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Commentary

Finding a VOICE for UK clinical pharmacology

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At a James Black Conference held in Oxford on 20–22 June 2011, a group of senior clinical pharmacologists and their junior colleagues, other medical specialists, and pharmacists discussed an agenda for UK clinical pharmacology for the next 5 years, addressing the following broad questions. How should UK clinical pharmacology be further developed and delivered as a discipline in universities, the NHS, pharmaceutical companies, and regulatory authorities? How should teaching and training in UK clinical pharmacology and therapeutics be delivered and assessed? What topics should be priorities for research in UK academic clinical pharmacology? How should clinical pharmacology contribute to UK drugs policy? How should pharmacology and clinical pharmacology be further integrated, to the benefit of both? Numerous recommendations emerged, under the collective acronym VOICE, standing for Visibility, Outreach, Integration, Coverage and Emissaries.

Visibility The visibility of the discipline needs to be increased. This could be done, for example, by increased activities in acute general medicine/toxicology, through activities of Medicines and Therapeutics Committees, participation in grand rounds, teaching and training, and monitoring therapeutic interventions, and by offering bolt-on training for other specialists (for example, short courses, MSc courses, and training programmes).

Outreach Methods of increasing outreach include roadshows in schools/medical schools, national special study modules, public education, press coverage, and social marketing.

Integration Closer collaborations with pharmacologists, clinical pharmacists, other prescribers, and pharmaceutical companies (e.g. through joint training programmes) are desirable.

Coverage Attention to neglected areas, such as general practice, paediatrics, obstetrics, geriatrics, anaesthetics, cancer, and immunology.

Emissaries Trainees to spread the word.

Background

In the early 1990s the academic discipline of clinical pharmacology in the UK started to shrink, with a fall in the number of core clinical pharmacologists, mainly owing to reduced support from universities. However, in the last 5 years there has been a turnaround, and the discipline has risen in the national health agenda, as its importance to health care has been more readily appreciated. I have described some recent positive outcomes in a paper in the *British Journal of Clinical Pharmacology* [1] and, as part of endeavours to encourage the instauration of the discipline, have also prepared a manifesto for clinical pharmacology, which was published in the July 2010 issue of the *British Journal of Clinical Pharmacology* [2], with subsequent correspondence [3].

Following these developments, I thought that it was important for clinical pharmacologists to prepare an agenda for UK clinical pharmacology for the next 5 years, addressing the following broad questions.

- How should UK clinical pharmacology be further developed and delivered as a discipline in universities, the National Health Service (NHS), pharmaceutical companies, and regulatory authorities?
- How should teaching and training in UK clinical pharmacology and therapeutics be delivered and assessed?
- What topics should be priorities for research in UK academic clinical pharmacology?
- How should clinical pharmacology contribute to UK drugs policy?
- How should pharmacology and clinical pharmacology be further integrated, to the benefit of both?

I therefore organized a 3 day James Black Conference on these topics. It was held in Green Templeton College in Oxford on 20–22 June 2011, under the collaborative banners of the British Pharmacological Society (BPS) and the Royal College of Physicians, with funding from the BPS and additional generous financial sponsorship from Green Templeton College. The meeting attracted about

Table 1

Some recommendations for taking forward UK clinical pharmacology

End-point	Some possible routes
Visibility	1. Acute general medicine/toxicology ('front-door' activities) 2. Activities and influence of Medicines and Therapeutics Committees 3. Participation in grand rounds 4. Teaching and training: • prescribing (for example, through *Prescribe*) • basic and clinical science • research methods 5. Monitoring therapeutic interventions 6. Bolt-on training for other specialists (e.g. short courses, MSc courses, and training programmes)
Outreach	1. Roadshows in schools/medical schools 2. National special study modules 3. Public education (for example, public lectures and advisory sessions) 4. Politicians 5. Press coverage (for example, through the Science Media Centre, newspaper articles) 6. Social marketing: blogs, websites (corporate and individual) and tweeting
Integration	Closer collaborations with: 1. pharmacologists (perhaps through joint departments of drug development) 2. clinical pharmacists (through Medicines and Therapeutics Committees and joint teaching programmes) 3. other prescribers (likewise) 4. pharmaceutical companies (for example, through joint training programmes)
Coverage	Attention to various neglected areas, such as: 1. general practice (where 80% of prescribing occurs, but there are currently few clinical pharmacologists) 2. paediatrics 3. obstetrics 4. geriatrics 5. anaesthetics 6. cancer 7. immunology (for example, clinical pharmacology of biologics)
Emissaries	. . . to spearhead the above activities

50 participants in all over the 3 days, mainly senior clinical pharmacologists and their junior colleagues, but also including other medical specialists, pharmacists, and even one microbiologist, who had been tasked by his university to organize therapeutics teaching.

