

Staffing issues in academic medicine and dentistry: The case of non-clinical researchers and clinical academics

Tom Sastry – Higher Education Policy Institute

1. This short paper has been prepared by HEPI in the course of its review of relations between the higher education sector and the NHS. While that work was in progress the Department of Health produced its consultation paper *Best Research for Best Health*¹, and this report covers ground relevant to the DH proposals.. It argues that it would be a mistake to prioritise clinical research capability at the expense of addressing pressing staffing issues affecting non-clinical researchers in the biomedical sciences and suggests that it is important that the latter be addressed alongside the former.
2. A more detailed account of the analysis which supports this conclusion is attached as an annex to this paper.
3. In 2004 the Council of Heads of Medical Schools published a report into clinical academic staffing in the UK². The report concluded that numbers of clinical academics were falling and implied that they were, or would shortly be, at unacceptably low levels.
4. There is clearly concern in official circles around clinical *research*. It has frequently been observed that the NHS – a planned, near-universal, system of healthcare dedicated to providing equity of care – potentially offers an unrivalled environment for clinical research. There is clearly concern that this potential is not being exploited as well as it might. In 2004, the Government announced the establishment of the UK Clinical Research Collaboration (www.ukcrc.org) with the aim “to establish the UK...as a world leader...in clinical research by harnessing the power of the NHS”
5. In July 2005 the Department of Health launched a consultation³ on proposals to change the way it funds hospitals for their research activities to reflect patient involvement in studies rather than the historical distribution of resources. The document also proposes the establishment of a virtual National Institute for Health Research whose activities will include the establishment of a dedicated faculty of clinical researchers tasked with ‘delivering the research needs of the NHS’ and the establishment of a group of Academic Research Centres designed to ‘act as the leaders of scientific translation’. This is a serious package of measures aimed to improve UK clinical research.
6. It is important that the current focus upon clinical research capacity is not at the expense of other measures needed to sustain the UK’s strength in biomedical research. An analysis of the staffing of departments of clinical medicine suggests that clinical academic numbers may not be the most pressing staffing issue facing UK medical schools. Across the sector, 73 per cent of staff on ‘teaching’ grades (lecturer, senior

¹ Consultation closes on 21 October. Whilst it remains live, the consultation document is available at <http://www.dh.gov.uk/Consultations/LiveConsultations/fs/en>

² Slike (2004) Clinical Academic Staffing Levels in UK Medical and Dental Schools (CHMS) is available on the CHMS website

³ Department of Health (2005) Best Research for Best Health available at <http://www.dh.gov.uk/Consultations/fs/en>. Consultation closes 21 October 2005.

lecturer/researcher and professor) are clinicians and in no major medical school are fewer than 55 per cent of such staff clinicians⁴. In dentistry, the proportions of clinical staff are higher.

7. In contrast to the large proportion of teaching staff who are clinicians, there are very large numbers of non-clinical researchers on researcher grades working in UK medical schools. These staff, most of whom will be postdoctoral research assistants employed on short-term contracts have little relatively prospect of moving into teaching (or senior research) posts because of the limited number of such posts available to non-clinical staff.

Table 1: Staff in departments of clinical medicine (HESA cost centre 01)

	Clinical	Non-clinical	Total
Professors	1271	590	1861
Senior lecturer/researcher	1593	1082	2675
Lecturer	1947	1028	2975
Researcher	491	8551	9042
Other	808	655	1463

Source HESA staff record 2002-03

8. It would be extremely unfortunate if, just as the Government launches a concerted effort to improve the clinical research capability within the NHS, the successes of basic biomedical science were to be undermined by the absence of career opportunities for laboratory researchers. Providing career opportunities for non-clinical researchers, who are largely responsible for the UK's very strong performance in biomedical research, is arguably a higher priority than increasing the clinical presence in UK medical schools – presence which already seems well established. A far-sighted policy would recognise the interdependence of clinical and non-clinical research capability and ensure that the latter is encompassed by initiatives designed to strengthen the former. In practice this would mean allocating some of the resources earmarked for developing clinical research capacity to the development of new career opportunities for the best postdoctoral researchers in biomedical subjects⁵.

