MPharm at Wolverhampton focuses on practice-based clinical teaching and clinical skills development

The University of Wolverhampton recruited its first cohort of pharmacy undergraduates in September 2006. **Alan Hindle**, lead clinical pharmacy lecturer/practitioner at the university, discusses the development and structure of the new MPharm course

The pharmacy practice laboratory, showing the medicines information area, the projection screen and the medicines stock

The School of Applied Sciences at the University of Wolverhampton has traditionally run degree courses in both pharmaceutical sciences and pharmacology. The new flagship MPharm programme was seen as a natural extension to the school's existing profile of pharmacy-related courses. At the same time, a need for increasing numbers of pharmacists required to undertake developing clinical roles in the West Midlands area was envisaged.

The idea for a pharmacy course was born out of existing collaborations between the School of Applied Sciences and the Royal Wolverhampton Hospitals NHS Trust. Catalysed by the appointment of a new director of pharmacy at the trust, regular meetings took place between the new pharmacy planning and development group, and key stakeholders. The group moved the accreditation process forward, planning a brand new programme of modules with the help of a range of subject experts. The new course builds upon the school's strong scientific foundations. However, the need to prepare students for future clinical roles, through early and extensive exposure to modern day practice, was seen as its central theme.

Modern facilities

The university has invested heavily on state-of-the-art laboratory facilities. The new pharmacy practice and aseptic suites are each equipped with live DVD streaming and recording capabilities. Indeed, the practical aspects of aseptics teaching will be led by specialist pharmacists from the Royal Wolverhampton Hospitals NHS Trust, supplemented by specially commissioned DVDs produced at the hospital. The adjacent mock pharmacy is fitted out as a community pharmacy OTC/counselling suite with semi-private and private consultation areas, and also Healthpoint self-care health information software. The streaming media technology in the pharmacy practice suite will be used for communication skills training. A dedicated medicines information resource area provides a comprehensive list of databases, books and journals that mimic those held in a typical district general hospital. The new pharmaceu-

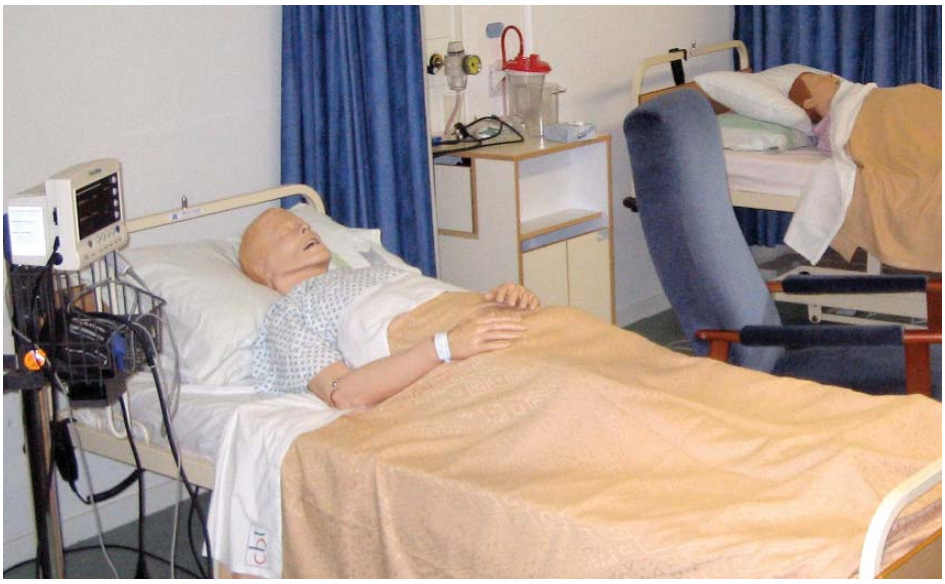
tics laboratory incorporates a pharmaceutical technology area for demonstrating industrial production. This laboratory will also be used to teach extemporaneous manufacture.

