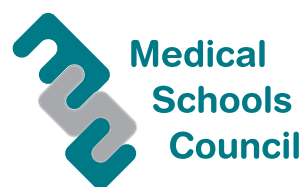


Women in Clinical Academia

Attracting and Developing the Medical and Dental Workforce of the Future

A report by
the Medical Schools Council
June 2007



Contents

Preface	3
The Medical Schools Council Women in Clinical Academia Working Group	
Foreword	6
Report	8
Overview	8
Student Perceptions	12
Learning from Experience	16
Flexible Working Lives	20
Best Practice in Higher Education Institutions	22
International Perspective	25
Conclusions and Recommendations	28
Appendices	31
1. Profile of the clinical academic workforce by gender	31
Medicine	
a) Clinical academics by grade and gender: 31 July 2006	31
b) Clinical academics by grade and gender: change since 2004	31
c) Clinical academics by specialty and gender: 31 July 2006	32
Dentistry	
a) Clinical academics by grade and gender: 31 July 2006	32
b) Clinical academics by grade and gender: change since 2004	32
c) Clinical academics by specialty and gender: 31 July 2006	33
2. Number of consultants and GPs relative to Medical School intake: 1987–2006	34
References	35
Acknowledgements	36

The Medical Schools Council Secretariat is based at Woburn House, 20 Tavistock Square, London WC1H 9HD
Tel: 020 7419 5494
Fax: 020 7380 1482

Executive Director Katie Petty-Saphon MA, PhD
Policy Officer Ceri Margerison BA
Policy Officer Helen Morley MA
Office Manager Barbara Anderson

© 2007 The Medical Schools Council, London

Preface

The Medical Schools Council, previously the Council of Heads of Medical Schools, acts as the authoritative voice of all UK Medical Schools. The organisation serves as a key reference point for Government, the Higher Education sector and health-related professional bodies for informed opinion and advice on all matters relating to the education of medical undergraduates. To fulfil this function, the Council engages with the Department for Education and Skills, the Departments of Health in the four UK countries, with stakeholders from across higher education provision and with the NHS and other service providers.

In addition, the Medical Schools Council:

- ◆ works to improve and maintain quality in medical education, engaging with all agencies concerned with the provision of medical education and training, including the Conference of Postgraduate Medical Deans (COPMeD), the GMC, the Postgraduate Medical Education and Training Board (PMETB) and the Medical Royal Colleges.
- ◆ aims to facilitate the seamless provision of medical education, ensuring that graduates from UK Medical Schools are optimally prepared for the challenges awaiting them in their future practice.
- ◆ aims to highlight and promote clinical academic careers, with, amongst other activities, the annual publication of the survey of clinical academic staffing levels in the UK's Medical and Dental Schools.

It is also intended that the Council's website will be used as a key recruitment portal for clinical academic posts in the UK's Medical Schools. The high-quality research conducted in these institutions makes a vital contribution to the economy and ensures that the educational experience of the doctors trained therein is grounded in a stimulating and innovative environment. Promoting the need to protect and enhance the support provided for such activities is a top priority for the Medical Schools Council.

The Council works closely with the Association of UK University Hospitals, which represents all the major university teaching hospitals, and with the Council of Heads and Deans of Dental Schools, representing the interests of the UK's Dental Schools.

More information about the work of the Medical Schools Council can be found at www.medschools.ac.uk.

The Medical Schools Council Women in Clinical Academia Working Group

The Medical Schools Council convened a Working Group in late 2005 to examine issues affecting the recruitment and retention of women in clinical academia. Clinical academics are those doctors and dentists who conduct high quality research in the UK's Medical and Dental Schools, teach medical and dental undergraduates and continue to treat patients in the NHS.

Data collected by the Medical Schools Council show that the number of women working in clinical academia decreases at each grade of the academic career ladder, with only 11% of professorial staff in medicine, female, compared to 36% at clinical lecturer level.^{1*} This situation is very similar to that in dentistry, with 13% of professors and 45% of lecturers, women. With women comprising 60% and 45% of entrants to Medical and Dental Schools respectively, it is vital that these individuals are both encouraged to enter a career in clinical academia and receive the support necessary to maintain them on an academic track^{2,3}.

The full Working Group met four times between March 2006 and March 2007, with meetings of subsidiary groups also taking place over the course of the year. The terms of reference of the group were defined as follows:

- 1 To review the current position of women in clinical academia by grade and by specialty, with reference to the position internationally.
- 2 To identify the most important issues which appear to be militating against attracting women into clinical academia and to identify those, which may be remediable.
- 3 To provide recommendations for where action needs to be taken to encourage the recruitment and retention of women in clinical academia.

This report is intended to outline best practice in the recruitment and retention of women in clinical academic medicine and dentistry, with the aim of reversing current trends, as identified in the Medical Schools Council data. It is intended that the Medical Schools Council annual Clinical Academic Staffing Survey can provide a means by which the efficacy of initiatives to stem the loss of women from the clinical academic ladder can be assessed on an on-going basis.

Members of the Working Group

Chair

The Medical Schools Council Women in Clinical Academia Working Group is chaired by Professor Debbie Sharp, Professor of Primary Health Care at the University of Bristol.

Membership

Professor Isobel Allen, Policy Studies Institute

Dr Suzanne Candy, The Academy of Medical Sciences

Professor Yvonne Carter, Warwick Medical School

Dr Lisa Cotterill, National Co-ordinating Centre for Research Capacity Development

Professor Jane Dacre, Royal College of Physicians

Dr Nandita DeSouza, Institute of Cancer Research

Professor Clair DuBoulay, Conference of Postgraduate Medical Deans of the UK

* Full data given in Appendix 1.

Dr Catherine Elliott, Medical Research Council
Baroness Professor Ilora Finlay of Llandaff, Royal Society of Medicine and House
of Lords
Professor Jacky Hayden, Conference of Postgraduate Medical Deans of the UK
Dr Anita Holdcroft, BMA Medical Academic Staffing Committee
Professor Janet Husband, Academy of Medical Royal Colleges
Ms Alison Johns, Leadership, Governance and Management, Higher Education
Funding Council for England
Professor Ian Lauder, The Academy of Medical Sciences
Ms Ann Macintyre, Association of UK University Hospitals HR Directors Group
Ms Ceri Margerison, Medical Schools Council
Professor Neena Modi, Royal College of Physicians
Professor Sir Peter Morris, Academic Careers Sub-Committee of the UKCRC and
Modernising Medical Careers
Professor Bhupinder Sandhu, Medical Women's Federation
Dr Katie Petty-Saphon, Medical Schools Council
Professor Cynthia Pine, Council of Heads and Deans of Dental Schools
Professor Mike Pitillo, Universities UK
Ms Anna Riemen, BMA Medical Students Committee
Ms Erika Szedon, Universities and Colleges Employers Association, Clinical
Academic Staff Advisory Group
Dr Naho Yamazaki, Wellcome Trust

Foreword



*Baroness Professor Ilora
Finlay of Llandaff*

I was very pleased to have been asked, in March 2006, to sit on the Medical Schools Council's Women in Clinical Academia Working Group. Although nearly two thirds of the entrants to Medical and Dental Schools are now women, there is a significant under-representation of women in senior academic posts in medicine. This disparity was the impetus for investigation by the Medical Schools Council. Questions that needed to be asked included whether there was a poverty of career aspiration amongst women graduates or whether they simply chose to avoid academic medicine and if so, why?

Third and fourth year students at Medical and Dental Schools around the UK were asked to provide some answers to these difficult questions, through a national focus group study. Their insights are revealing of the lack of knowledge amongst undergraduates, not only with respect to clinical academia but also with regard to career progression through medicine and dentistry as a whole. One of the key recommendations of the Medical Schools Council Working Group is to combat this lack of awareness and reliance on misinformation, through the provision of better careers advice for medical and dental students.

Role models play an important part in career decisions in all walks of life – and so it is in research and teaching in medicine and dentistry. But there are additional hurdles that women graduates seem to face, some due to their own biology and some through the insecurity that an academic career entails. Difficulties are compounded through the uncertainty of funding for research and the grants application process.

This enquiry revealed with great clarity that unless women are attracted into academic careers, the teachers of the next generation of medical and dental students will simply not exist. If students are not taught and inspired by the leaders of the day, they lack the role models needed for achieving excellence in their own careers. They will fail to consider the academic career path and thus miss out on the excitement of academic medicine and dentistry.