9. Analysis of the funding sources of staff in UK medical schools suggests that there may be some justice in such an approach. It is noticeable that UK medical charities and research councils, generally thought of as research funders fund 33 per cent of lecturer grade clinical staff. It is equally noteworthy that charities and research councils fund more

⁴ See **The Education and Training of Medical and Health Professionals in Higher Education Institutions** available at www.hepi.ac.uk. Publication due October/November 2005

⁵ We are not the first to identify this problem. Sir Gareth Roberts' Review *SET for Success* identified the importance of creating a career structure for young research professionals. What distinguishes non-clinical researchers in medical schools is the lack of academic posts because faculty grade posts go to clinicians – in other subjects the opportunity to move into academic posts with teaching and research responsibilities keeps promising young researchers in research. The need for senior 'research only' posts for laboratory researchers in biomedical fields is therefore particularly urgent. *SET for Success* is available on the website of HM Treasury <http://www.hm-treasury.gov.uk/media/152/F0/ACF616.pdf>

clinicians at lecturer grades than at researcher grades. It is probable that some of these staff are fulfilling research-only roles whilst formally occupying lecturing positions. But if charities - and possibly research councils - are funding large numbers of staff with teaching responsibilities, then this makes them important supporters of clinical education, which would mean - to put it another way - that research funds are subsidising clinical teaching.

Academic and research staff in clinical medicine and dentistry

This annex looks at the profile of staff in university departments of medicine and dentistry in UK universities and concludes that there is a worrying lack of career opportunities for non-clinical researcher grade staff.

Academic staff

1. Table 1 shows staff in departments of clinical medicine broken down by staff grade and clinical status. Clinical staff outnumber non-clinical staff in those grades associated with the traditional 'teacher researcher' role. Just over half of all staff however are on researcher grades and these staff are overwhelmingly non-clinical. Of course, staff grade is not a perfect indicator of job role and many clinical lecturers are highly active in research but even so this indicates that medical research in UK universities depends extremely heavily upon non-clinical researchers in research posts.

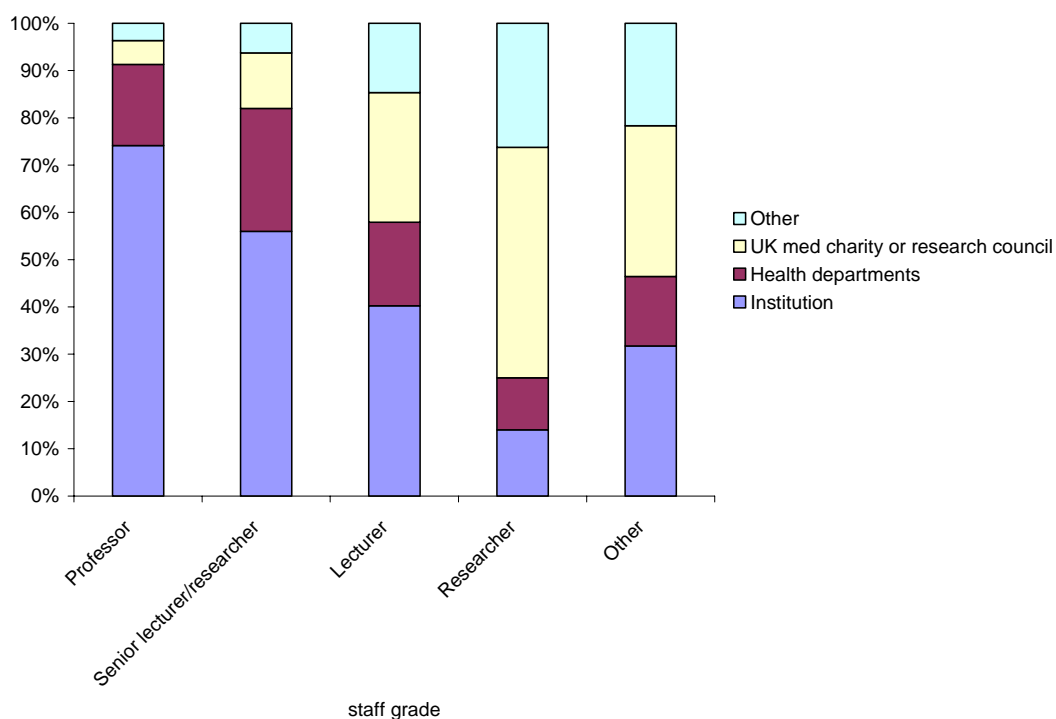
Table 1: Staff headcount in departments of clinical medicine (HESA cost centre 01) 2002-03

