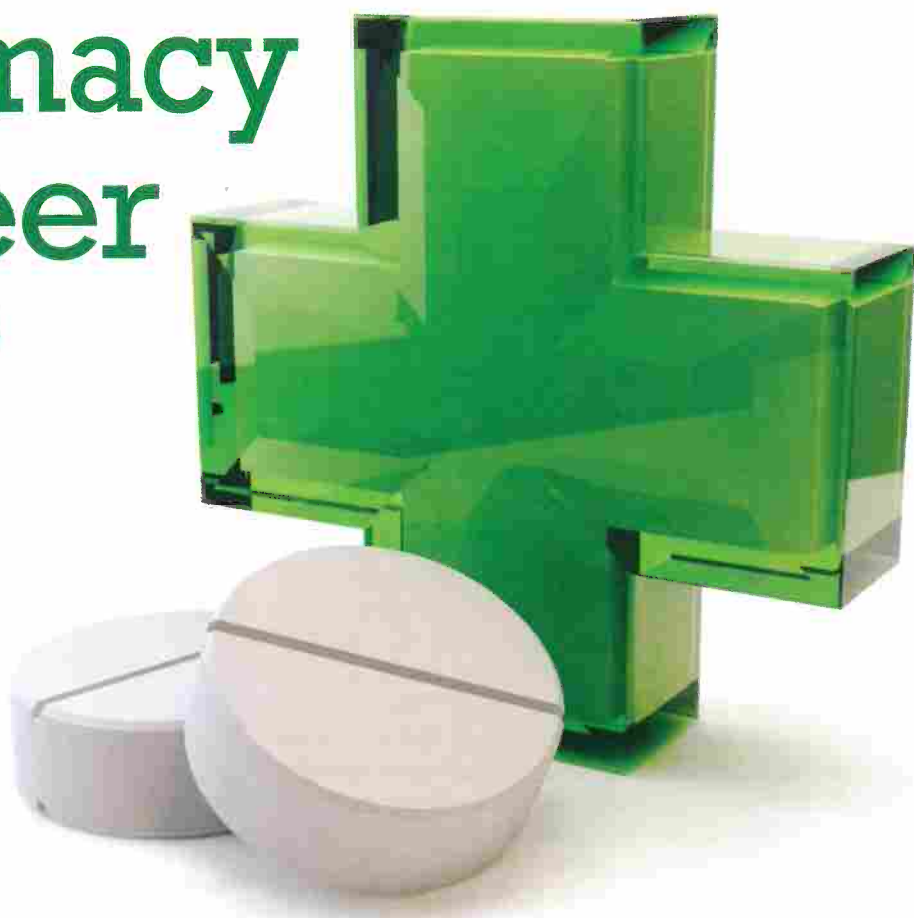


Is pharmacy the career for you?

There is far more to pharmacy than simply dispensing medicinal drugs. Pharmacy undergraduate admissions tutor David Allison explains what a career in pharmacy can entail



Key words

Healthcare
University
Medicine

Pharmacy involves the discovery, design, development, evaluation, production and use of medicines. Pharmacists are highly trained medical and scientific professionals, qualified to ensure that patients receive appropriate medicines. Pharmacy differs from pharmacology — the branch of science concerned with the study of drugs, both natural and synthetic, and how they affect living organisms. Pharmacology is part of a pharmacy curriculum, but pharmacologists cannot practise as pharmacists because they lack the legal and professional qualifications to dispense drugs.

Pharmacy is an essential part of the healthcare system in the UK. Over 1.6 million people visit a pharmacy each day in England alone. The day-to-day work is interesting, stimulating and varied, and as one of the fastest growing areas of healthcare, it offers excellent career prospects. So, what do you need to do to become a pharmacist?

Becoming a pharmacist

To become a pharmacist you must graduate from university with a Masters degree in pharmacy (MPharm). This is currently a 4 year programme of study. All UK pharmacy degrees are accredited by the General Pharmaceutical Council (GPhC), which is the professional body responsible for defining the education and training requirements

for pharmacists. Currently, 28 universities in the UK are accredited to offer the MPharm degree. Some universities have been offering pharmacy for only 2–3 years, whereas others have a long-standing history that stretches back over 100 years.

