

Integration, interprofessional training and innovation in pharmacy education

This symposium focused on new developments in education and what can be learned from other health professions. **Joseph Chamberlain**, former editor of *The Journal of Pharmacy and Pharmacology*, reports

The profession of pharmacy has depended on the integration of science for almost 200 years, argued Larry Gifford, dean of the school of pharmacy, University of Manchester. In the 19th century there was the age of botanicals and then the age of synthetics. The early 20th century saw the ages of vitamins, penicillin, vaccines and tetracyclines. In the 1950s there was the emergence of deductive pharmacology (the intelligent design of beta-blockers and H₂ antagonists) followed at the close of the century by the biological revolution, with genomics and bioinformatics, he said. However, the current overemphasis on the biological revolution, rather than seeing an increase in the discovery of new drugs, has seen a slowdown. The

skills of deductive pharmacology are being overlooked and yet these past skills must continue to be looked at. Integration must be with the past as well as across disciplines, he said.

A study of the history of the practice of pharmacy is equally illuminating, said Professor Gifford. An examination paper from 1870, for example, required the candidate to translate into Latin (with full endings!) a typical prescription containing oak bark, water, tannic acid and tincture of opium. In 1913, insurers stipulated that prescriptions of people insured were to be dispensed in pharmacies and not by doctors, putting pharmacists at the forefront of primary care. In 1948, at the start of NHS, the avalanche of prescriptions meant

that the pharmacist's activity was confined to the dispensary, explained Professor Gifford.

Most science activities can be integrated with the corresponding activity of practice — pharmacology with therapeutics for instance — but the integration of interprofessional clinical care is problematical because of the number of people involved. Professor Gifford explained that in Manchester this has been tackled by creation of a "virtual hospital ward" in which small teams of student doctors, nurses and pharmacists administer treatment to patients. Using mobile telephones the teams communicate with each other, and use pharmacokinetic models run on a computer in real time to provide feedback on their knowledge base and problem-solving skills.

New generation project: interprofessional learning with other health care professionals

The University of Southampton has been committed to developing interprofessional learning for many years, said Adrian Hunt, director of pharmacy education, University of Portsmouth. In 1999 it established the new generation project (NGP) which expanded to become a joint venture between the two universities and the Hampshire and Isle of Wight Workforce Development Confederation. The NGP now covers 14 professional programmes spread over four faculties and two universities, and health and social care organisations, that support learning in practice. There are approximately 1,500 students per year from nursing (50 per cent), medicine (15 per cent) and pharmacy (10 per cent). This is a complex mix and inevitably some curriculum and culture differences need to be reconciled, said Dr Hunt.

He said that the aims of the programme were to ensure that students respect and understand others' roles and contributions, and become comfortable with the concept of role flexibility.

Interprofessional units have to be developed by teams representing all professions and have to be formally approved by each programme. A student reference group is also involved, he said. Of the four units, only unit one is university based. The others are placement based and look at different aspects of practice, such as audit, change and ethical issues. An interprofessional group typically comprises a medic, a pharmacist, five nurses and two or three from other professions, explained Dr Hunt. As much assessment as possible is undertaken electronically. The placements are probably the most important but most ambitious part of the programme. Staff work with the providers by identifying potential placements and assisting in the development of suitable tasks. Placements cover a range of environments including the offer of two placements at Parkhurst Prison.

Unit one ran for the first time last year. Most students were positive and thought the exercises worthwhile and enjoyable, particularly in meeting other students. Some of the negative comments related to what could best be described as teething problems — transport, IT problems and inconsistency in marking.

Society goes back to basics with education

The aim of education in pharmacy is generally to support the Royal Pharmaceutical Society's mission to improve the health of the population and specifically to ensure that all registered pharmacists are competent and fit to practise, said Phil Green, deputy secretary and registrar, Royal Pharmaceutical Society. This involves undergraduate pharmacy education, the preregistration year training and post-registration activities, he explained.

Learning beyond registration is a shared responsibility. Haphazard workforce development will result from a lack of clarity about roles and levels of practice, he said. To meet the regulatory threshold, competencies programmes will need to comprise both theoretical and practice-based learning requiring collaboration.

The Society is going back to basics to decide what needs to be taught, learned and assessed for the career of a pharmacist, said Mr Green, and it has therefore put in place a structure to fit the purposes outlined here.

Global Challenge

Portsmouth harbour was the start point for the Global Challenge yacht race in October this year. This is an excellent example of team-building and teamwork, said Dr Hunt.

Like the crews of the yachts, pharmacy staff are keeping a close eye on those factors which will ultimately determine success or failure. There must be a product that is fit for purpose and deliverable. At present we are on course, he concluded.

Details The symposium was jointly organised by the **Royal Pharmaceutical Society**, the **Academy of Pharmaceutical Sciences** and the **Academic Pharmacy Group**. The symposium was held at the Royal Pharmaceutical Society in London on 24 November

Pharmacy workforce must be fit for purpose and educators play a critical role in delivering this

Plans for pharmacy education are firmly rooted in the NHS Plan (July 2000), with further refinement from the Kennedy report (July 2001) and the various reports of the Shipman Inquiry plus the public health White Paper (November 2004), said Jim Smith, chief pharmaceutical officer, Department of Health.