	Clinical	Non-clinical	Total
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2. The fact that the number of researcher-grade staff is so high reflects the availability of grants for medical research. That grant funders are behind the levels of researcher-grade posts in UK medical schools is apparent in figure 2a which shows that only a quarter of these posts are primarily funded by the university or medical school or by the relevant health department.

Figure 2a Principal funding sources for staff in HESA cost centre 01 by grade (clinical medicine)



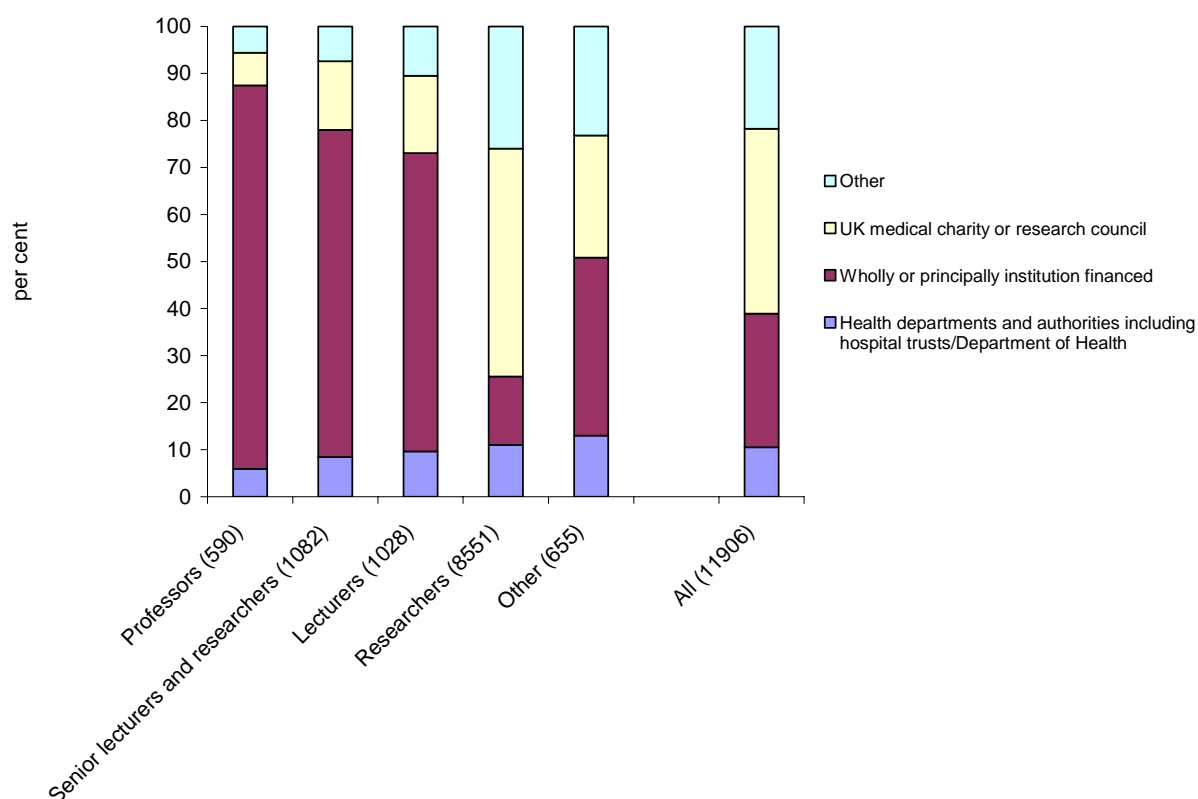
Source HESA staff record 2002-03

3. The majority of academic staff in departments of clinical medicine are non-clinical. As figure 2b (below) shows, the great majority of these, however, are researcher-grade staff, predominantly funded by sources outside the institution and the NHS. This reflects the very high levels of grant-funded research in medicine.