To qualify as a pharmacist in the UK, you will need both your MPharm qualification and 1 year's practical and professional training, usually in a community or hospital pharmacy. This period can be an equal 6 month split between hospital and industry for students who seek a career in industrial pharmacy. This is known as the pre-registration year, at the end of which you will have to pass a final registration exam run by the GPhC. Some universities offer a sandwich course in which the pre-registration training is integrated between years 3 and 4 of the degree programme. Most universities, however, offer an uninterrupted 4 year academic programme. Therefore, the total length of time to qualify as a pharmacist is 5 years: 4 years of university study plus 1 year pre-registration training.

University entry requirements

The first step in your application process should be to look at university websites for the most recent entry requirements, as these vary from university to university and from year to year. Pharmacy is a competitive subject, with approximately 12 candidates applying for every university place. If you feel

that you may not achieve the minimum entry requirements for a particular university then there is no point in applying to that institution. Many universities do, however, make differential offers to take into account an applicant's academic background. Your grades for both GCSE and A-level (or equivalents) must at least match if not exceed the university criteria. If extenuating circumstances have led you to underachieve, it is worth contacting the admissions staff directly to seek their opinion. All universities have relevant contact details on their web pages.

The GPhC requires students entering an MPharm degree to hold GCSEs in English language and mathematics at grade C as a minimum. Most universities now require grade B in both subjects. Beyond this, the entry requirements are set by the individual university. As a guide, you will be expected to have A–B grade A-levels in chemistry and one from biology or mathematics and sometimes physics along with a third subject. General studies and critical thinking are not usually considered appropriate third subjects. At present, all universities in the UK select pharmacy students on the basis of three A-levels. They will also accept equivalent qualifications other than A-levels, including qualifications gained outside of the UK as long as they are of the correct standard in appropriate subjects. All applications must be made through UCAS.

Personal statement

Most admissions tutors require applicants to demonstrate commitment to the subject. A creative statement that demonstrates enthusiasm and commitment for pharmacy will improve your chance of success. You should also include details of outside interests, work experience and any position(s) of responsibility held, but do not simply

list these. Instead, describe what you have learnt from these experiences and how they might benefit you as a pharmacist. In other words, how can you apply your interests and experiences to being a pharmacist? Do not use parts of other people's personal statements that have been successful. UCAS undertakes plagiarism checks and any statement that contains plagiarised material will be in breach of the pharmacy student code of conduct and will be rejected. More detailed advice about writing your personal statement can be found on the *BIOLOGICAL SCIENCES REVIEW Extras* page (see back cover for details).

Is work experience essential?

The short answer is 'no', but it can be very useful. Admission tutors realise that pharmacy-related work experience can be difficult to get. However, be enterprising. For example, visit your local pharmacy and ask the pharmacist if you can observe what they do. Talk to pharmacists — find out what their daily routine is, what they enjoy about the job, what challenges they face and what career prospects are available. A little information is better than none at all. Whatever work experience you have, whether it be paid or voluntary, pharmacy or non-pharmacy, make sure you include details of it in your personal statement, emphasising the transferable skills that you have acquired.

The interview

Most universities interview candidates, but the style of interviews differs. Some universities have one-to-one interviews while others may use panels of interviewers, multiple mini-interviews (where applicants pass through a series of different stations each of which has a different interviewer) and/or assessed discussion groups. Again,

MPharm students learning about dispensing



Further reading



Further information about careers can be found on the Royal Pharmaceutical Society website:

www.rpharms.com/about-pharmacy/careers-in-pharmacy.asp

General pharmaceutical council website: <http://pharmacyregulation.org>

you should check the university's website so that you can prepare yourself appropriately.

