective vehicle for the subtle promotion of products. This has created what a leading critic, Victor Marrow of Johns Hopkins University School of Medicine, calls “a feeding frenzy.”

With the pharmaceutical companies providing most of the cash, and easy accreditation of courses produced by medical education and communication companies (MECCs), an industry with a turnover of several billion dollars a year has been created. In some cases, the companies providing CME have been offshoots of advertising agencies or public relations companies with little history of expertise in medical training. An accreditation body, the Accreditation Council for Continuing Medical Education (ACCME), is responsible for ensuring that the content of the teaching materials meets acceptable standards. But it does not seem difficult for the MECCs to pass muster: most of those who apply to ACCME are given accreditation.

In recent years, ACCME has tightened its standards, with new rules to try to ensure that commercial interests cannot control the content of CME and even the tentative suggestion that commercial support should be eliminated altogether. This would leave a big hole: according to a study carried out last year by the Josia Macy Jr Foundation, of \$2.4 billion spent on accredited CME in the United States in 2006, \$1.45 billion (60%) came from

drug companies and device manufacturers. As the Senate Finance Committee remarked: “It seems unlikely that a sophisticated industry would spend such large sums on an enterprise but for the expectation that the expenditures will be recouped by increased sales.”

Among the many critics of CME in the United States, Victor Marrow is one of the most vocal. He says that CME has become an industry, not a professional responsibility. “It is corporations giving money to companies to



Royal colleges now . . . develop content, set standards, provide examinations, and accredit the content

put on programmes for physicians. There is something desperately wrong with that,” he said. “Pharma has poured in over a billion dollars every year, and there are about 500 000 practising physicians in the US. That is an enormous amount of money thrown at these relatively few physicians. It would be nice to have other funds available, but no one is going to step up to the plate.”

CME in the US had begun to smell so fishy that earlier this year Pfizer announced that it would no longer fund MECCs. In future, its cash will go directly to medical societies or medical schools, though it did not rule out those organisations that were then striking a deal with MECCs to prepare course materials or organise meetings. The ACCME responded to this unwelcome news by saying that the companies it accredited had all shown a separation between education and promotion. But for Mike Saxton, Pfizer's head of CME, complying with ACCME's rules counts for little. Such compliance, he said, ignored more fundamental conflicts of interest—in particular, the common business practice in MECCs of tying executives' salaries to the grants they bring in from pharma or medical device companies.

CME in Britain

CME in the UK is much smaller, and it has proved impossible to locate any figures for the size of the market or how big a role pharma plays. A study published in 2003 by

a Scottish team found that the drug industry funded about half the conferences and meetings attended by doctors. Polling 622 hospital doctors and 515 general practitioners in the Edinburgh area, the study found that less than a fifth of the doctors funded themselves, and it reported that a third of the meetings would not have been attended if funding from the industry had not been available. Only a minority of doctors (40%) thought that industry funding created a conflict of interest.

A tighter code of conduct introduced in 2006 by the Association of the British Pharmaceutical Industry aims to remove the perception that doctors are being bought under the guise of being educated. A ban on gifts worth more than £6 hit the market for commercially produced books and CDs, although some claim that educational materials are exempt—the wording of

the guidance is opaque. There has also been a decline in pharma companies paying for “key opinion leaders” to attend conferences abroad. According to some industry observers, this has been replaced by a growth in study days paid for by the industry in the UK, at which results from major conferences may be discussed.

Edward Briffa, publishing director of BMJ Learning, believes that pharma money can be used for funding CME, so long as there is a clear separation between funders and originators. BMJ Masterclasses receive funding from industry and BMJ Learning has struck a deal with Merck Sharp and Dohme under which its online learning modules are distributed to 33 countries, mostly in Europe. “We have complete editorial independence,” he says. “I think undue emphasis has been placed by some critics on the source of funding, and not enough on standards. There is too much easy dismissal of the pharma companies.”

Last week these issues were discussed in London at a conference on the status of CME in Europe. Dr Borman, a speaker at the conference, says that CME in Europe has not been subject to the same degree of scrutiny as in the United States, and that rules on conflicts of interest are interpreted with “an incredible degree of variation.”