The NHS Plan emphasised access, quality of care, national standards, clinical priorities, investment, more staff and expanding roles said Dr Smith. NHS staff at all levels hold the key to delivering reform. There must be modernisation of training and development, enabling staff to reach their full potential. There needs to be more flexible working so the old restrictive demarcations can be eliminated, he added.

Under the NHS Improvement Plan (June 2004) there will be continuing growth in frontline NHS staff. Dr Smith explained that staff will be working differently, making the

best use of skills and will be supported to fulfil their potential throughout their careers. The “skills escalator” will enable people who join the NHS with low skill levels to progress through investment in training and development to professional levels.

The Kennedy report strengthened professional self-regulation with greater public involvement. Interprofessional training and continuing professional development is fundamental to quality of care, said Dr Smith.

The public health White Paper outlines the Government’s vision for pharmacy. Pharmacy is an integral part of the NHS, planning and delivering local services, supporting self-care and responding to the diverse needs of patients and communities. Pharmacy will be involved in innovation in delivery of services, helping to deliver aspirations in national service frameworks and helping to tackle health inequalities, he said. Thus pharmacy in the future will need to de-

liver curative, acute services and provide management of long-term conditions, using ever more complex medicines and diagnostics, and supporting self care with increasingly more significant medicines.

Dr Smith said that the pharmacy workforce must be fit for purpose. The supply-demand equation must be right, as must the skill-mix and extent of personal contact. The roles of support staff must be identified. It will be necessary to get education and learning right with the appropriate undergraduate curriculum, including a science base with teaching of prescribing skills.

Concluding, Dr Smith said that powerful health policy drivers will continue and pharmacy in all sectors will face increasing demands for new services, delivered in a pluralist health environment. There is a critical role for pharmacy educators, the Department of Health and the Department for Education and Skills in delivering this.

Aim at UEA is to produce individuals who are both fit to practise and competent scientists

With his first year as head of pharmacy at the University of East Anglia complete, Duncan Craig said that the “blank sheet of paper” was an opportunity for innovation but it also meant little in the way of a comfort zone of precedence.

As a starting principle, it was always the intention to produce individuals who are fit to practise and who are also keen and competent scientists, said Professor Craig. Encouragingly, students, staff and collaborating practitioners have not seen any incompatibility between the science and practice teaching. He said that initial problems included a difference in teaching culture between pharmacists and other colleagues, an occasional mismatch in student expectations, and the time pressures in a research-driven environment.

He told participants that important aspects that the new school has successfully implemented include establishing a good mix of relevant experience among staff and developing excellent relationships with students (particularly via an active staff student liaison committee).

The main features of the first year course include traditional lectures but with an emphasis on workshops, tutorials and assignments. Problem-based learning is an important component of teaching at UEA, said Professor Craig. It is used as a means of enhancing team working and self-directed learning. Problem-based learning quickly

leads to better long-term learning. Interprofessional learning is also a strong element and advantage is taken of the close proximity of other health care-related subjects within UEA, he explained. The basic idea is to develop relationships among professionals.

Professor Craig emphasised that placements are important at UEA, with each student making four professional visits in each year of the course. Group sizes vary according to logistics of the visit with such visits made possible by excellent relationships with the local pharmacy community. Students are expected to prepare reflective statements which become part of their pharmacy practice portfolio.

For clinical therapeutics, it is intended to teach pharmacology and drug synthesis associated with a disease state or target tissue, and formulation and clinical issues associated with disease. This combines science and practice taught as a single subject.

Not all problems had been completely solved, admitted Professor Craig. Still to be addressed satisfactorily are balancing the needs of the profession with the research assessment exercise, managing long-term and constant change, establishing training programmes for staff development, meeting master’s regulations in levels three and four, and managing a group of highly intelligent, highly motivated, highly opinionated individuals (or something akin to herding cats!).

Workshop sessions

Education, training and CPD; reflective skills

Richard O’Neill, University of Hertfordshire, reported that there was some reflection in all areas, but there was more emphasis on practice or professional subjects, including law and economics. Methods of reflection included the use of a portfolio or a diary and reflection tended to be at the end of each teaching session.

Post graduation, there was a similarity in the methods but students were keener to engage and had more self-direction leading to a greater acceptance of CPD. It was important to recognise that not everyone learns in the same way and the needs of the student remain important. The desirability of a private section in the portfolio was mentioned. CPD should be available, but not compulsory, from year one with students having access to the Society electronic version.

Supply of educators and trainers

Philip Roberts, University of Central Lancashire, reported that the academic workforce required included non-clinical scientists (biochemists and chemists), clinical scientists (pharmacists) and clinical teachers (pharmacists, doctors and nurses). Preregistration and postgraduate tutors are also included.

More educators will be needed as there will be more pharmacists needing more extensive training. Greater sustainability and formalisation of such numbers is needed; good will cannot be relied on. To achieve appropriate numbers and quality of educators, career paths should include research and teaching.