Over the past year, the Working Group has met on four occasions, and convened several small sub-group meetings, to discuss ways in which women can be attracted to clinical academic careers, and see these careers develop in a fulfilling and supported manner. I believe that the recommendations set out by the group in this Report can go some way towards redressing the balance between the number of men and women in senior positions in clinical academic medicine and dentistry.

A paucity of women in clinical academia risks long-term consequences not simply for the medical and dental workforce of the future but also for the health

and wealth of the UK population as a whole. I urge policy-makers in Government and across the health and education sectors, as well as HR professionals in the Higher Education Institutions, to recognise the recommendations made by the Medical Schools Council as the foundation upon which further initiatives to improve the working lives of women, and men, in clinical academic careers can be built.

Baroness Professor Ilora Finlay of Llandaff

Baroness Ilora Finlay is a Professor of Palliative Medicine and President of the Royal Society of Medicine. Professor Finlay was Vice Dean in the School of Medicine, Cardiff University between August 2000 and October 2005.

Since her elevation to a Peerage in 2001, she has been actively involved in debates on health issues, particularly relating to Health and Tobacco. She is a Member of the Select Committee on Science and Technology and the Select Committee on the Assisted Dying for the Terminally Ill Bill.

Overview



Professor Debbie Sharp

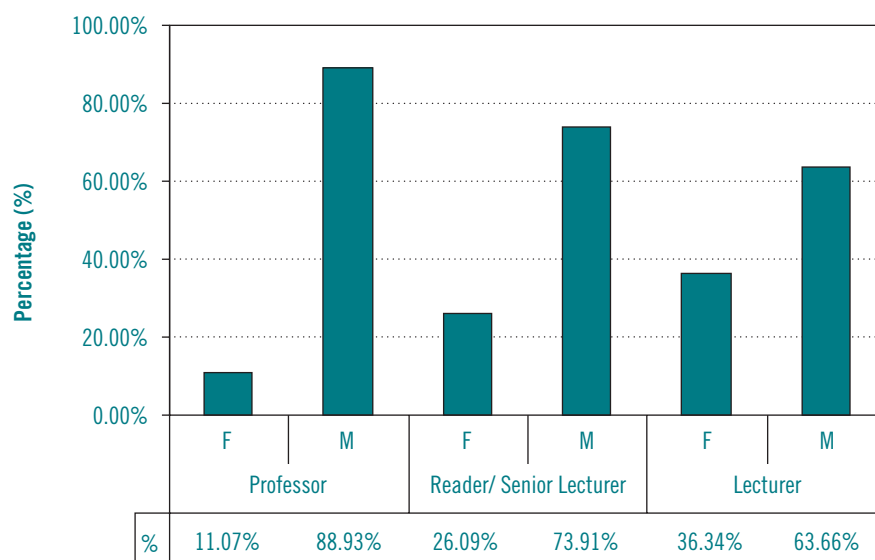
Clinical academics are those doctors and dentists conducting research in the UK's Medical and Dental Schools, whilst also having a major responsibility for the education of medical and dental undergraduates. As well as a commitment to carrying out research and/or teaching activities, academic doctors and dentists must also dedicate time to clinical work and administrative duties. At 31 July 2006 there were 2937, Full Time Equivalent (FTE), clinical academics working in medicine and 435 FTE working in dentistry in the UK. Overall, women comprise approximately 21% of medical and 31% of dental clinical academics.¹

The low proportion of women in clinical academic medicine and dentistry is a situation reflected in other disciplines, for example in science, engineering and technology (SET) and in law.^{4, 5} Many of the potential barriers often cited as responsible for such gender imbalance are similar. The difficulty of maintaining a suitable work-life balance and maintaining a high profile whilst working less than full-time are two such examples. However, the demands placed on clinical academics through the dual, or even tripartite, requirement to deliver both research and teaching, in some cases, along with clinical commitments, places clinical academics in a unique position compared with researchers and educators working in SET and academic legal practice. The pressures faced by clinical academics in this context, the additional time taken for individuals to attain a Certificate of Completion of Training (CCT) and a PhD and the slower progression up the pay scale relative to non-academic colleagues are often cited as disincentives to the pursuit of an academic career in medicine.

Something must be done to ensure that women are attracted to clinical academia, and that they continue on the clinical academic ladder. Only 11% of professorial staff in the UK's Medical Schools are women, compared with 36% of clinical lecturers.¹ The proportion of women decreases substantially at each academic grade, from lecturer to senior lecturer to professor, as is evident in Figure 1. The situation is very similar in dentistry, with 13% of professors women, compared with 45% of senior lecturers. Although data indicate that women are moving up the clinical academic ladder, the proportion of women at each grade relative to men has remained static since the Medical Schools Council and Council of Heads and Deans of Dental Schools began to collect data on clinical academics by gender in 2004.⁶

Only 10% of those clinical academics working in surgery are women, compared to 36% in academic general practice, whilst 46% of women working in clinical academic dentistry are concentrated in oral pathology, paediatric dentistry and restorative dentistry. There is also geographical disparity; in the last round of

Figure 1: The representation of women and men in the clinical academic workforce –Medicine



Data from the Medical Schools Council and Council of Heads of Dental Schools (2007).¹

data collection by the Medical Schools Council, six Medical and six Dental Schools returned no female clinical professors in post on the census date of 31 July 2006.

With approximately 60% of students entering medical school now women,² and 46% of the undergraduate population at the UK's Dental Schools female,³ it is vital to the future of clinical academia that women graduates are enabled to pursue a clinical academic career should they so wish. If women are not encouraged to enter an academic track in medicine or dentistry, and supported in this endeavour across a range of medical and dental specialties, the ability of the UK health system to respond to challenges with innovative solutions, to which clinical academics greatly contribute, will be compromised.⁷ As clinical academia suffers, so too will the doctors and dentists of the future, unable to benefit from an education in a research rich environment which is a core strength of the UK's Medical and Dental Schools.

Academic Foundation Programmes represent an opportunity to engage young doctors in clinical academia at an early stage of their career which should be capitalised on. However it is clear that in order to consider applying for such programmes, medical students must be enthused about clinical academia early in the undergraduate course. Focus group sessions convened by the Working Group to question third and fourth year students on their perceptions of clinical academia have revealed a worrying lack of awareness about what clinical academia is, what clinical academics do and how to follow this pathway. The provision of clearer careers information by Medical and Dental Schools, with careers sessions tailored towards clinical academia, is a key recommendation of this report.

Intercalated degrees and appropriate special study modules provide one means by which Medical Schools can encourage students to experience research first-hand. Data collected from across the UK by the Medical Schools Council

suggest that more women than men enrol to undertake intercalated degrees, and often gain a higher degree classification than their male counterparts.⁸ Medical and dental students must be given the opportunity to engage with high quality, relevant research which can spark their enthusiasm. Clinical academics should be encouraged to engage with students as role models and mentors. Too often, the focus groups revealed that students were unable accurately to identify those staff at their Medical and Dental Schools who were clinical academics. Increasing contact between clinical academics and students within the framework of interesting research and enquiry could address this issue.

Allowing clinical academics to train and work flexibly is key to attracting and retaining women within clinical academic careers and an important recommendation of the Medical Schools Council Working Group. Flexibility is vital at both senior and junior grades. At the first national meeting of senior women in NHS and academic dentistry, those around the table highlighted the importance of support for those at senior levels working flexibly. Although such individuals wished to focus their time on high priority tasks, necessitating support to enable the delegation of more routine matters, funding pressures meant that often such support was not forthcoming.⁹ It is vital to ensure that those wishing to work less than full time are valued as full members of faculty and allowed opportunities to progress. In the past there was a disincentive for Trusts to employ part-time staff as they were relatively more expensive. It is encouraging that this has now been addressed.¹⁰

Flexible training and working less than full time are viable options for those wishing to balance clinical and academic work with the demands of family life, yet the Working Group believes that it is important for advice to be realistic. Certain specialties are more suited than others to a particular pattern of working. Women should receive clear guidance and support when considering specialties to pursue and receive full information on what each will demand. The appointment of a dedicated staff member with responsibility for promoting clinical academic careers at each Medical and Dental School, could be one method of fulfilling this aim. Women's Liaison Officers are already in post in Medical Schools in the US, where they are encouraged to meet annually, through the Association of American Medical Colleges, to network and share expertise.¹¹

Finally, women need to be encouraged to put themselves forward for appointments and awards. Data collected from across the UK's Medical and Dental Schools and from the major funders of the biomedical sciences show that all too often women select themselves out of the pool of candidates for fellowships and academic positions. Informal discussions with the major headhunter organisations for the most senior posts in Medical and Dental Schools confirm this finding. There is little evidence of discrimination amongst appointment panels once women apply for positions.¹² Overwhelmingly, senior women questioned by the Medical Schools Council Working Group cited support from colleagues, both men and women, as important to their career progression, with many fostering life long bonds with mentors.

