Clinical Pharmacology and Therapeutics—past, present and future

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Aims To obtain information about the speciality of clinical pharmacology and therapeutics in the United Kingdom.

Methods A survey of the views of 26 individuals in academic posts in clinical pharmacology and therapeutics was carried out by postal questionnaire. Response rate was 100%.

Results Of 25 assessable responses of 25 centres, there were 35 academic staff of professorial status (median 2, range 0–5) and 61 staff of reader/senior lecturer status (median 2, range 0–5) but only 20 clinical staff in training grades in 19 institutions. All had extensive clinical commitments. Two-thirds of respondents considered that the speciality was stable locally and nationally. However, recruitment of trainees was poor with only 8% of responders having several good applicants for each post and 90% reported that recruitment had deteriorated in the last 5–10 years. Likely good future careers for clinical pharmacologists in training were considered by 75–80% of respondents to likely lie in the pharmaceutical industry or regulatory authorities. Greater flexibility is required to facilitate training in clinical pharmacology and therapeutics.

Conclusions Clinical pharmacology and therapeutics in the United Kingdom has a strong academic base but a sub-optimal age structure. Recent experience in recruitment into training posts was disappointing. This may reflect wider problems of recruitment into academic medicine in this country.

Keywords: clinical pharmacology, therapeutics, career prospects

Introduction
Clinical Pharmacology and Therapeutics emerged as a discipline in the late 1950s/early 1960s from a variety of origins. In some countries it originated in departments of basic pharmacology or pharmacy. In the United Kingdom it developed in many cases as a research discipline in association with Clinical Medicine for the application of new discoveries in pharmacology in the investigation of human disease and its treatment. Strong research groups exploiting new research methods emerged at several centres including the Royal Postgraduate Medical School, Hammersmith Hospital, London. The Specialty also thrived in older established Medical Schools with a strong tradition in ‘Materia Medica’ and ‘Applied Therapeutics’. Although the catalyst to the development of clinical pharmacology in many cases was clinical research, the main resource which enabled the subject to expand through the 1960s and 70s was its academic base and established role in teaching clinical aspects of pharmacology and therapeutics to undergraduate medical students. In the early days industrial and commercial applications did not figure large and involvement in government, agencies or regulatory authorities were minor, peripheral and ‘part-time’ interests.

The discipline of clinical pharmacology developed and grew in the 1970s and 80s. Professional training programmes were developed and clinical specialists were trained with expertise in clinical pharmacology and internal medicine. In the 1970s a role for the clinical pharmacologist as a ‘specialist’ in district hospitals was envisaged to complement the career openings in undergraduate teaching and research in medical schools. In practice, very few non-teaching hospital appointments were made of specialists in clinical pharmacology. A further factor has been the move to super-specialisation in medicine and the increasing technical and procedure-driven aspects of medical specialties which has eclipsed not only the clinical pharmacologist but the traditional general physician. Even the powerful academic bases of clinical pharmacology in medical schools have been eroded by departmental mergers, lateral career moves, retirements and deaths.

In 1997 specialist medical training in the United Kingdom undergoes major revision to bring it into line with training in other European Union countries. From January 1997 training in Clinical Pharmacology and Therapeutics, like other medical specialties, will be limited to individuals with an allocated national training number in an approved training programme. After completing the necessary period as a specialist registrar, the procedure is that application is made to the relevant Royal College who advise the Specialist Training Authority that it would be appropriate to award a certificate of completion of specialist training which entitles the holder to appear on the specialist register held by the General Medical Council. From January 1997 only individuals with such specialist registration would be eligible to apply for consultant appointments in the NHS and elsewhere in Europe.

In view of these major developments, most particularly the introduction of a new training grade, it is pertinent to review the state of clinical pharmacology in the U.K. at this time [1]. One source of information about a speciality is to look...
at the activities of the relevant professional society. In the early 1970s the nascent discipline in Britain chose not to form a separate society but to establish under the auspices of the British Pharmacology Society a ‘Clinical Pharmacology section’. This section remains part of the British Pharmacology Society and has always met jointly with the main ‘basic’ pharmacology society. However, the Clinical Pharmacology Section established its own journal, the British Journal of Clinical Pharmacology. This journal has grown to become one of the most respected international publications in clinical pharmacology. In 1975 the Clinical Pharmacology Section of the British Pharmacological Society met for Scientific Meetings on three occasions, where a total of 61 oral and poster communications were presented. As an indication of the rapid growth of the Clinical Section (in the discipline) in 1985 when the Section met on four occasions, there were 238 presentations. After a peak in the mid-eighties, the number of presentations at the Clinical Pharmacology Section meetings has fallen to a total of 121 presentations in 1995.

Another approach to obtaining information about a specialty is to canvas the academic leaders on their views about the present circumstances and projected future developments. Between July and September of 1996 a questionnaire was sent to all academics identified as having responsibility for teaching and training in Clinical Pharmacology in U.K. Medical Schools. Their responses form the basis of the following review of the present and future of Clinical Pharmacology and Therapeutics in the U.K. It is interesting to compare these responses with questionnaires reported previously [2].

Methods

In all 26 individuals were identified and contacted by mail. All (100%) responded. In two cases the questionnaire was not fully completed. In one case the medical school was undergoing a major reorganisation and a completed questionnaire was promised within 3 months. The other medical school had no identified clinical pharmacologist on staff. Neither of these institutions had present or projected training posts in clinical pharmacology.

The questionnaire consisted of a series of questions relating to either the present state of clinical pharmacology in the academic centre, future arrangements for the new grade and perceptions as to which areas were more or less important to the future of clinical pharmacology. The full questionnaire and a summary of responses is available on request.

