Career choices and career progression in the pathology specialties: national surveys of UK medical graduates

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Background

Over the past ten years there has been increasing concern about the recruitment of junior doctors into pathology. The number of consultant vacancies has risen sharply across the UK and, in some areas, vacant consultant posts now represent 25% of the total.

The problem affects all pathology specialties and is particularly acute in histopathology and its subspecialties, where the rise in consultant vacancies has been nothing short of spectacular. In 1992, there were four vacancies across the UK, while in April 2005 the figure stands at 220. Histopathologists who were looking for consultant posts in the early 1990s (as one of the authors was!) are very jealous of the opportunities afforded to today’s post-CCST trainees who have great choice and are almost guaranteed to obtain a consultant post in their chosen field. The Royal College of Pathologists has concerns about the future of the pathology workforce and, because of these worrying trends, College Council and the Oxford Medical Careers Research Unit (OMCRU) joined forces to carry out a study looking at career choices and career progression in the pathology specialties.

Methods

The study was carried out by analysing the responses to a postal questionnaire sent by the OMCRU to all graduates from UK medical schools in nine qualification years: 1974, 1977, 1980, 1983, 1993, 1996, 1999, 2000 and 2002. In 1974, the graduates of all medical schools in England, Scotland and Wales were surveyed, while from 1977 onwards, the surveys covered the whole of the UK including Northern Ireland. Questionnaires were sent at the end of years 1, 3 and 10 after qualification; at years 3 and 10, the mailing list comprised the whole cohort as it was at the time of qualification. Up to four reminders were sent to non-responders.

The questionnaire asked a number of questions about career choice, including “What is your choice of long-term career?” In answering this question, respondents could be as general or specific as they wished. If they had more than one choice, they were allowed to list up to three choices in order of preference.

Additionally, doctors graduating in 1993 and 1996 were asked to signify which factors, from a list of 11 possible factors specified in the questionnaire, had influenced their career choice: “A great deal”, “A little” or “Not at all”. For the purposes of the analysis, the specialties categorised as “pathology” included all the major specialties and subspecialties.

Results

The percentage of responses received was 74% at year 1 (24,623 out of 33,198), 73% at year 3 (17,741 out of 24,044) and 69% at year 10 (9,011 out of 12,988). This is a very high response rate for a questionnaire survey and no doubt reflects the importance that the recipients placed on the results. The number of pathologists responding was 740 in year 1, 735 in year 3 and 337 in year 10.

As might be expected from a study of this type, the surveys produced a large amount of data. The most interesting and relevant data fall into the following categories:

• early career choice
• career choice by medical school
• factors influencing career choice
• long-term career
Early career choice

Figure 1 shows the percentage of respondents at the end of year 1 and year 3 specifying pathology as their first choice of eventual career. There is no year 3 data for the 2002 cohort as this will be collected later this year. This graph shows that between 1974 and 1983 there was a small but steady rise in the number of graduates choosing pathology. Then, between 1983 and 1993, there was a precipitous fall in numbers in both year 1 and year 3 and there has been no sign of significant recovery since then. Indeed, the mean percentage of respondents choosing pathology between 1974 and 1983 was 4.3 in year 1 and 4.4 in year 2, whereas between 1993 and 2002 this figure had dropped to 1.9% and 2.3% respectively.

This data needs to be compared with that for other specialties, but preliminary analysis suggests that this precipitous drop in numbers has not been observed with other specialties.

Career choice by medical school

Figure 2 shows the percentage of graduates from each of the UK medical schools choosing pathology as their long-term career, comparing the early cohorts (1974–1983) with the later cohorts (1993–2002). For the sake of simplicity, only the year 1 data is given, but the year 3 data is very similar.

These graphs show that between 1983 and 1993 there was a significant drop in the number of graduates choosing pathology from every UK medical school. The downward trend is greater in some medical schools (e.g. Newcastle, St George's) than others, but even Oxford and Cambridge, with their ‘traditional’ curricula, have not been immune from the change.

Factors influencing career choice

Figure 3 shows the individual factors that influenced career choice “a great deal”. The responses for graduates choosing pathology are compared with those of graduates choosing other careers. For the sake of simplicity, the year 1 and year 3 responses are combined to give an overall picture – though there are some differences, which will be highlighted.

Four factors stand out in influencing doctors in their choice of career, irrespective of whether the career was pathology or another specialty. These are:

- hours/working conditions
- self-appraisal of skills and attitudes
- experience of jobs so far
- enthusiasm for and commitment to the specialty.