4. It seems safe to assume that this large group non-clinical researchers will struggle to obtain lecturing posts in medical departments as there are relatively few of these available for non-clinical staff. It will be interesting to see whether this has an impact upon career structures: if this state of affairs persists, institutions may well come under pressure to create more senior research posts in order to retain experienced staff.

5. The posts of non-clinical lecturing staff are overwhelmingly funded by the institution itself, implying a high degree of job security (because employment is not deemed to be linked to the continuation of external funding).

Figure 2b Principal funding sources for non-clinical staff in HESA cost centre 01 (clinical medicine) by grade



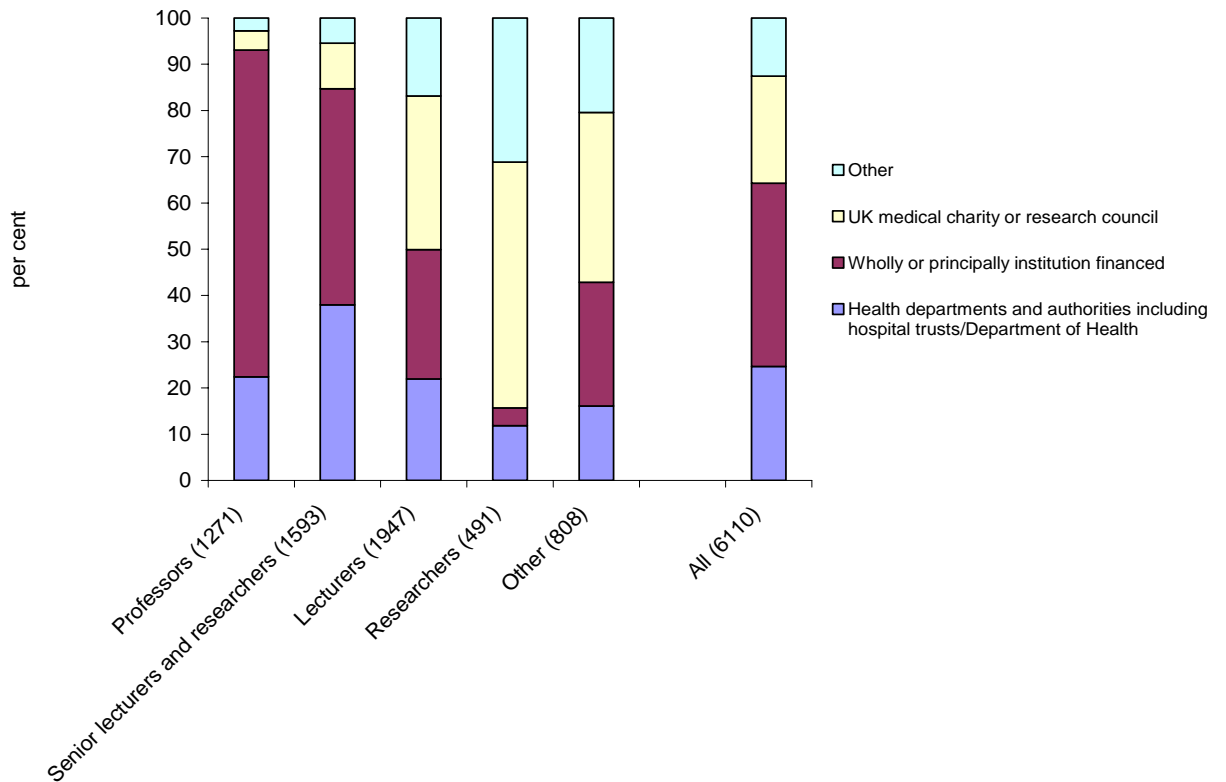
Source HESA staff record 2002-03

6. As might be expected, the NHS is much more prominent as a funder of clinical staff. It is noticeable that UK medical charities and research councils, generally thought of as research funders fund 33 per cent of lecturer grade clinical staff. It is equally noteworthy that charities and research councils fund more clinicians at lecturer grades than at researcher grades. It is probable that some of these staff are fulfilling research-only roles whilst formally occupying lecturing positions but if that charities and possibly research councils