The following Report explores the results of this and other work over the past year by the Medical Schools Council Women in Clinical Academia Working Group. The results of focus groups convened at Medical and Dental Schools around the

UK are discussed, followed by an examination of information collated in response to questionnaires circulated to all female senior academics (and a sample of their male colleagues) in medicine and dentistry in the UK is examined. Opportunities for training flexibly are outlined, as are examples of best practice in the recruitment and retention of women across the sector. Lessons to be learned from international initiatives are discussed later in the Report.

Several recommendations are set out at the end of the document, against which the Medical Schools Council plans to monitor progress over the coming months. The report will be submitted to the Department for Education and Skills, the Academy of Medical Sciences Clinical Academic Careers Committee and to the UK Health Advisory Committee, which reports to the four UK Departments of Health.

Professor Debbie Sharp

Chair, the Medical Schools Council Women in Clinical Academia Working Group

Professor Debbie Sharp is Professor of Primary Health Care and Head of the Academic Unit of Primary Health Care at the University of Bristol. She took up the Chair in Bristol in 1994. The world-class department which she has built up over the last twelve years is a founder member of the NIHR School for Primary Care Research. She is currently Chair of the Society for Academic Primary Care, represents primary care at the Medical Schools Council and sits on both the GMC Education Committee and the Walport Academic Careers Panel.

Between 2000 and 2003, Professor Sharp was Head of School in the Faculty of Medicine in Bristol and it was during this time that she became aware of the particular recruitment and retention issues for women in academic medicine.

Student Perceptions

From amongst the medical and dental undergraduates of today will come the clinical academic workforce of tomorrow: those who will contribute to innovation and change in the delivery of healthcare and to developments leading to better outcomes for patients. Medical and Dental Schools have a vital responsibility to ensure that students are well informed about the possibilities and challenges offered by a career in clinical academia and how best to pursue this route.

To gather information on students' perceptions of clinical academia, the Medical Schools Council Working Group convened focus groups of third and fourth year female students in 12 Medical and Dental Schools.* A senior female clinical academic within the School facilitated each group using an agreed topic guide. Transcriptions of audio recordings of the groups were prepared, along with additional contemporaneous notes. These were then thematically analysed by an independent educational researcher.

What did clinical academic medicine/ dentistry mean to the students?

Students were confused about the meaning of the term 'clinical academic.' Few recognised that the term encompassed three roles: clinical practice, research and teaching. Most thought of clinical academics as those people who taught and/or did research and did not appear to understand that they had a clinical commitment.

“Academic makes you think more about constantly having your head in a book, rather than actual hands-on clinical work.”

“I think that the general view is that it does take you away from being on the wards, and I just have an image of spending time in a lab.”

Students identified both male and female clinical academics, ranging from eminent professors to research fellows in laboratories. Mature students and those who had done an intercalated degree were much better informed than others, but the overwhelming impression was of a lack of knowledge, particularly in identifying in which specialties clinical academics might be found or what they actually did.

* Focus groups were run at the following Medical Schools: Bristol; Cardiff; Dundee; Imperial College; Manchester; Oxford; Queen's University Belfast; East Anglia; Warwick, and at the following Dental Schools: Birmingham, Cardiff, Liverpool.

“We need more information about it. If something is surrounded with myth and legend it is never going to be attractive, especially when the myths and legends aren't very nice.”

Students' perceptions of a career in clinical academic medicine/dentistry

Very few students had considered a career in clinical academic medicine/dentistry. There was a general anxiety that they would lose patient contact and clinical skills in an academic role.

Research was variously described as number-crunching, literature searching or laboratory-based, with little or no patient contact. Students' own experience of research was limited and often described negatively. Many reported disliking their fourth year projects, in which they felt they had little choice, too little time and pressure to get positive results. There was clear distaste for the perception that research was necessarily laboratory-based and would take them away from patients. The research culture was described as highly competitive and political, with uncertainty about funding and endless grant applications.

“If you're really fascinated in a particular area of medicine, then doing research would be the ideal thing.”

However, others described their projects as some of the best parts of their training and those who had done an intercalated degree often had more interest in clinical academia than others.

Teaching was more popular than research. However, the teaching students had received was varied, with few teachers seen as engaging or passionate about their subject. Most students had some experience of delivering presentations, and a few had mentored younger students, but they stressed that they had never been taught how to teach.

“We have never actually been guided how to teach... It's largely been from experience and what you have picked up from other people lecturing, which is probably quite a good way of doing it, but it might be useful to have some sort of teaching methods.”

Some students regarded academic careers as pressurised and badly paid with long working hours, while others saw them as having less pressure and responsibility than being an NHS consultant. There was little agreement on the most suitable stage to embark on an academic career, with some thinking it best to start at the end of their basic training while others wished to keep open the possibility of returning to academia having practised for a few years.

Most students stressed that they would value more information on all their career options, and focus groups were dominated by accounts of the lack of good careers advice and the paucity of information that they had received to date.

Role models

Students named both male and female role models who had influenced them, often saying that gender was largely immaterial but behaviour was important. However, it was thought that there were very few senior women role models in either academic medicine or dentistry.

Positive role models offered time, encouragement and support, and were seen as 'inspirational and dynamic'. Students were often most impressed by women who had managed to combine senior academic careers with less than full-time working when they had family commitments.

“Writing up their thesis whilst having their children, so that they can stay home with them... that would be appealing to me.”

However, while positive role models could inspire students, there was also clear evidence that negative role models could discourage students from pursuing academic medical or dental careers.

Differences between men and women

Students frequently discussed the best age and career stage for them to have children and the difficulties of juggling babies and their medical careers. However, while many felt that employment conditions for men and women were 'more equal now' and that there was little sexual discrimination in medicine or dentistry, there was little evidence that they fully appreciated the potential problems they might encounter in working less than full time or taking a career break in either an academic or NHS career.

“Strong women are seen as scary, strong men are seen as admirable”

“I sat in a neurosurgery clinic and a consultant came up to me and said, 'To be honest, if you want a family you can't do neurosurgery'.”

Summary

The vast majority of students had no conception of the roles of clinical academics. Many were discouraged from considering clinical academia as a career option because of their negative experiences of university research or teaching and their perceptions of academic work as poorly paid, pressurised and, in the case of teaching, lacking status. Students had little factual information about these roles or career progression within them and few positive role models or mentors whose influence might have counteracted their negative perceptions.

The recommendations made by the Medical Schools Council as an outcome of this exercise are provided in further detail in the final chapter of this Report. It is clear that several things must happen to encourage young women to perceive clinical academia as a viable career option. There is an urgent need for the provision of detailed careers information to trainee doctors and dentists. Medical

and Dental Schools should be encouraged to make better use of dedicated careers services already in place at universities. Anecdotal evidence suggests that many Medical and Dental Schools do not currently make use of such services, with the perception being that students studying vocational courses do not need such guidance.

Medical training in the UK has undergone a massive change in recent years, with the introduction of Modernising Medical Careers (MMC), and Modernising Dental Careers (MDC) under exploration. Evidence from the focus groups suggests that penultimate year medical students have little idea how postgraduate training works. This should send a clear message to Medical and Dental Schools to improve the provision of careers information.

The School of Medicine at the University of Leicester is one of a number of schools that runs a highly successful annual careers fair for medical students, an initiative which other institutions could usefully adopt. The event includes a session on clinical academic careers, which has proven influential in encouraging medical undergraduates to seek out further information on clinical academia and routes into a career in teaching and/or research. The Academy of Medical Sciences has already embarked upon initiatives to promote interest in academic careers, particularly at the postgraduate level. It should be encouraged to do more in the undergraduate arena.

“I am always really impressed when I see a professor with a woman’s name. I’m sorry, but it is so unusual.”

Learning from Experience

In order to complement the information derived from focus group discussions with students and to identify further opportunities to encourage women doctors to consider an academic career, in May 2006 the Medical Schools Council Working Group circulated a short questionnaire to all, professorial level, female clinical academic staff working in the UK's Medical and Dental Schools. They were identified using data on academic grade, gender and unique reference number, collected as part of the 2006 Medical Schools Council Clinical Academic Staffing Survey.¹³ Questionnaires were also distributed to senior women working in the postgraduate deaneries.