Course structure

In the first year, students are given a comprehensive grounding in the biomedical sciences, human physiology and pharmaceutical chemistry. The science base is complemented by an introductory pharmacy practice module. The emphasis of dispensing practicals at Wolverhampton has shifted from traditional compounding to clinical dispensing. Here the concept of the "clinical check" is introduced, with students encountering prescription types from both community and hospital practice. Undergraduates also gain an appreciation of pharmacists' roles across the main sectors of the profession, supported by an early programme of placements in community, hospital and industrial pharmacy.

Second-year students are introduced to the fundamentals of pharmaceutics and pharmacology. However, the second year of the course focuses extensively on pharmacy practice. Students undertake modules covering ethics and professionalism, communication skills, health beliefs and advanced dispensing. A further community pharmacy placement allows students to focus on the development of effective communication skills. Preparation for future roles in prescribing and management of minor ailments begins with a workshop module which introduces the concept of differential diagnosis. Placement visits to both industrial sterile production and hospital aseptic units support modules in pharmaceutics and aseptic practice.

In the third year the clinical emphasis of the course is further developed. Students study year-long modules in both clinical pharmacology and clinical pharmacy. The latter incorporates eight hospital placements covering major therapeutic areas. To facilitate this, the school is investing heavily in a team of seven clinical lecturer/practitioners, most of whom will be working as clinical pharmacists in surrounding hospital trusts. Further community and primary care pharmacy placements allow students to gain an insight in to the enhanced clinical roles developing within these areas. Students also undertake modules covering evidence-based medicine and research methods to develop the concept of life-long learning further and to provide a firm basis for clinical pharmacy practice and research.



The mock hospital ward at the clinical skills centre

The fourth year continues with a further full-length clinical pharmacy module which, this time, concentrates on more complex therapeutic areas and multiple disease states. As in the third year, eight hospital clinical placements plus a community and primary care visit allow students to develop their clinical, communication and problem-solving skills further. The university's clinical skills centre incorporates a three-bay mock hospital ward which will be used to simulate ward-based pharmacy services and also teach near-patient testing in a dedicated pharmaceutical public health module.

The introduction of shared learning experiences with the university's nursing students in these, as well as in more conventional, teaching settings is planned. The aim is to encourage the development of a multidisciplinary approach to future practice. The school's Meti human patient simulator will be also used to practise near-patient skills and to simulate clinical scenarios.

Two students at the mock pharmacy counter

Research

The pharmacy department will be playing a key role feeding into two of the institutions research hubs, the Research Institute for Healthcare Sciences and the Research Centre for Applied Sciences. Senior academics within the department include: new head of department Kelvin Chan, FRPharmS, former head of school at Liverpool, who specialises in clinical pharmacology and also interactions between Chinese and conventional medicines; Mike Brown FRPharmS, former head of school at Aston University and professor of pharmaceutical microbiology; John Howl, a professor and leading molecular pharmacology researcher; and Ray Fitzpatrick, the department's professor of clinical pharmacy, who is a medicines management specialist.

Assessment

In contrast to a number of the more established pharmacy schools, a small cohort size of 60 enables staff to provide more individualised support in a friendly, intimate environment. The course not only aims to produce fledgling clinical pharmacists, but also reflective practitioners who can go on to apply a deeper understanding of their learning to new situations. The university has developed its own electronic portfolio, PebblePad, which will be used throughout the course from the first year onwards. The advantages of the e-portfolio go beyond simulating the steps of the continuing professional development learning cycle. The system, which incorporates facilities to create web logs and curricula vitae and to share work, is also an ideal tool for use in formatively or summatively assessed problem-based learning activities. The department also recognises the increasing need to incorporate competency-based assessments as part of a diverse assessment programme. The use of methods such as Objective Structured Clinical Examinations will complement preregistration or rotational hospital training and help to prepare graduates for roles such as independent prescribing.