Interviews are used to assess the calibre of applicants, including their knowledge of pharmacy and their interpersonal and communication skills. You should be able to talk about your work experiences (if you have them), your hobbies and outside interests and your studies. You may also be asked to discuss an ethical issue. For example: 'If you suspect that one of the pharmacists working with you is drinking alcohol while at work, what would you do?' There are no right or wrong answers to such questions. Rather, the

interviewer is assessing how considered your response is in relation to some applied but pertinent issues and dilemmas that are integral to the work of a pharmacist.

The MPharm degree programme

Although the GPhC defines the learning outcomes required for the training of pharmacists, universities are allowed to develop their own curriculum. So although all students start and finish at the same point, what happens in between can vary quite considerably. Some universities offer a subject-specific curriculum, whereas others are more thematic. For example, some courses may focus on disease states, others on systems of the body, some centre around the four cornerstones of pharmacy — the medicine, the pharmacist, the patient and the public.

Each university will also play to its strengths: for example, through the use of professional pharmacists teaching on the course, placements at local community pharmacies, clinical placements or involvement at local hospitals.

Teaching methods also vary from the more traditional didactic approach (i.e. lectures and lab-classes) to problem-based and team-based learning, self-study and inclusion of additional material such as inter-professional learning (i.e. teaching by and with other healthcare professionals). This is why you should visit universities on their open days and talk to current students, or consult the university websites to find a pharmacy programme that suits you.

What careers are available in pharmacy?

All the MPharm courses in the UK will provide a broad-based, scientific and clinically strong education in pharmacy, which will enable you to enter any area of the profession on graduation and adapt to changes that may occur during your professional life. At present, virtually all pharmacy graduates take up employment within 2 months of leaving university. Pharmacists mainly work in the following areas.

Community pharmacy

Community pharmacists work in high street, local and rural pharmacies. They use their detailed knowledge to ensure that the medicines ordered on the doctors' prescriptions or bought over the counter are correctly and safely supplied. They may talk to patients about how to take their medication and give advice on possible adverse side effects. Community pharmacists also act as readily accessible health advisors to the general public, providing both advice and counselling on the maintenance of good health, together with public health services such as smoking cessation, cholesterol management, blood pressure testing and weight loss programmes (see Box 1).

Hospital pharmacy

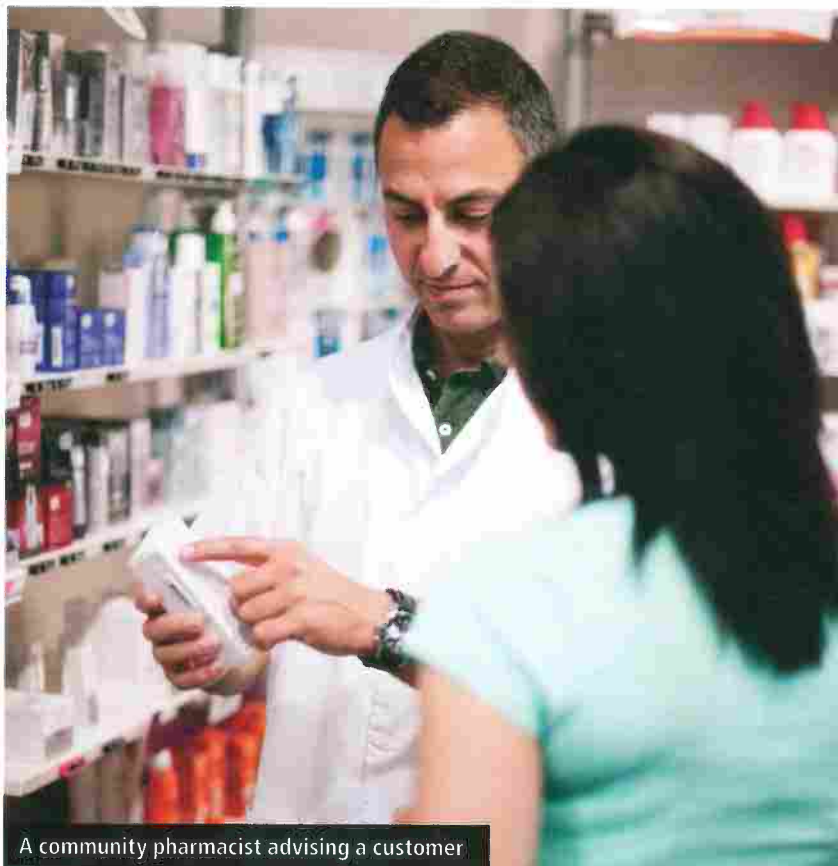
Hospital pharmacists work directly with doctors, nurses and other health professionals and are a vital part of the healthcare team. They help to ensure that both in-patients and out-patients receive the most appropriate medicines and that those medicines are used in the most effective way. The purchase, storage, manufacture, quality testing and