are funding large numbers of staff with teaching responsibilities this makes them important supporters of clinical education, which would mean - to put it another way - that research is subsidising clinical teaching.

7. The great majority of clinical staff are on traditional 'teaching grades'. Curiously, of the 491 clinical 'researchers' counted by HESA in 2002-03, 268 are employed at the University of Cambridge⁶.

⁶ This illustrates the difficulty with the indicators used in these analyses. It is straightforward to identify Cambridge as unusual in this respect and to surmise that it may differ from other medical schools in the way in which it organises and funds its teaching and research. It is, however, impossible to ascertain from the statistics what form this difference might take!

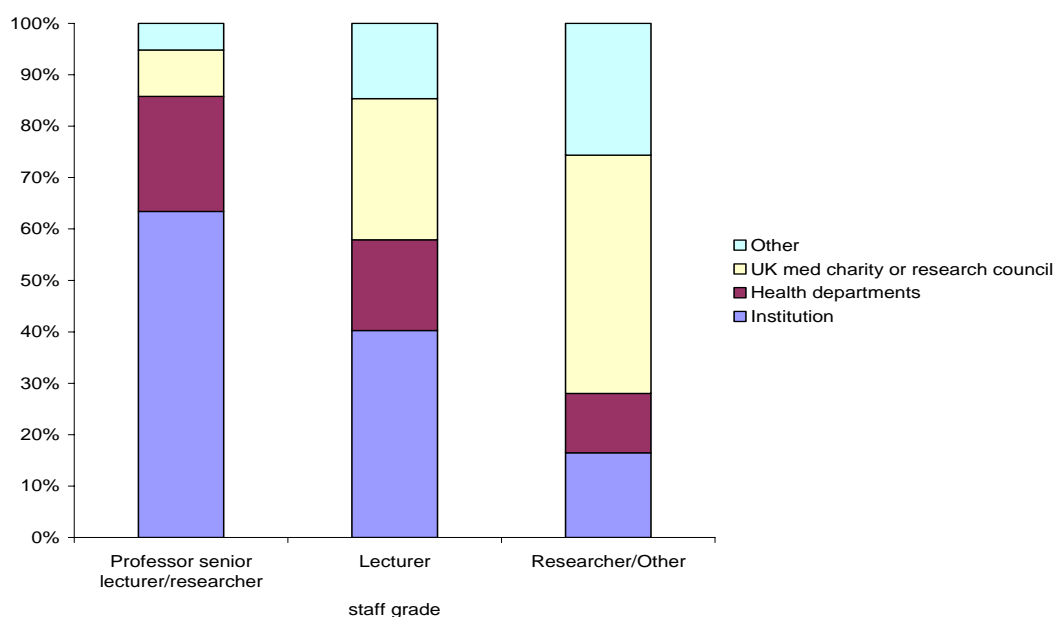
Figure 2c Principal funding sources for clinical staff in HESA cost centre 01 (clinical medicine) by grade



Source HESA staff record 2002-03

8. Two clear messages emerge from these data. The first is that there appears to be a straightforward relationship between seniority and the source of funding for one's post, with more senior staff being more likely to be funded by the NHS or the institution and more junior staff more likely to be funded from other sources. The extent to which this is so comes out very clearly if the data is shown in a simplified form.