The papers that appear in this issue of the *Journal* resulted from the talks that their authors presented at the meeting and the subsequent discussion. From feedback that we have received, I believe that the meeting was a success, and as a result some recommendations emerged, under the collective acronym VOICE, which stands for Visibility, Outreach, Integration, Coverage, and Emissaries. The recommendations are summarized in Table 1.

Visibility

It was generally agreed at the meeting that it is important for clinical pharmacologists to improve their visibility among their clinical colleagues, many of whom do not know what the discipline entails or what its practitioners do. Being at the front door of the hospital is an excellent way of doing this, providing, as many clinical pharmacologists already do, clinical service in acute general medicine and, where relevant, toxicology. These are services that NHS Trusts need and that clinical pharmacologists are well placed to provide. We also need to ensure that general medical services provided by clinical pharmacologists are branded as such in national statistics and not subsumed under the heading of general or acute medicine.

That is not to say that clinical pharmacologists should not include other specialisms in their training; however, dual accreditation in clinical pharmacology and another hospital specialty is nowadays difficult to obtain, because of the prolonged nature of training [4]. In contrast, dual training in clinical pharmacology and general practice should be possible, because of the relatively short period of training that general practitioners currently undergo.

Clinical pharmacologists should also continue to chair local Medicines and Therapeutics Committees, to participate in grand rounds, and to teach medical students and junior doctors. Monitoring therapeutic interventions in all forms, not only in the form of so-called 'therapeutic drug monitoring', which is based only on pharmacokinetics, could be reinvented, recognizing the importance of methods in pharmacokinetic, pharmacodynamic, and clinical monitoring [5].

What I have termed 'bolt-on' training for other specialists could be offered, in the form of short (for example, 1 week) courses on specific topics, MSc courses (either modular or continuous), and 2 year training programmes, to add clinical pharmacology and therapeutics accreditation to another specialty (i.e. dual accreditation; but see above). The last of these could most readily be achieved in general practice, where training programmes currently last only 3 years.

Outreach

Two aims are subsumed under this heading: the need to advertise the attractiveness of the discipline to potential trainees and the need to create a public image for the discipline, which is currently largely lacking. The idea of roadshows in schools and medical schools won warm support at the meeting, as did special study modules, whether locally in centres large enough to support them or nationally for students who are in centres where clinical pharmacology is less well or not at all represented or in which such modules may not suit the methods of teaching otherwise available.

The BPS's successful presentations at the annual Cheltenham Science Festival and elsewhere have shown that public outreach can be achieved in this way. It would also be good to have access to the public through newspaper articles about medications and prescribing, but finding a

foothold in this way is difficult and depends on catching the attention of op-eds. Nevertheless, our occasional briefings at the Science Media Centre have been very influential and could be repeated when there is something newsworthy to say. Blogging and tweeting are part of the BPS's daily activities, but too few individuals do likewise; these activities are more effective as individual rather than corporate ones, and we should encourage members of the BPS to go public in this way.

Integration

The desire to integrate pharmacology and clinical pharmacology has been strongly signalled by the BPS, through the appointment of basic and clinical pharmacologists as alternate Presidents of the Society. The development of joint academic departments of (say) drug discovery and development and better integration within companies and between companies and academia is also desirable. There is currently a shortage of clinically trained clinical pharmacologists in pharmaceutical companies, but solving the problem of recruitment will be necessary before this will change; joint training programmes could be implemented to remedy this. Collaboration of clinical pharmacologists with other prescribers, particularly clinical pharmacists, is also highly desirable, although everyone recognized the difficulties of persuading those others of the desirability of this.

Coverage

There are currently several areas in which clinical pharmacologists are not active. Prime among these is general practice, in which 80% of prescribing occurs [6, 7]. Some other areas to which more attention could be paid are listed in Table 1.

Emissaries

If we are to undertake some or all of these initiatives, there is a great deal of work to be done to build on the recent positive developments. The meeting welcomed the suggestion that emissaries of the BPS could be appointed to take these proposals forward. These would ideally be younger members of the discipline, who would be tasked with, among other things, enthusing their students and colleagues.

Conclusion

This is work in progress. Table 1 lists some examples of what might be done as part of our joint efforts as a specialty to further the discipline; others will have other suggestions. The next challenge is to decide how, and then to carry through these recommendations.

Competing Interests

There are no competing interests to declare.

I am grateful to Charlotte Barker who was an efficient rapporteur at the meeting.

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