Preparing a sterile medicine

Box 1 A day in the life of a community pharmacist

- 8.30 Answer telephone queries
- 9.00 Deal with walk-in patients and customers
- 9.30 Travel advice to a customer
- 10.00 Medicine useage review (MUR) with asthmatic patient
- 11.00 Prescription for maggots received
- 11.10 Ring zoobiotics to request maggots
- 11.30 MUR with hypersensitive patient
- 12.00 Deal with a fraudulent prescription
- 13.00 Lunch
- 13.30 Cholesterol testing for a patient
- 14.00 Provide emergency hormone contraception (EHC)
- 14.30 Demonstrate the use of a glucose monitor to a patient
- 15.00 Discuss smoking cessation with a 43 year old male
- 15.30 See a mother whose 4 year old boy has an itchy rash
- 16.00 Advise pharmacy assistant on what to do after she has taken a customer's BP that is elevated
- 16.30 Write in controlled drug (CD) entries for addict prescriptions
- 17.00 MUR with a diabetic patient
- 17.30 Write up MURs completed today and prepare them for postage to GP
- 18.05 Home time



A community pharmacist advising a customer

distribution of medicines in NHS hospitals are primarily the responsibility of the pharmacy department. In addition, some pharmacists specialise as consultants in areas such as haematology (blood), respiratory medicine, cardiology (heart), diabetes, gastroenterology (stomach and intestines), infectious diseases, paediatrics (children) and care of the elderly.

Industrial pharmacy

The pharmaceutical industry is responsible for the synthesis and research on new medicines and the production and marketing of proven medicines to the public. Pharmacists are involved in every step of the process, from research to technical and medical information, from product development to formulation and production.

Other

Other career areas include:

- prisons — primary care organisations where pharmacists play a significant role in managing medicines, and run patient review clinics encouraging healthier lifestyles and trying to reduce or prevent illness
- universities — pharmacists are involved in teaching the professional aspects of the course as well as conducting research
- the armed forces — pharmacists are commissioned to distribute medical supplies services to support military operations at home and overseas
- journalism — pharmacists, with their all-round knowledge, are ideally placed to interpret research data and

write scientific and medically related articles, or to write articles on current trends in the NHS, prescribing policy, the future of healthcare provision etc.

- veterinary pharmacy — contributing to the welfare of animals by supplying animal medication and dispensing veterinary prescriptions

So, is pharmacy for you?

Having read through this article, you now need to ask yourself the question 'does pharmacy appeal to me?' Do you want challenges, opportunities and a chance to make a difference? If the answer is a resounding 'yes', then this is what you can expect from a career in pharmacy:

- Primarily, you will help people.
- You will be an important part of the community.
- You will be in demand wherever you choose to live, home or abroad.
- You will have a good living with a secure future. Pay levels in pharmacy compare favourably with those of other professions, and job security is excellent.
- You will have a choice of working environments and many career options.
- Your job will be interesting.

Few occupations meet all these criteria, and few meet them better than pharmacy. What's stopping you?

Dr David G. Allison is a Reader in pharmacy education and the undergraduate admissions tutor for the School of Pharmacy at the University of Manchester.