Women were asked to provide information on their career progression to date and on any barriers, structural or personal, they had faced when moving up the clinical academic ladder. They were also asked to nominate a male colleague, of a similar age and working in the same specialty, although not necessarily at the same institution, to complete a copy of the questionnaire. These 'matched pairs' were analysed to ascertain whether women and men faced similar or disparate barriers when pursuing a career in clinical academia. The results are set out in the following sections.

Quantitative analysis

Analysable data was received from 76 women and 75 men, with an average age of 52 for women and 51 for men. Thus this was a cohort of senior clinical academics who went to Medical or Dental School in the early to mid 1970s. The sample was spread across all the specialties as defined in the annual Medical Schools Council and Council of Heads and Deans of Dental Schools Staffing Surveys. Women tended to make their specialty choice later than men, when they were registrars rather than medical students or housemen. Similarly, they entered academic medicine somewhat later, although the differences were less marked than for specialty choice. More women (36%) than men (28%) undertook an intercalated degree but slightly more male doctors had entered Medical School as graduates: 17% versus 14%. The vast majority of all respondents described having a mentor, explored in further detail in the following section.

Women reported having had more structural (51% versus 44%) and 'people' (45% versus 29%) obstacles in their careers. 61% of women had taken at least one career break, usually for maternity leave, compared with only 11% men. The mean number of career breaks was 1.4 and the average length 7.4 months.

With regard to career promotions, women appeared to have had slightly fewer unsuccessful promotion experiences compared with men (means 0.8 and 1.0)

respectively, whereas the experience of successful promotions was similar (mean 2.1). Only 2.5% women were currently working part time, although over one quarter had done so at some point in their careers. There were no men working part time and only 2.5% had ever done so. The data also revealed that 30% women and 18% men declared that they would like to work part time.

Interestingly, there was no difference in the number of programmed activities (11 PAs) between men and women. However more women declared that they majored in teaching or research and teaching rather than simply research. With respect to Clinical Excellence Awards, in this sample, women were less well represented for discretionary points (less than nine) and at Bronze and Gold levels, but were more likely to have a Silver or Platinum award. However 11 women reported they had no award and two women were ineligible by virtue of not being on a consultant contract. All of the male respondents had Clinical Excellence Awards.

Supporters and mentors

Most supporters and mentors mentioned by both male and female academics were male, reflecting the historical profile of senior doctors at the time that respondents were embarking on their careers. The supporters were mainly professors or heads of department, but also included doctorate supervisors and members of funding bodies. One in eight of the women mentioned their husbands, although only one man mentioned his wife as an important supporter.

The most striking feature was the warmth with which these senior academics described the way in which their supporters had helped them, mainly by providing inspiration and encouragement. The importance of their roles in furthering the careers of respondents was underlined by constant references to the advice they gave about funding, career direction, research opportunities, publications and networking. Many appeared almost literally to have taken respondents 'under their wing'. One woman summarised the views of many:

“He was just inspirational – a role model as to how you can be a top professor and fantastic clinician.”

Women were much more likely to cite the support of their mentors in enabling them to combine family and an academic career, which was acknowledged to have been much tougher in the past than it was regarded to be now. This understanding by very senior doctors of potentially conflicting pressures was very much valued by these women, and undoubtedly enabled them to stay in an academic career.

“None of these individuals ridiculed me for leaving to pick up children from school or crèche, none of them made any adverse comments if I could not attend evening or late finishing meetings” (F)

Structural obstacles to progress in academic medicine

Although a fairly high proportion of both men and women stated that they had never encountered structural obstacles in their careers, others identified

Qualitative analysis

problems common to both genders. These were often related to specialty, with respondents in psychiatry, general practice, palliative and rehabilitative medicine reflecting on their perception that their specialty or sub-specialty was insufficiently respected as an academic discipline, or expressing concern that certain academic institutions dominated the specialty to the exclusion of others.

Other structural obstacles included fierce competition for limited research funding and a lack of research Fellowships or academic training posts. Some respondents were concerned about lack of status in either the clinical or scientific communities, resulting from the combined demands of clinical, research and teaching responsibilities of the clinical academic. There were also comments about the lack of recognition from the academic community itself.

“Nobody in the academic hierarchy ever says ‘Well done’. Even when you get A+ awards or gold medals from your Royal College, there is never any acknowledgement of success.”

Gender-specific obstacles

Women identified a number of obstacles they had encountered, and in many instances described how they had dealt with them. They spoke of being passed over for promotion, male colleagues being given more interesting research projects, and noted that having children was seen as a barrier to promotion, particularly in male-dominated specialties such as surgery. There were references to overt sexist, ‘old-boy network’ behaviour, but these were seen as less important than more subtle discrimination against women.

“Attitude problem: a female with kids plus interested in research equals disaster in a surgical specialty dominated by men.”

Some women felt that they were overlooked through not being as ‘pushy and self-promoting’ as their male colleagues, while others mentioned being ‘set up to fail’ by being given leadership roles and then undermined by male colleagues.

“As a trainee, my male colleague was offered more demanding but interesting things to do: he was always offered a new lecture, outside presentations etc before me. I had to work hard and be a ‘bit pushy’ to get this kind of experience.” (F).

People or individuals who obstructed progress

Many men and some women cited problems with some NHS colleagues who were said to be antagonistic towards academics, resulting in delays in their clinical career progress or limiting access to clinical facilities and resources. On the other hand, some respondents of both genders mentioned obstructive behaviour by fellow academics, sometimes feeling compelled to move in order to make progress in their careers.

“We are respected by neither the clinical nor the scientific community in entirety and therefore the balance of [our] activities... adequate for neither.” (M).

Women were more likely to cite problems with senior colleagues who were hostile towards women academics with children, while some spoke of obstacles placed in their way by those who thought they would not be ‘tough enough’ for any academic career or were unable to contemplate a woman in a senior position.

Conclusions

These senior academics mainly came from a generation of doctors who qualified in the 1970s or 80s, if not earlier, where medical careers in general were much less structured than they are today, and where personal ‘patronage’ and the apprenticeship tradition of medical teaching was dominant. This was highlighted by the emphasis given in the responses to the intense encouragement and inspiration they received from senior role models. Although there were clear disadvantages in such a system, particularly for those who did not benefit from it, there can be no doubt that this very personal nurturing of young talent is much less prevalent in the present structure of the medical profession, where doctors are unlikely to be attached to a team or individual consultant and may not come to the notice of senior academics at all. The result of this is that young doctors may well not be ‘inspired’ by their seniors, and, indeed, as seen in the focus groups with medical students, may not even be able to identify any potential role model or mentor. This has important implications for the future of academic medicine and underlines the necessity that every possible avenue is explored to ensure that the next generation of clinical academics can benefit from inspiring teachers, supporters and mentors.

Flexible Working Lives

Encouraging flexibility

The provision of opportunities to work less than full time and pursue postgraduate training, research, teaching and clinical responsibilities flexibly, forms a vital means by which clinical academic careers can be made more attractive to women. A recent survey by the BMA revealed that the vast majority of women doctors questioned as part of the research (94%) were currently working less than full time, or wished to in the future, compared to 46% of men. Childcare responsibilities and the desire to spend more time with family were cited as the main reasons for women wishing to do so.¹⁴

Support must be available for women to work flexibly both in terms of hours and in their need to relocate geographically.

It is encouraging that the funding bodies represented on the Medical Schools Council Women in Clinical Academia Working Group offer both part- and full-time awards, aiming to accommodate the varying needs of promising clinical researchers. Although specific eligibility criteria vary between organisations, all emphasise the importance of flexibility in order to attract the brightest and best academics. As an example, the Medical Research Council award its Fellowships for a minimum 50% time, and on the understanding that the approved programme of research training/research can be carried out effectively. Similarly, Cancer Research UK is supportive of those wishing to undertake further academic training on a less than full-time basis. They judge such applications on their competitive science and the ability to complete the research in a timely manner, particularly in the context of other groups working on similar or related topics. All the funding bodies allow a small proportion of the working week to be set aside for clinical duties which is enormously helpful, both in terms of maintaining clinical competencies but also in allowing accrual of time to be set against the award of a Certificate of Completion of Training.

The Working Group would recommend greater consistency between schemes and between universities, for example with respect to the length of time given to doctoral candidates to submit theses. Possibilities to undertake awards on a flexible basis, where appropriate, should be highlighted to candidates.

