



research training in the  
healthcare professions





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# foreword

The UK Council for Graduate Education was established in 1994 to promote the interests of graduate education in all disciplines in higher education institutions. The Council has over 120 institutional members. The Council promotes a series of activities, workshops, conferences and seminars in support of its mission and also commissions reports on specific topics. This report is the eleventh in a series of publications investigating key issues in graduate education.

The current report is the result of work undertaken by a group of experts convened by Professor Gerry McKenna, Vice-Chancellor and President of the University of Ulster. The group has had the opportunity of discussing and testing its ideas with a wide range of colleagues both formally and less formally in the context of the UKCGE events. The Council is grateful to all those who gave up their time to the project and to the group and its Chair, Professor McKenna, for preparing this report for publication.

The Council is pleased to recognise and acknowledge the fundamental importance of research and research training in the Healthcare Professions. This commitment will continue into the future and will be reflected in the activities of the Council.

As in many aspects of postgraduate research, the environment is changing rapidly and new challenges are arising almost daily. This is certainly the case in the Healthcare Professions. This report articulates and responds to many of these changes and challenges and will I hope inform discussion and provide a focus for debate in order to establish a firm foundation for development within the Healthcare Professions.

*Professor Howard Green  
September 2003  
Chair, UK Council for Graduate Education*

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# preface

The last two decades have seen unprecedented changes in UK higher education, one of which has been the rapid integration and development of departments of nursing and allied health professions within higher education institutions. A recent report by Universities UK (Partners in Care: Universities and the NHS, Universities UK, 2003) highlighted the unique contribution that universities now make to the National Health Service, through training staff in medicine, dentistry, and the healthcare professions, through research and development, and, ultimately, in enhancing patient care. In spite of the progress to date, academic healthcare departments still face considerable challenges, the most important of which is to develop their research base and research capacity, against a legacy of limited support and the absence of a research ethos in many professional areas. This is an important issue, for not only are the healthcare professions expected to demonstrate participation in the scholarly and research activities that represent the *sine qua non* of any area with claims to be represented within the academy, but additionally, contemporary healthcare is expected to be evidence-based:

*'The methodologies applied to biomedical and health services research have matured dramatically over the past three decades. Effectiveness, efficiency, and efficacy of clinical practice has been carefully examined in focused areas and is under increasing scrutiny to ensure that the right procedure is delivered to the right person at the right time'*

(Smith K.P.D., 1996, Evidence-based management in healthcare.  
In: Peckham M., Smith, R. (Ed.s) Scientific Basis of Health Services, BMJ Publishing, London)

This represents a particular challenge for the healthcare professions, and led in part to the establishment in 2000 of the joint Department of Health/Higher Education Funding Council for England Task Group 3, to consider the issues of research in nursing and the allied health professions, and how this area might be developed. In parallel with the launch of the Task Group 3 Report in late 2001, the UK Council for Graduate Education established a new Working Group to consider the particular research training needs of the healthcare professions from a UK-wide perspective. Through its membership, the Working Group represented a cross-section of the main healthcare professions (including nursing, physiotherapy, occupational therapy, speech and language therapy, radiography, podiatry), representatives of relevant professional bodies, the health service, and the Medical Research Council, and brought to its task a wide range of professional and academic experience.

The following report aims to summarise our work and deliberations over the last year or so, and to provide an overview of current practice and opinion within the field. Although primarily prepared for the UK Council for Graduate Education and its member institutions, we believe it has relevance – and clear recommendations – for stakeholders well beyond the academy. In particular, we saw that the current situation within the healthcare professions would change little without wholehearted commitment (matched with adequate resources from all relevant stakeholders) to the development of research capacity in these areas.

In completing our work, we were impressed with the level of enthusiasm shown by relevant staff in member institutions, many of whom were already involved in innovative courses and collaborations to underpin the development of research training in the healthcare professions. In addressing our task, we consulted widely, both formally and informally, and we would like to acknowledge the support we received from those individuals, institutions and various bodies who took the time to share their experience and opinions, and thus helped us refine our thoughts and recommendations, and particularly those who completed questionnaires distributed as part of our formal consultation.

I would also like to record my personal thanks to all the members of the Working Group who, despite the demands of extremely busy professional lives, gave freely of their time and personal resources to complete the task which faced us. Particular thanks are due to Professor Dave Baxter who acted as secretary to the group, and undertook the drafting of the final report and thus ensured the project came to a successful conclusion.

Finally, it is accepted that nothing stands still in the higher education sector; if anything, the pace of change within the healthcare area is probably even more hectic. Indeed, we recognised that even over our brief lifetime as a Working Group, there were significant changes unfolding (e.g. changes to the Research Assessment Exercise, and the HEFCE consultation on Improving Quality of Research Degree Programmes) which will have profound effects upon research training within this area, and indeed more widely. This notwithstanding, we hope that our report will provide a useful starting point in addressing the challenges which we all face in further developing the research base within the healthcare professions, and particularly in developing research training.