Nigel Hawkes is a freelance journalist and consultant
nigel.hawkes1@btinternet.com

Competing interests: None declared.

Cite this as: *BMJ* 2008;337:a2333



CUTTING OUT HUMAN ERROR

Worldwide millions of people experience avoidable complications from surgery every year. **Jane Feinmann** looks at steps being taken to make it safer

Why do surgeons seem reluctant to adopt a simple safety procedure that outsiders would regard as second nature? The question was recently posed by Sir Ian Kennedy, chair of the Healthcare Commission and best known for the inquiry he led into the deaths of 29 babies in the paediatric cardiac surgery unit at Bristol Royal Infirmary. That report, published in 2000, found that systematic failure and a culture of arrogance among doctors were the leading causes. His recent comments suggest that he doesn't think much has changed.

"It comes as a shock that a group of professionals should be prepared to wait until something disastrous occurs before they agree to change their behaviour. It's rather like a dangerous pilot being told: wait until you have your first crash," he said.

Sir Ian's comments at the first annual meeting of the Clinical Human Factors Group—an independent group of experts on factors that affect human performance from both inside and outside the healthcare professions (www.chfg.org)—in Harrogate in October are timely for once again the safety record of surgery is under scrutiny.

Last week, the health select committee began to question senior doctors and managers as part of its inquiry into patient safety. The investigation focuses on the issues identified by Kennedy: human error, poor clinical judgment, and systems failures rather than the better known problem of hospital infection.

The World Health Organization is also turning its attention to safety in the operating theatre. In June it warned of the growing risks of surgery in both the developing and developed world. Around 230 million

operations are carried out every year—one for every 25 people in the world—giving rise to a million deaths and 7 million complications every year. "And that is because the quality and safety of surgery is dismayingly variable in every part of the world," said Atul Gawande, surgeon and professor at Harvard School of Public Health and now the WHO lead for a new initiative, Safe Surgery Saves Lives (www.who.int/patient-safety/safesurgery/en). The global project is based on use of a basic safety check similar to the one that has been mandatory in aviation for 20 years (box). The checklist has now been widely tested, and the results are expected imminently.

SAFE SURGERY SAVES LIVES CHECKLIST

WHO recommends that a single "checklist coordinator" take responsibility for confirming that each member of the surgical team has completed his or her required tasks before the operation can begin. The checklist is divided into three stages, and the issues covered include:

Sign in (before anaesthesia)

- The patient's identity and exact surgical site
- The procedure to be performed
- Known patient allergies
- Antibiotics have been administered within 60 minutes of the operation
- Time out (before incision)
- Confirm team members have introduced themselves and their roles
- Team members verbally confirm the patient's identity, site, and procedure

Sign out (after the operation)

- All instruments, sponges, and needles are accounted for
- Labelling of specimens
- Plans for postoperative care

What can we learn?

Breaking the chain

A further focus on surgery is the launch of *The Journey* (see bmj.com for a videoclip), the first human factor training DVD. The film is produced by the Alliance for the Safety of Patients, a multidisciplinary group dedicated to improvement of the safety of patients, and was previewed at the Clinical Human Factors Group meeting. It shows a dramatic reconstruction of real events that led to a skilled team in a modern operating theatre allowing a patient to bleed to death during what should have been straightforward surgery for the removal of tumour.

What killed the patient, according to Tony Giddings, a former member of the council of the Royal College of Surgeons of England and now chair of the alliance, is "the latent conditions that reside in all of us as fallible human beings—unseen bugs that can be just as lethal as the micro-organisms that we scrub away before surgery."

The Journey describes "an extraordinary cascade of ordinary events": the surgeon's favourite retractor going missing, the sucker failing to work; no preparation of platelets or cross matching of the patient's blood despite the fact that he had been receiving anticoagulant treatment.

The surgeon, as leader, claims full responsibility and expects years of disabling guilt. But the DVD's message is that this was a team failure: "Everyone was acting as an individual and no-one asked any questions before they began," said Mr Giddings.