It is encouraging too, that guidance for the 2008 Research Assessment Exercise explicitly requires panels to take account of career breaks for childbirth and provision of care, along with part-time working, when assessing submissions.¹⁵

Training flexibly

The postgraduate deaneries are supportive of less than full-time training, seeking to integrate less than full-time or flexible training into mainstream, full-time training programmes as far as possible. The Postgraduate Medical Education and Training Board (PMETB) has agreed that a post approved for mainstream, full-time training is also approved for training on a flexible basis. Trainees are currently required to undertake at least 50% of a normal working week.

Article 22 of EU Directive 2005/36/EC on the recognition of professional qualifications, states that '*Member States may authorise part-time training under conditions laid down by the competent authorities; those authorities shall ensure that the overall duration, level and quality of such training is not lower than that of continuous full-time training...*'¹⁶

The UK Order permits part-time training but with the caveat, derived from the 1993 Directive, that at least 50% of specialist training must have been undertaken on a full-time basis, with the weekly duration of part-time general practice training being not less than 50% of weekly full-time training. It is clear that the interpretation of the directive must be clarified by regulators, prior to its coming into force in the UK in October 2007, to ensure that confusion does not militate against possibilities for clinical academics to train flexibly.

The achievement of clinical competencies will, of necessity, take longer in some specialties than others. Although it is important for deaneries to adopt a supportive approach, the Working Group would recommend that trainees should also assess realistically the time commitment required by a particular clinical discipline when selecting specialty choices. It would be helpful if the Academy of Medical Royal Colleges and the PMETB could provide guidance, by specialty, on the maximum length of time which may be spent in training, and the safe, minimum amount of clinical work which may be undertaken to ensure core competencies are attained.

Deaneries may find it easier to accommodate flexible trainees in particular specialties, for example due to the availability of numbers of trainees willing and able to undertake slot-share arrangements. A national database of trainees wishing to job-share in this way, by specialty, may facilitate trainees in making an informed choice.

The Royal Colleges should seek to ensure that the new generation of Academic Clinical Fellows across the UK receives adequate support and encouragement during training. A national cohort development programme could be considered, similar to that already set up for those appointed to the GP posts in round one.¹⁷ As pre-doctoral students, trainees must have access to the career development opportunities offered by the institutions in which they work. Universities must also work with the Royal Colleges and deaneries to ensure that the time limits for the submission of PhD theses are realistic for those wishing to take career breaks or work flexibly, balancing this with the demands of maintaining clinical skills.

Best Practice in Higher Education Institutions

Only 11% of professors working in academic medicine and 13% working in academic dentistry are female, compared to 36% and 45% of clinical lecturers respectively.¹ Such disparity is mirrored in the health service. Data show that of the 32,874 consultants employed in hospitals in England on 30 September 2006, only 8,902, or 27% were women.*¹⁸ A study of a sample of clinical academics working for NHS Scotland revealed that women were less likely to be promoted than their male counterparts, even after experience, part-time working and other factors were controlled.¹⁹

A lack of women at the highest levels in the Health Service and in Higher Education Institutions engenders a fundamental underuse of talent and a lack of motivation amongst women working at less senior academic grades. This has a negative impact on the productivity of the workforce in Medical and Dental Schools and thus on the ability of institutions to contribute to the change and innovation required by the health service. In contrast, a demonstrably 'gender aware' institution fosters satisfaction and commitment from staff, attracting women, and men, to apply for and remain within posts.

The reduction in sickness absence and turnover, which can be achieved by an organisation making visible steps to promote equality and transparency, is of clear benefit to productivity, and therefore ultimately costs. Universities, which invest heavily in staff through training and development, stand to lose this investment on the departure of the staff member. Enhanced retention, for example through adopting policies encouraging women to return to work following maternity leave, can counter this significant drain on resources. At the other end of life and very much later in their career, it is often women who have to care for sick and dying parents. These life events, if not managed sensitively by institutions, can impact badly on members of staff.

Data from the Medical Schools Council show that at 31 July 2006, six Medical and six Dental Schools in the UK had no female clinical professors in post, suggesting that varying HR practices at Medical and Dental Schools mean some institutions are more effective than others at recruiting and retaining women in clinical academia. Data suggest that although universities may formulate policies on equal opportunities, real efforts are required to ensure that these filter down to inform the attitudes of staff. A qualitative study of non-clinical academics working in Higher Education in the UK revealed that many of those questioned had not considered the position and opportunities for under-represented groups.²⁰ This suggests that further efforts must be made to raise the profile of the diversity debate across the sector.

* Data available in Appendix 2.

It is vital that those Medical and Dental Schools experiencing difficulties in attracting and retaining female clinical academics learn from effective practice identified elsewhere. The Medical Schools Council and Council of Heads and Deans of Dental Schools provide fora in which exemplars can be shared and discussed.

Queen's University Belfast established a Gender Initiative in 2000, which has been recognised formally as an example of best practice, winning the 'Opportunity Now' Education Award in 2006.²¹ The university has recognised that flexibility and career enhancement opportunities can lead to enhanced retention of staff, reduced sickness absence and lower rates of staff turnover, all saving money for the organisation and fostering an atmosphere of higher motivation and productivity. Amongst other initiatives, a mentoring scheme has been piloted for academic women and work-life balance procedures have been extended to encompass this group of staff. Work is mainstreamed through the HR and Equal Opportunities directorates, with the Vice Chancellor accountable for the success of the schemes through formal appraisal processes and personal target setting. A dedicated 'Women's Forum' meets monthly to monitor the work of the Initiative. Since 2000, the representation of women on Academic Council has increased by 58% and, as conveners of appointment panels, by 900%.

The University of Sheffield is a further institution leading the way in enhancing career satisfaction for female employees. The University has been named in The Times' list of the top 50 places where women want to work and, similarly to Queen's University, has been identified by Opportunity Now as a Gender, Equality and Diversity Exemplar Employer.^{22, 23} The university launched a Women Academic Returners Scheme in January 2006, which offers substantial financial support to women returning to work following maternity leave. Additional six-month full-time posts are funded, in which staff cover teaching and research activities, freeing women returners to focus exclusively on research activities, assisting them in raising their research profile and publication record. A dedicated Women's Network provides support for women in science, engineering, technology and medicine, allowing them to develop personally and professionally.

These examples demonstrate that those at the highest level in universities need to be persuaded that recruitment and retention of clinical academic staff is of the highest importance. Although many of the larger Schools may have a staff member to deal with issues as they relate to clinical academic staff, consideration should be given to appointing staff with dedicated responsibility for women's issues.

It is vital that issues relating to equal opportunities are not seen simply as for the benefit of a particular group. The career progression of women also affects the career progression of men in clinical academia: a less productive clinical academic workforce has implications for a whole organisation. Both men and women must be engaged with this agenda, to avoid polarisation and stigmatisation.

Queen's University Belfast

The University of Sheffield

Ways forward

Women should be encouraged to see themselves as leaders and should be supported by senior members of staff as they progress. The Medical Schools Council, together with HEFCE Leadership, Governance and Management and the Leadership Foundation for Higher Education, is developing a leadership programme for future deans and heads of Medical and Dental Schools. Women should be actively encouraged to attend. To focus just on senior staff would be to ignore those with the highest career aspirations in lower academic grades: women at these grades should be encouraged to pursue 'mini-managerial' roles. Nurturing leadership and management skills from an early stage in a woman's career, even from undergraduate level, can only empower women to push themselves forward more comprehensively.

Medical and Dental Schools should view themselves not simply as the 'interviewers' but also as the 'interviewees' when assessing the suitability of a clinical academic for a particular post. The 'soft' side of recruitment is important; from showcasing family-friendly initiatives, considering the style of promotional materials or ensuring that positive feedback spreads via word of mouth. Women represent a significant proportion of the potential clinical academic workforce of the future: there is no more significant business case for institutional change.