Results and discussions

The picture that emerged varied from centre to centre. The academic base of clinical pharmacology appeared to be strong. Of 25 assessable responses from 25 centres there were 35 academic staff of Professional status (median 2, range 0–5) and 61 staff of Reader/Senior Lecturer status (median 2, range 0–4). There were however only 20 clinical staff of Lecturer/Academic training grade status in a total of 19 institutions. When asked to define the present clinical responsibilities of clinical pharmacologists, all had extensive clinical service commitments usually in general internal medicine providing emergency medical services, general medical outpatient services and specialist clinics. Twenty-three out of 24 respondents had regular responsibility for general medical in-patient beds (mean 24 beds, median 20, range 10–42). Clinical pharmacologists were on call for medical emergencies 5–6 days per month (range 2–10) and were responsible for 2 (range 1–4) general medical clinics each week. Many special services were co-ordinated by clinical pharmacologists alone or in collaboration with other specialists. These included hypertension clinics, epilepsy clinics, diabetics clinics, lipid clinics, stroke services and coronary care. The vast majority of clinical pharmacologists provide local support to Drug and Therapeutics Committees, Hospital or Regional Formulary Groups and organise Educational Case Conferences in Clinical Pharmacology. In addition, two thirds contributed to Drug Information Services but only 2 out of 24 (less than 10%) were directly involved in Therapeutic Drug Monitoring.

Academic respondents were invited to comment on future developments in Clinical Pharmacology and Therapeutics as a medical specialty in their own medical school and in the U.K. as a whole (Table 1). Responses were generally positive with 25% seeing local expansion and a further 63% no change within the next 5–10 years. Only 12% (three respondents) foresaw a substantial reduction in the staffing in their centre. For the U.K. as a whole, while only one (4%) envisaged expansion, 67 (16 out of 24) predicted no change. Some seven (29%) anticipated a substantial reduction in the specialty.

Most academic units had well developed plans for specialist registrar training posts after January 1997. From 24 respondents 46 new training posts were already identified (median 2 per unit, range 0–4) and 38 of these had confirmed funding (median 2, range 0–3). A majority of training programmes had been approved by the local Postgraduate Dean.

A less positive position emerged in response to questions about recent experience with recruitment (Table 2). Only two (8%) had ‘several good applicants for each post’, while 70% reported ‘few good applicants’, five (22%) felt they had had ‘no good applicants’ for recent training posts. Compared with 5–10 years ago, 19 of 21 respondents felt that the recruitment position was worse and only two (10%) noted no change. Three younger respondents who had only recently taken up senior academic positions, indicated that they had no experience of recruitment in the past.

Senior academics were asked to rank a range of academic and service activities in terms of their perceived importance to the future of clinical pharmacology. As all the respondents are employed in medical schools, it is perhaps not surprising that they all ranked undergraduate medical student teaching as ‘very important’. Postgraduate educational roles were believed to be ‘important’ or ‘very important’ by 86–100%. National and local input into drug regulation and formularies was also important or very important to all respondents. There was a much wider range of views on the importance of basic drug discovery compared with clinical trials and provision of drug information. This probably reflects the diversity of clinical and pharmacological interests and the influence of size and other local factors in different departments.

In response to a question ‘where do you expect the future clinical pharmacologist will be employed after...
Table 1 Clinical Pharmacology and Therapeutics: The future.

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<tr>
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<th>Total</th>
<th>Expand &gt; 50%</th>
<th>Not change</th>
<th>Reduce &gt; 50%</th>
<th>Disappear</th>
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<tbody>
<tr>
<td>Numbers of responses</td>
<td>100</td>
<td>24</td>
<td>6</td>
<td>15</td>
<td>3</td>
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Do you believe that over the next 5–10 years CPT as a medical specialty in your medical school will:

Table 2 Recruitment to training posts in Clinical Pharmacology.

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<tr>
<th>Experience with recruitment of trainees:</th>
<th>Number</th>
<th>%</th>
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<tr>
<td>Several good applicants for each post</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Few good applicants</td>
<td>16</td>
<td>70</td>
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<tr>
<td>No good applicants</td>
<td>5</td>
<td>22</td>
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Compared with 1–10 years ago in the recruitment position:

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<th>Better</th>
<th>Same</th>
<th>Worse</th>
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<tr>
<td></td>
<td>0</td>
<td>2</td>
<td>19</td>
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These respondents were recent appointments and had no previous experience of recruitment.

How do these responses compare with comments of 10–12 years ago? [2] Many of the issues are not new. Recruitment, triple accreditation and the difficulty of interesting trainees in careers in industry or regulatory agencies have not changed. Surprisingly the numbers training in the specialty have not changed greatly and career openings in academia remain at least for the present.

Conclusion

A survey of senior academics responsible for teaching and training in Clinical Pharmacology and Therapeutics was undertaken 6 months before the introduction of a new professional training grade Clinical Pharmacology and Therapeutics in the U.K. still has a strong academic base but a suboptimal age structure. Recent experience of recruitment into training posts was widely viewed as disappointing. This may, however, reflect wider problems of recruitment into academic medicine and not be specialty specific.

Most clinical pharmacologists make considerable contributions to hospital medical services, especially in general medicine. Undergraduate medical education, and postgraduate education are major activities, together with local and national advice on drug therapy, formularies and regulatory issues. The development of posts jointly funded by industry and the Departments of Health is likely to extend training opportunities but also a broader range of career opportunities. Clinical Pharmacology and Therapeutics remains a strong academic discipline in the United Kingdom. However its long term survival will require full commitment of those who identify themselves as clinical pharmacologists and the emergence of attractive professional training programmes offering a range of career opportunities which appeal to medical graduates in the late 1990s.

References