Interestingly, however, “hours/working conditions” was more important for pathology than for other careers and – not surprisingly – “experience of jobs so far” was more important in year 3 than year 1. Indeed, in the responses from year 1 graduates it was listed as a positive factor by less than 30%.

With regard to the factors “experience of the subject as a student” and “a particular teacher/department”, although the overall positive effect was not as great as other factors, these appeared to be more important for pathology than for other careers.

Compared to other specialties, factors that did not seem to be important in choosing pathology were:

- financial prospects
- career and promotion prospects
- domestic circumstances
- advice from others
- inclinations before medical school.

Long-term career

Figure 4 shows the number of doctors still in pathology ten years after qualification and is therefore obtained from the first five cohorts only. Of those graduates who were in pathology at year 1, 57% were still in pathology at year 10. Not surprisingly, of those who were in pathology at year 3, a higher proportion (nearly 80%) was still in pathology at year 10.
Conversely, of those doctors who were in another career in year 1, only 2% were in pathology at year 10 and of those who were not in pathology at year 3, an even smaller number (1%) were in pathology at year 10.

Summary

The percentage of doctors selecting pathology as their first choice of career halved between 1983 and 1993, from 4.4% to 2.2%, and has remained static ever since. The reasons for this were not examined by the study but might include a lowering of the status and profile of pathologists, a false perception of pathologists as autopsy ‘technicians’, the low financial reward, the erosion and eventual decimation of academic pathology and more recently the generally negative media portrayal, particularly following events at Alder Hey and Bristol. The publication of the GMC’s Tomorrows Doctors in 1993 led to radical changes in undergraduate medical curricula from ‘traditional’ to ‘integrated’. This may have played a part in recent years, though it is obvious from the data that the drop-off in numbers had already started before most of the integrated curricula would have had a chance to take effect.

All medical schools experienced a significant drop in the number of graduates choosing pathology between the early cohorts of 1974–1983 and the later cohorts of 1993–2002. Indeed, in the last ten years only four medical schools have had more than 3% of their graduates selecting pathology: Oxford, Cambridge, Queen Mary and Glasgow.

Important positive factors in influencing a career choice of pathology are hours and working conditions, self-appraisal of skills and attitudes, experience of the subject as a student and the effect of a particular teacher or department. Less important factors (possibly negative factors) include future financial prospects, future career prospects and experience of jobs so far (particularly in year 1). Interestingly, with the career opportunities available in today’s market, “future career prospects” may soon be seen in the ‘positive’ list.

43% of doctors working in pathology in year 1 and 22% in year 3 were no longer working in pathology at year 10. Conversely, only 2% of doctors working in another specialty in year 1 and 1% in year 3 had switched to pathology by year 10. Thus there is large net loss of pathologists out of the specialty by year 10. The reasons for this were not examined by the study, but as there is a long lag phase before such results become available, they may be reflecting the move out of pathology in the late 1980s and early 1990s due to the poor job opportunities at that time. If this is indeed the case, there should be some improvement in these figures in the future.

Conclusions

There is little doubt that these figures are worrying, not only for the pathology workforce and profession, but also for the wider NHS. The Royal College of Pathologists has been extremely successful in persuading government to pump money into the pathology workforce, and a large number of new posts have been created at both consultant level and in the training grades. But unless the recruitment of UK graduates into pathology increases substantially, most of these newly created posts will have to be filled by foreign graduates. This ‘policy by default’ raises ethical and moral issues that are too complex to explore in this report.

The success of any UK recruitment strategies depends on raising the profile of pathology to medical students and junior hospital doctors, so innovative ways of doing this must be developed. These include active involvement by pathologists in curriculum planning, offering selected study modules, clinical attachments or intercalated BScs in pathology subjects, and developing pathology modules for inclusion in Foundation programmes. Above all, every pathologist in the UK should be aware of these issues and take his or her share of responsibility for ameliorating the situation so that future generations of pathologists are guaranteed.

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Figure 1 Percentage of respondents at year 1 and year 3 specifying pathology as their first choice of eventual career.

Figure 2 Percentage of respondents specifying pathology as first choice of career at year 1, by medical school.

Legend:
- Year 1
- Year 3
Figure 3 Percentage of respondents specifying factors that influenced their career choice “a great deal”

Pathology
Other careers

Figure 4 Percentage of doctors who originally chose pathology still working in pathology ten years after qualification