International Perspective

Colleagues around the world tell us that women continue to be under-represented in academic medicine and dentistry and there are ample objective data confirming this. The steady rise in the proportion of women entrants to Medical and Dental Schools, to the present level where women exceed men, has not been matched by an equivalent rise in the number of women in senior posts in academic medicine or dentistry.²⁴ High quality data on a global scale to explain this disparity are lacking, nor is there good evidence of proven stratagems to tackle these inequalities. The principal hypotheses proposed are that women are disadvantaged by family responsibilities, lack appropriate role models and mentors, spend less time in research and more in teaching, are less productive, are less ambitious and are subject to covert discrimination (the glass ceiling effect). It is also suggested that the disparity is no more than a reflection of the historical under-representation of women in medicine and dentistry, which will disappear with time.²⁵

Whilst the UK data for academic medicine are remarkably similar to those from the USA, within Europe the Scandinavian countries, particularly Finland, seem to display less gender discrimination and take an institutional rather than an individual level approach to offer solutions.²⁶ In European academic medical general practice, colleagues from Scandinavia suggest that women underestimate their own skills, so limiting their own careers, whereas those from Italy and Austria believe family responsibilities are an inhibiting factor. Others suggest that women prefer to study subjects that are less valued in dominant research.²⁷

Women achieve significantly higher grades than men throughout their education, a disparity continued at university. The Todd report found that women performed better than men at undergraduate level and more recent research confirms that this is still so.^{28, 29} No study to date provides support for the suggestion that women in academic medicine or dentistry are less ambitious than men. However women do spend more time in teaching and patient care and are financially disadvantaged, having adjusted for differences in the distribution of work time and productivity.^{30, 31, 32} Given the increasing numbers of women in the medical and dental workforce the continuing disparity at senior level in service settings, in professional organisations, as well as in Medical and Dental Schools is noteworthy.

A substantial proportion of women rank gender discrimination as the principal hindrance to their career in academic medicine. This view is supported by the limited amount of high quality research in this area that provides evidence of prejudice against women by men and women, a situation that is not unique to medicine or dentistry.^{12, 33} Such prejudice appears to be deep-seated, subtle and

more often than not, the unwitting reflection of the cultural and social attitudes of previous generations.

Efforts to close the gender gap have been greatest in the US. The US Association of American Medical Colleges, Women in Medicine programme has published an annual benchmarking report since 1983 and supports academic women in a variety of ways.¹¹ It is disappointing that despite this considerable investment of time, effort and money, it is still the case that fewer American women achieve senior rank than would be expected on the basis of parity between men and women. Academic success among women is little different between the US and the UK. In both countries only approximately 10% of full professors in clinical disciplines are women.

In the UK, considerable emphasis has been placed on the need to support part-time working, flexible career development and institutional child-care provision as a means to improve the position of women in medicine. High profile schemes such as the Athena project have promoted mentorship for female academics. Although initiatives of this kind are likely to improve quality of life, and as such are highly valued, existing evidence to date does not demonstrate that they improve productivity or academic advancement.^{11, 34, 35, 36} There is some evidence that structured training pathways promote equalisation of promotion rates of female and male graduates.³⁷ The new UK academic training pathways would provide an opportunity to test this objectively.

Though the number of women in senior positions in academic medicine and dentistry is slowly increasing, given the present rate of change it will take many years to correct the cumulative deficit. This is unacceptable at a time when academic medicine is in difficulty and the number of women in medicine is increasing. Acknowledging this, the European Union established targets for women's representation in 2001.³⁸ Though it has been argued that this approach will worsen the situation by fostering resentment against women, it is also plausible that it will improve matters by breaking down patterns of behaviour that perpetuate discrimination. Attitude retraining, where male and female senior faculty are taught how to consider and eliminate gender bias in their assessments, does not appear to have been tested against the implementation of quotas or targets as an alternative means to break down long-standing cultural and social barriers, nor against mentorship schemes.

There also does not appear to have been a comprehensive survey of the experiences of men and women in relation to academic medicine with the aim of examining specific hypotheses relating to gender inequities and in view of the balance of published evidence to date, attempting to understand the nature of attitudes that militate against women. The paucity of good data relevant to the UK situation has been highlighted repeatedly by the British Medical Association and by the Royal Colleges.³⁹

The Medical Schools Council recommends that the Royal Colleges and Medical Schools should implement regular monitoring of representation by gender on panels, boards and in faculty positions. These data could be incorporated into the annual Medical Schools Council survey or a separate benchmarking report to be published separately and at regular intervals.

Funding streams should be allocated to test the effect of specific stratagems

on career advancement and academic productivity in women and men: this could in part be incorporated into the new UK academic training schemes. Making use of this unique opportunity to redress the profound paucity of high quality research in this area would be of international importance. Specific interventions that merit objective assessment include formal, informal and multi-faceted mentoring; structured part-time versus full-time training; and randomised comparisons of attitude retraining of senior faculty, institutional quota setting and mentoring.

Conclusions and Recommendations

Whilst the working group was convened to consider the particular needs of women clinical academics, many of its findings and thus conclusions are equally relevant to men wishing to pursue an academic career.

Students

There is an urgent need for Medical and Dental Schools to provide more comprehensive information, particularly about careers in clinical academic medicine and dentistry but also regarding careers in both disciplines more generally. The provision of this information should not simply be limited to the undergraduate period. Careers resources should be accessible at all stages of medical and dental training, including information on application processes, career progression, opportunities and pay scales with respect to different specialties.

Clinical academics are less visible to students than should be the case. Structured opportunities for students to interact with and question clinical academics would help to combat the lack of exposure of students to clinical academics as 'role models' and should be facilitated by Medical and Dental Schools.

Academic staff should be appointed to act as dedicated mentors to students, providing information, support and encouragement to students. Mentorship should not simply be confined to those students approaching completion of their undergraduate training but should be available to students at all stages of the medical or dental course.

Students should have sufficient opportunities to experience different types of research topics and methodologies in a supportive environment.

Students should receive formal, structured instruction in how to teach.

Flexibility

There is a need for the new organisations responsible for junior doctor training to work closely with the funding agencies and the Higher Education Institutions to ensure sufficient flexibility in the system concerning the career stage for entry to academic medicine/dentistry.

There should be recognition that clinical academics may wish to work less than full time at certain stages of their careers, without their career progress being affected.

There should be opportunities for clinical academics to take a career break without detriment, perhaps involving retraining and staged re-entry to their careers.

There should be a dedicated tenure track for clinical academics.

Career tracking should take place through the funding bodies, with sector-wide agreement on how to group the 55 PMETB specialties. The Medical Schools Council is actively engaged in a Working Group, with stakeholders drawn from across the major funders, to harmonise specialty nomenclature and facilitate career-tracking across Fellowships and other awards.

The budget for flexible training should be reinstated in deaneries.

There is a need to make sure that women are nurtured in their aspirations to succeed and encouraged to see themselves as the leaders of the future. It is vital to ensure that those in positions of seniority encourage female colleagues to seek places on panels and committees of influence both within their institution and at a national and international level. The Medical Schools Council, in partnership with the Leadership Foundation for Higher Education and HEFCE Leadership, Governance and Management, is developing a course targeted at future deans and heads of Medical and Dental Schools, aiming to encourage colleagues in these institutions to put themselves forwards for such positions in full knowledge of what such a leadership position would involve. Women should be actively encouraged to participate in this programme.

The following strategies should be adopted to test the efficacy of the proposed measures in encouraging women to enter, and remain within, the clinical academic workforce.

Royal Colleges and Medical Schools should implement regular monitoring of representation by gender on panels, boards and faculty positions. These data could be published as part of the annual Medical Schools Council Clinical Academic Staffing Survey or included in a separate benchmarking document, to be published at regular intervals.

Funding streams should be allocated to test the effect of specific stratagems on career advancement and academic productivity in women and men. The Medical Schools Council understands that data on gender is being collected by both MMC, in assessment of those taking up Academic Foundation Programmes, and by the National Coordinating Centre for Research Capacity Development (NCCRC) in assessing the beneficiaries of Academic Clinical Fellowships, Clinical Lectureships and 'new blood' Senior Lectureships. It is vital that this data collection continues and that efforts are made to ensure the highest quality data.

The international significance of this issue should not be forgotten. An approach should be made by the Medical Schools Council to the European Commission to secure funding for an in-depth, rigorous evidence-based analysis of barriers to the progression of women in clinical academia across member states. A paucity of women in clinical academia, yet with a concomitant increase in female medical and dental students, will affect the ability of a health system to respond to change with the innovation and flexibility required by consumers with ever higher expectations. The EC must be encouraged to recognise this as an economic issue.

Women as leaders of the medical and dental workforce of the future

Future work

Specific interventions that merit objective assessment include formal, informal and multi-faceted mentoring; structured part-time versus full-time training; and randomised comparisons of attitude retraining of senior faculty, institutional quota setting and mentoring.

The Medical Schools Council will continue to monitor the recruitment and retention of women in clinical academic medicine and dentistry through the annual Survey of the UK's clinical academic staffing levels. It is intended that progress against these recommendations be reviewed bi-annually.