Figure 2d Simplified presentation of principal funding sources for staff in HESA cost centre 01 (clinical medicine) by grade



Source HESA staff record 2002-03

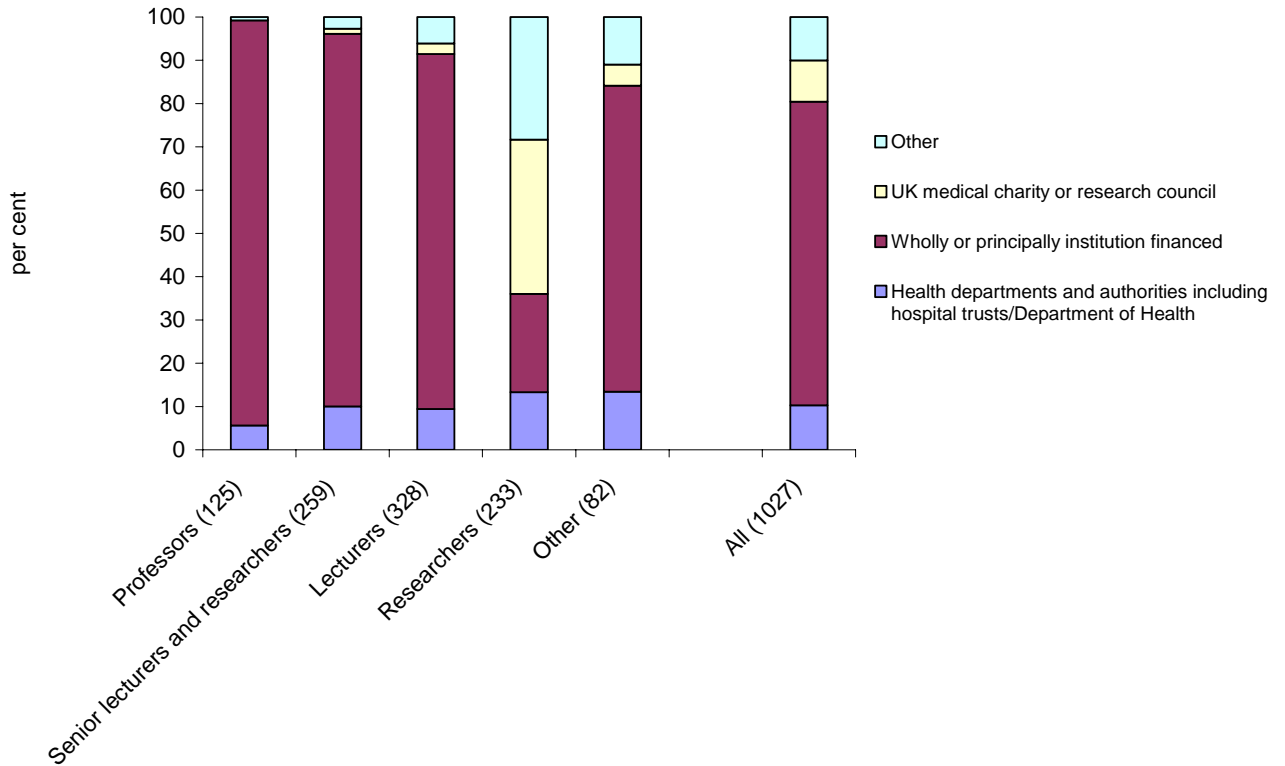
9. The second clear message is that almost half of the academics in medical schools are non-clinical staff on researcher grades. This is consistent with a separation of research from teaching and the association of the former with non-clinical and the latter with clinical staff.

10. This raises an interesting question. In the HE sector generally, research is strongly associated with status (although this does not always translate into higher remuneration). In medicine, to a far greater extent than elsewhere, research is undertaken by a very large group of specialists whose job security, pay and (because of the shortage of non-clinical lecturing or senior researcher posts) career prospects fall well below those of their clinical colleagues. Given the extent to which research drives decision-making within the modern university, it will be interesting to see whether this situation is sustainable or, if not, what steps will be taken by institutions to provide career tracks for non-clinical research professionals.