None of these individual failings is even verging on criminal. The surgeon had a reputation for being demanding, arrived late, and got steadily more annoyed when nothing he shouted for was available until he was unable to see beyond these problems. The anaesthetist was from overseas,



The DVD's message is that this was a team failure: "Everyone was acting as an individual and no-one asked any questions . . ."



TVC FILMS LTD

new to the hospital, and expecting the same system as had operated in her previous job. "I didn't ask questions in case it looked as though I didn't trust the rest of the team," she says.

The operating department practitioner didn't check if cross-matched blood was available "because we don't usually need it." And the scrub nurse made only one attempt to call for help when the patient developed a major venous bleed. When she was ignored, she shut up. "What I can tell you," she says, "is that a woman is often taken less seriously in a crisis."

The Journey goes on to show that the disaster would not have happened if the WHO checklist had been in place, enabling the healthcare professionals to work as a team, "sharing the plan, sharing the work, and sharing their experience." This is in line with early data from the global study showing that the initiative halves the likelihood of missing basic safety steps, greatly reducing potential complications and deaths.

"It's a three step checklist that takes surgical teams around two minutes to complete—about the same time as the conversation that the surgeon and anaesthetist tend to have in the corridor before the operation," explained gastrointestinal surgeon, Krishna Moorthy, the project lead at Imperial College Healthcare NHS Trust, one of the eight sites that are evaluating the initiative.

"Yet the data so far show that that is time enough to put into practice established protocols on safe anaesthesia, preventable infection and bleeding, and good teamwork. We have also seen a significant improvement in the administration of prophylactic antibiotics within 60 minutes of the incision. The checklist reduces the chances that team members assume that someone

else has administered the antibiotic," Mr Moorthy said.

Alongside the checklist, there is evidence that non-technical skills can be taught by using patient simulation manikins that produce real pathological responses to treatment. In one study at the Scottish Clinical Simulation Centre at Stirling Royal Infirmary, senior anaesthetic trainees took an average of four minutes to defibrillate a "patient" who developed ventricular fibrillation while having a hip replacement—a delay that reduces the survival rate by 20%.

"All the trainees knew that in a cardiac arrest scenario, defibrillation is the priority, but they muddled about for several minutes. That knowledge needs to be embedded for the doctor to have situational awareness and the leadership skills to get the right thing done in an unusual circumstance," said Nikki Maran, director of the centre. "The right place to embed that knowledge is the simulated theatre."

Putting safety into practice

So with pressure to act from both parliament and WHO and clarity on the way forward, will surgical teams routinely take on human factors training? Not necessarily, according to chair of the Clinical Human Factors Group, Martin Bromiley, a pilot and expert in human factors in aviation. He brought together the loose knit group of experts three years ago after the death of his wife during minor surgery.

"I believe there is a great will at the top of the NHS to make things happen. But the bureaucratic culture in the royal colleges creates an inertia that makes change difficult," he told the meeting in Harrogate.

Mr Moorthy was also cautious about the future of the WHO initiative. He warned that clinicians might demand a stronger evidence base. "At the moment we are focusing on outcomes—complications and deaths that are inevitably low in this day and age. We may need further local measures to bring everyone on board."

However, there are certain barriers to successful implementation of the checklist, he said. "After an extensive introduction to the checklist, 80% of teams used the checklist when researchers were present. That fell to only 40% when they were not. This probably reflects the fact that it may be essential for someone to be in the theatre in order to drive use of the checklist till teams are convinced of its importance," he added.

All of which leaves open the exact status of an evidence based Safe Surgery Saves Lives checklist. In the United States, use of the checklist looks set to become mandatory for all surgical teams—with the threat of the hospital losing its licence if it is not routinely used.

In the UK, the idea of the checklist being mandatory is controversial. But there is recognition that a handful of uncooperative senior staff could block progress. "There will always be 5-15% of mature professionals who won't join in—including the surgeon that everybody has had to tiptoe around for years. Perhaps these people will need to move on," said Mr Giddings.

Jane Feinmann is a freelance medical journalist, London jane@janefeinmann.com

Competing interests: None declared.

Cite this as: *BMJ* 2008;337:a2370

See a clip from the training video at www.bmj.com/cgi/content/full/337/nov04_2/a2370