Appendices

Appendix 1: Profile of the clinical academic workforce by gender

MEDICINE

a) Clinical academics by grade and gender: 31 July 2006

2006	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer	
	F	M	F	M	F	M
FTE	136.41	1095.27	338.52	958.83	146.55	256.7
Headcount	144	1127	402	1052	183	278
% of total at each grade	11.08%	88.92%	26.09%	73.91%	36.34%	63.66%

b) Clinical academics by grade and gender: change since 2004

Year	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer	
	F	M	F	M	F	M
2004	125.14	1009.14	322.31	1089.73	151.32	296.45
2005	127.25	1084.10	326.26	1003.11	151.25	273.19
2006	136.41	1095.27	338.52	958.83	146.55	256.70
Actual change since 2004	11.27	86.13	16.21	-130.90	-4.77	-39.75
% change since 2004	9.01%	8.53%	5.03%	-12.01%	-3.15%	-13.41%

Source data: The Medical Schools Council and Council of Heads and Deans of Dental Schools¹
All figures given as FTE.

c) Clinical academics by specialty and gender at 31 July 2006

Specialty	Academic Grade						F as % of total
	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer		
	F	M	F	M	F	M	
Anaesthetics	0.00	21.77	9.00	29.76	1.00	5.00	15%
General Practice	16.05	42.20	32.53	64.56	18.40	12.15	36%
Infection/ Microbiology	5.00	26.28	8.35	23.00	2.50	6.00	22%
Medical Education	0.00	5.10	4.05	4.58	3.40	6.00	32%
Oncology	4.30	41.70	13.80	35.20	0.60	4.00	19%
Obstetrics and Gynaecology	5.00	37.60	16.21	37.41	16.80	6.10	32%
Occupational Medicine	0.00	4.00	3.00	4.20	0.00	0.00	27%
Ophthalmology	3.00	12.82	5.65	11.00	1.60	6.00	26%
Other**	0.00	25.73	9.95	15.40	2.00	9.00	19%
Pathology	10.00	72.00	23.60	68.78	6.40	10.00	21%
Physicians/ Medicine*	47.10	449.57	98.91	345.90	46.53	84.80	18%
Paediatrics and Child Health	9.98	67.00	30.30	72.38	11.70	24.00	24%
Public Health Medicine	10.00	56.21	30.67	52.71	9.34	9.15	30%
Psychiatry	16.98	110.00	34.90	88.67	13.18	32.50	22%
Radiology	6.00	14.00	2.60	13.18	3.60	0.00	31%
Surgery	3.00	109.28	15.00	92.10	9.50	42.00	10%
Total	136.41	1095.27	338.52	958.83	146.55	256.70	21%

DENTISTRY

a) Clinical academics by grade and gender: 31 July 2006

2006	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer	
	F	M	F	M	F	M
FTE	12.00	81.70	44.70	123.48	75.88	93.75
Headcount	12	84	53	148	141	196
% of total at each grade	12.81%	87.19%	26.58%	73.42%	38.06%	55.27%

b) Clinical academics by grade and gender: change since 2004

Year	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer	
	F	M	F	M	F	M
2004	9.90	81.59	41.34	125.06	78.11	92.15
2005	12.00	84.50	43.25	118.95	79.19	95.56
2006	12.00	81.70	44.70	123.48	75.88	93.75
Actual change since 2004	2.10	0.11	3.36	-1.58	-2.23	1.60
% Change since 2004	21.21%	0.13%	8.13%	-1.26%	-2.85%	1.74%

c) Clinical academics by specialty and gender: 31 July 2006

Specialty	Academic Grade						F as % of total
	Clinical Professor		Clinical Reader/ Senior Lecturer		Clinical Lecturer		
	F	M	F	M	F	M	
Endodontics	0.00	3.00	1.00	1.95	2.40	4.08	27%
Dental General Practice	0.00	0.00	0.00	0.00	1.80	4.28	30%
Oral Microbiology	0.00	1.00	0.00	3.00	0.00	0.00	0%
Orthodontics	0.00	9.00	4.50	14.95	4.10	4.10	23%
Oral Medicine	2.00	10.00	1.86	3.00	1.18	2.30	25%
Oral and Maxillofacial Surgery	0.00	3.00	3.40	6.18	1.90	1.90	32%
Oral Surgery	1.00	5.00	1.00	6.80	9.50	11.10	33%
Other**	0.00	3.30	2.90	6.40	5.80	6.70	35%
Periodontics	1.00	4.00	4.64	6.60	10.10	7.70	46%
Oral Pathology	0.00	4.00	2.00	5.00	1.10	2.20	22%
Paediatric Dentistry	3.00	6.00	7.00	5.80	6.40	5.60	49%
Dental Public Health	4.00	5.40	5.60	7.50	4.50	5.30	50%
Prosthodontics	0.00	2.00	1.20	16.40	6.80	7.40	24%
Oral Radiology	0.00	1.00	2.00	2.20	3.10	0.32	59%
Restorative Dentistry	1.00	24.00	7.60	37.50	18.80	30.36	23%
Surgical Dentistry	0.00	1.00	0.00	1.00	0.40	0.40	14%
Total	12.00	81.70	44.70	124.48	77.88	93.74	31%

* For the purposes of Medical Schools Council data collection, Physicians/ Medicine includes the following specialties: allergy; audiological medicine; cardiology; clinical genetics; clinical neurophysiology; clinical pharmacology and therapeutics; dermatology; endocrinology and diabetes mellitus; gastroenterology; general medicine; genitourinary medicine; geriatric medicine; haematology; immunology; neurology; nuclear medicine; paediatric cardiology; palliative medicine; rehabilitation medicine; renal medicine; respiratory medicine; rheumatology; tropical medicine.

** 'Other' includes all those specialties not included in the specialty categories used for the Medical Schools Council and Council of Heads and Deans of Dental Schools data collection.

Appendix 2: Number of consultants and GPs relative to medical student intake: 1987–2006

Year	All Consultants*	Male	Female	% female consultants	Total GPs**	Male GPs	Female GPs	% female GPs	Medical student intake	Male	Female	% Female medical students
1987	13,992	12,048	1,944	14%	–	–	–	–	–	–	–	–
1988	14,328	12,251	2,077	14%	27,420	20,915	6,505	24%	–	–	–	–
1989	14,847	12,591	2,256	15%	27,749	20,863	6,886	25%	–	–	–	–
1990	15,520	13,102	2,418	16%	27,523	20,519	7,004	25%	–	–	–	–
1991	15,838	13,298	2,540	16%	27,888	20,365	7,523	27%	3,191	1,615	1,576	49%
1992	16,263	13,575	2,688	17%	28,185	20,332	7,853	28%	3,263	1,542	1,721	53%
1993	16,598	13,761	2,837	17%	28,460	20,243	8,217	29%	3,374	1,654	1,720	51%
1994	17,099	14,029	3,070	18%	28,735	20,179	8,556	30%	4,514	1,701	1,813	52%
1995	18,401	14,943	3,458	19%	28,869	20,007	8,862	31%	3,486	1,777	1,709	49%
1996	20,402	16,334	4,068	20%	29,116	19,925	9,191	32%	3,594	1,711	1,883	52%
1997	21,474	17,034	4,440	21%	29,389	19,909	9,480	32%	3,749	1,697	2,052	55%
1998	22,324	17,578	4,746	21%	29,697	19,802	9,895	33%	3,735	1,690	2,045	55%
1999	23,321	18,229	5,092	22%	29,987	19,815	10,172	34%	3,972	1,748	2,224	56%
2000	24,401	18,882	5,519	23%	30,252	19,744	10,508	35%	4,300	1,826	2,474	58%
2001	25,782	19,745	6,037	23%	30,685	19,721	10,964	36%	4,713	1,959	2,754	58%
2002	27,070	20,530	6,540	24%	31,182	19,673	11,509	37%	5,277	2,123	3,152	60%
2003	28,750	21,588	7,162	25%	32,593	20,003	12,590	39%	6,030	2,403	3,627	60%
2004	30,650	22,835	7,815	25%	34,085	20,311	13,774	40%	6,294	2,513	3,781	60%
2005	31,993	23,640	8,353	26%	35,302	20,633	14,669	42%	6,314	2,651	3,663	58%
2006	32,874	23,972	8,902	27%	35,369	20,431	14,938	42%	6,451	2,662	3,789	59%

* Includes dental specialties.

** Figures exclude GP Retainers.

Source data: The Information Centre, Medical and Dental Workforce Census; Higher Education Funding Council for England; Department of Health, London.

All figures are for Hospital and Community Health Services in England only and are presented as headcount.