Staff in clinical dentistry

11. The pattern of funding for academic posts in dentistry differs markedly from that in medicine. Majorities of both clinical and nonclinical staff are funded principally by the institution. As in medicine, a majority of researcher grade staff are supported by funders outside the HE and health sectors but researchers are a relatively small group amongst dental academics so this does not have the same impact upon the population as a whole.

Figure 3: Principal funding sources for staff in HESA cost centre 02 (clinical medicine) by grade



Source HESA staff record 2002-03

12. It might be expected that research charities and research councils would fund a higher proportion of medical staff than dental staff owing to the exceptionally high levels of research funding available in medicine. It is also clear, however, that it is much less common for clinical academics in dentistry than for their counterparts in medicine to be funded by the NHS or the appropriate health department. Dentistry, in short, resembles a 'normal' academic subject which looks to the HE funding system for support; it does not have the exceptional levels of investment from the health sector, government science budget and charitable sector which characterise medicine; neither is its teaching activity funded directly the NHS as is that of nursing.

Table 4: Funding source (per cent) in clinical medicine and dentistry by clinical status

	Clinical Medicine			Clinical Dentistry		
	Clinical	Non-clinical	All	Clinical	Non-clinical	All
Institution	40	28	32	82	56	70
Health department/NHS/Regional health	25	11	15	12	8	10
UK research charity or research council	23	39	34	1	20	10
Other	13	22	19	5	16	10
	100	100	100	100	100	100

Source HESA staff record 2002-03

13. In general, dental schools are less well resourced than medical schools, partly as a consequence of the factors discussed in the previous paragraph. Levels of expenditure per student and staff student ratios are lower⁷. On average, however, an even higher proportion of staff on teaching grades are clinicians in dentistry than in medicine, which suggests that dentistry retains its identity as a clinical subject even if the way it is financed is in many ways closer to the academic mainstream than it is to medicine. What is more, unlike medical schools, most dental schools do not have very large numbers of non-clinical researchers and are, therefore unlikely to face the same pressure to dilute the clinical presence in their faculties in order to accommodate the career aspirations of important research staff.

Clinical and non-clinical academics

14. The predominance of non-clinical staff in researcher roles indicate that – as one would expect – the performance of UK biomedical research depends massively upon non-clinical staff: 95 per cent of staff on researcher grades are non-clinical and these non-clinical researchers represent 47 per cent of all FTE staff in clinical medicine⁸. Clinical education is well-resourced by the standards of the HE sector but non-clinical researchers are not particularly well-paid. The average salary for researcher grade staff in clinical medicine in 2003-4 was £27300 and, given that the ratio of FTE non-clinical researchers to FTE non-clinical staff on teaching and senior researcher grades higher than 1:3⁹, it is reasonable to assume that these staff do not have good prospects for career progression. By contrast, teaching roles are still largely clinical: in 2002-03, a large majority (73 per cent) of staff at lecturer, senior lecturer and professorial grades were

⁷ See forthcoming HEPI report 'The Education and Training of Medical and Health Professionals in Higher Education Institutions'

⁸ Using a part-time conversion factor of 0.5. This gives a total of 16818 FTE staff in HESA cost centre 1 (clinical medicine) and 7958 FTE nonclinical researcher grade staff.

⁹ In 2002-03 there were 2558 FTE nonclinical staff on lecturer, senior lecturer, senior researcher and professorial grades compared to 7958 FTE staff on researcher grades.

clinicians. Even more strikingly, in no major medical school were less than 55 per cent of the staff on these grades clinicians¹⁰.

¹⁰ In May 2004, the Council of Heads of Medical Schools (CHMS) produced evidence that clinical academic numbers were in decline both in absolute terms and as a proportion of academic staff in medical schools. Slike (2004) Clinical Academic Staffing Levels in UK Medical and Dental Schools (CHMS) is available on the CHMS website http://www.chms.ac.uk/fchms_pubs.html It is recommended for those seeking a different perspective on the data discussed in this section as it arrives at very different conclusions from this report.