References

1. Margerison, C, Morley, H. *Clinical Academic Staffing Levels in UK Medical and Dental Schools*. Medical Schools Council and Council of Heads and Deans of Dental Schools London 2007.
2. HEFCE figures (2005/6 academic year). Available at www.hefce.ac.uk.
3. The Council of Heads and Deans of Dental Schools (2007). Data on the intake of students to Dental School, by gender, for the 2005/6 academic year. Unpublished.
4. Peters J, Lane N, Samuels G. SET Fair: *A Report on Women in Science, Engineering and Technology from The Baroness Greenfield CBE to the Secretary of State for Trade and Industry*. Department of Trade and Industry London 2002.
5. The Law Gazette. (22 March 2007) *Women on top?* Available at www.lawgazette.co.uk.
6. Silke A. *Clinical Academic Staffing Levels in UK Medical and Dental Schools*. The Council of Heads of Medical Schools and Council of Heads and Deans of Dental Schools London 2005.
7. The Independent. (2 February 2004) *The Medical Timebomb: 'Too many women doctors. Head of Britain's leading training college says profession will lose status.'*
8. The Medical Schools Council. (2007) Data on the frequency of intercalation and degree classification amongst medical students. Unpublished.
9. *Developing Women in Leadership Roles within Academic and NHS Dentistry*, Report of the First National Meeting of Senior Women in Dentistry in Academia and the NHS (2006).
10. *Doctors in flexible training: Equitable Pay for flexible medical training*. NHS Employers (2005). www.nhsemployers.org/pay-conditions/pay-conditions-468.cfm [accessed 23 April 2007].
11. Magrane D, Lang J, Alexander H. *Women in U.S. academic medicine: statistics and medical school benchmarking*. Association of American Medical Colleges, 2005.
12. Data supplied by members of the Medical Schools Council Working Group (2006).
13. Margerison, C, Morley, H. *Clinical Academic Staffing Levels in UK Medical and Dental Schools*. The Council of Heads of Medical Schools and Council of Heads and Deans of Dental Schools London 2006.
14. *BMA Cobort Study of 1995 Medical Graduates: Tenth Report*. The British Medical Association London 2005.
15. Research Assessment Exercise 2008, Equality briefing for panel chairs, members and secretaries (2005).
16. *Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications*, Official Journal of the European Union 30 September 2005.
17. National Institute for Health Research School for Primary Care Research (personal communication)
18. The Information Centre for Health and Social Care, Medical and Dental Workforce Census (2006).
19. Mavromaras K, Scott A. *Promotion to hospital consultant: regression analysis using NHS administrative data*. BMJ 2006; 332: 148-151.
20. Metcalf H, Rolf H, Stevens P, Weale M. *Recruitment and retention of academic staff in Higher Education*. DFES London 2005. www.dfes.gov.uk/research/data/upload-files/RB658.pdf [accessed 4 April 2007].
21. Queen's University Belfast - Gender Initiative 2006. Business in the Community. www.bitc.org.uk/resources/case_studies/oncsqub2006.html [accessed 4 April 2007].
22. The University of Sheffield. Where Women Want to Work. www.wherewomenwanttowork.com/organisations/information.asp?id=1423 [accessed 28 April 2007].
23. Opportunity Now Exemplar Employers. Business in the Community. www.bitc.org.uk/take_action/in_the_workplace/diversity/gender/opportunity_now/exemplar_employers.html [accessed 23 April 2007].
24. Nonnemaker L. *Women physicians in academic medicine: new insights from cohort studies*. N Engl J Med 2000; 342:399-405.
25. Nickerson KG, Bennett NM, Estes D, Shea S. *The status of women at one academic medical center: breaking through the glass ceiling*. JAMA 1990; 264:1813-1817.
26. Stefanovic, V. *Academic Medicine- Experiences from Finland and Suggestions for the Future*. Croat Med J. 2004; 45(3): 248-53.
27. De Jong, GM., Lagro-Janssen ALM. *A glass ceiling within academic general practice in western Europe: career-inhibiting and facilitating factors for female general practitioners*. Eur J Gen Pract. 2006; 12(4): 183-184.
28. Report of the Royal Commission on Medical Education (Todd Report). London: HMSO 1968.
29. Woolf K, Haq I, McManus C, Higham J, Dacre J *Exploring the underperformance of male and minority ethnic medical students in first year clinical examinations*. Advances in Health Education (in press).
30. Kaplan SH, Sullivan LM, Dukes KA, Phillips CF, Kelch RP, Schaller JG. *Sex differences in academic advancement*. Results of a national study of pediatricians. N Engl J Med 1996; 335:1282-9.
31. Wright AL, Schwindt LA, Bassford TL, Reyna VF, Shisslak CM, St Germain PA, Reed KL. *Gender differences in academic advancement: patterns, causes, and potential solutions in one US College of Medicine*. Acad Med 2003; 78:500-8.
32. Ash AS, Carr PL, Goldstein R, Friedman RH. *Compensation and advancement of women in academic medicine: is there equity?* Ann Intern Med. 2004; 141:205-12.
33. Carr PL, Szalacha L, Barnett R, Caswell C, Inui T. *A 'ton of feathers': gender discrimination in academic medical careers and how to manage it*. J Womens Health (Larchmt). 2003; 12:1009-18.
34. Tesch BJ, Wood HM, Helwig AL, Nattinger AB. *Promotion of women physicians in academic medicine: glass ceiling or sticky floor?* JAMA 1995; 273:1022-25.
35. Schroen AT, Brownstein MR, Sheldon GF. *Women in academic general surgery*. Acad Med. 2004; 79:310-8.
36. Sambunjak D, Straus SE, Marusic A. *Mentoring in academic medicine: a systematic review*. JAMA 2006; 296:1103-15.
37. Smith MA, Barry HC, Dunn RA, Keefe C, Weismantel D. *Breaking through the glass ceiling: a survey of promotion rates of graduates of a primary care Faculty Development Fellowship Program*. Fam Med 2006; 38(7):505-10.
38. 2001/51/EC Council Decision of 20 December 2000 establishing a programme relating to the Community framework strategy on gender equality (2001-2005). Official Journal of the European Communities 19 January 2001.
39. Medical Academic Staff Committee. *Women in Academic Medicine: challenges and issues*. British Medical Association London 2004.

Acknowledgements

The Medical Schools Council would like to thank all members of the Working Group for assistance with the Women in Clinical Academia project. In addition, the Council would like to thank:

Ms Becky Byrne, University of Liverpool
 Dr Susan Burge, University of Oxford
 Ms Lorraine Cullin, Virtual Business Support
 Ms Tania Fisher, British Medical Association
 Professor Michael Goldacre, University of Oxford
 Mr Paul Gill, University of Cardiff
 Dr Rebecca Harris, University of Liverpool
 Dr Kirsty Hill, University of Birmingham
 Ms Nancy Horlick, Academic Unit of Primary Health Care, University of Bristol
 Professor Amanda Howe, University of East Anglia
 Dr Jane Kidd, University of Warwick
 Mr Trevor Lambert, University of Oxford
 Ms Finola Lynch, University of East Anglia
 Mr Matthew Mak, Imperial College London
 Professor Marion McMurdo, University of Dundee
 Dr Alan Montgomery, Academic Unit of Primary Health Care, University of Bristol
 Ms Helen Morley, Medical Schools Council
 Dr Frances Rapport, Swansea University
 Dr Katrina Turner, Academic Unit of Primary Health Care, University of Bristol
 Dr Poppy Turner, Independent educational researcher
 Ms Naomi Tyrell, University of Warwick
 Professor Valerie Wass, University of Manchester
 Dr Deborah White, University of Birmingham

And all those clinical academics who took the time to respond to the Medical Schools Council questionnaire on career progression. Many thanks also to the students who participated in the twelve focus groups run across the UK.

A particular and very important contribution to supporting the working of the Group and the drafting of the Report was made by Ceri Margerison from the Medical Schools Council.

With special thanks to Professor Isobel Allen, Emeritus Professor of Health and Social Policy, Policy Studies Institute.

Finally, the Working Group would also like to thank the Royal Society of Medicine for hosting the conference to launch the report: 'Women in Clinical Academia: Attracting and Developing the Medical and Dental Workforce of the Future', on 18 June 2007.

The Medical Schools Council would like to acknowledge the support of the Higher Education Funding Council for England, Leadership, Governance and Management Fund, in contributing to the production costs of the report and associated conference.

Published by the Medical Schools Council
 © 2007 The Medical Schools Council, London

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording or any other information storage and retrieval system, without express prior permission from the publisher.

Produced on behalf of the Medical Schools Council
 by Aldridge Press, London

Printed by MWL Print Group, Pontypool, S Wales