*Professor Gerry McKenna  
September 2003  
(Vice-Chancellor and President, University of Ulster)*

# 1. introduction

- 1.1 This report summarises the work and recommendations of the UK Council for Graduate Education's Working Group on Research Training in the Healthcare Professions, which was established in 2001 to consider the issue of research training for postgraduate research students in the nursing and allied health professions. The Working Group was chaired by Professor Gerry McKenna, Vice-Chancellor and President, University of Ulster; other group members were: Professor Annie Anderson, University of Dundee; Professor Cliff Bailey, NHS R&D Office; Professor David Baxter, University of Ulster, and Convenor for the UK Council for Graduation Education; Ms Tracy Bury, Chartered Society of Physiotherapy and World Confederation for Physical Therapy; Dr Mike Davies, Medical Research Council; Professor Pam Enderby, University of Sheffield; Dr Irene Ilott, College of Occupational Therapy; Professor Alison Kitson, RCN Institute; Professor Jackie Oldham, University of Manchester; Professor Julius Sim, Keele University; Dr Wesley Vernon, Society of Chiropodists and Podiatrists; and Professor Pat Williams, Anglia Polytechnic University and University of East Anglia (Appendix A).
- 1.2 For its purposes, the Working Group considered 'Healthcare Professions' to be defined as the Nursing professions and those Allied Health Professions represented by the Health Professions Council (HPC): i.e. arts therapists, chiropodists/podiatrists, clinical scientists, dieticians, medical laboratory technicians, occupational therapists, orthoptists, paramedics, physiotherapists, prosthetists and orthotists, radiographers, and speech and language therapists. We recognised that while these groupings had much in common, there were also key differences between professional groups in terms of roles, autonomy, culture, and, perhaps most importantly in relation to this report, their research training needs. This notwithstanding, the Group believed there was a sufficient degree of common cause in relation to the latter to justify the relevance of its work. While consideration of research training in developing areas such as osteopathy and chiropractic, or disciplines with more established research traditions such as medicine and dentistry, did not form part of the remit of the Working Group, it was recognised that some of the group's discussions and final recommendations might have resonance for these areas.
- 1.3 The Working Group agreed its terms of reference as: to review the particular issues and problems associated with research training for the healthcare professions; to review the current state of research development in these areas in higher education institutions; to survey



and identify examples of current best practice in the field, particularly in relation to effective delivery of research training, collaborative arrangements, interdisciplinary initiatives, funding etc; and, as far as was possible, to make recommendations in respect of the development of research training for the healthcare professions, particularly in relation to models for research training for the healthcare professions, funding arrangements in support of such initiatives, and models for collaboration between the NHS, DOH, research councils, professional statutory bodies, and HEIs. The Working Group met for a series of half day meetings over the course of just over a year, reviewed relevant data from the RAE 2001, and carried out a survey of member institutions to investigate current practice and canvas opinion with respect to the research training of nursing and allied health professionals; in addition, the Group consulted widely on its draft recommendations, informally through UK Council workshops, meetings, and newsletter, and formally through a questionnaire-based survey of member institutions, and written consultation with relevant key stakeholders.

- 1.4 The timing of the current initiative was considered important by the Working Group for several reasons. In the first instance, graduate education in the UK has undergone significant change since the 1980s, with rapid expansion and development of provision in several key areas, including the nursing and allied health professions. While in part this had resulted from the move to graduate-level entry within a number of the larger healthcare professions ('diplomate' entry was widespread for most of these professions until comparatively recently), as well as increasing levels of post-registration specialisation and focus on the need for continuing professional development, there has also been a growing recognition of the importance of research skills development among these professional groups. However, and despite their increasing profile within higher education institutions (underpinned to a large degree by rising numbers), there had been relatively little attention paid to the research training needs of these professional groups, at least before the establishment of Task Group 3, jointly by the Higher Education Funding Council for England and the Department of Health in 2000.
- 1.5 Research was commissioned to underpin the work of Task Group 3, the findings of which highlighted a number of important issues and challenges facing the HEFCE and the DOH in trying to develop research in these areas, including low research capacity, lack of

research infrastructure, and relatively low levels of investment<sup>1</sup>. The final Task Group 3 Report<sup>2</sup> recognised the strategic importance of development of this area, and made recommendations in respect of funding arrangements and necessary infrastructure to support the training and development needs of researchers in these professional areas, and not only those practising within the health service, but also those involved in teaching within HEIs.

- 1.6 Thus, research training in the healthcare professions has become an important issue at the national level. It was against this background that the UK Council for Graduate Education established the current Working Group in late 2001. The Council had already organised a workshop within this area, which proved popular and demonstrated a high degree of interest among member institutions in the issue of research training for the healthcare professions. Given the particular role and remit of the UK Council, it was felt that a Working Group would be ideally placed to focus and to make recommendations on the most suitable and effective research training models for healthcare professionals, and the potential contribution of HEIs to the further development of research capacity in these areas. Furthermore, and in contrast to previous work, it was recognised that the current initiative would benefit from being UK-wide, and thus the final recommendations of the Working Group should have a broader focus and currency.
- 1.7 Beyond this, and while the Working Group accepted that review of several of the key issues in the area had already been addressed as part of the work of Task Group 3, it was recognised that the HEFCE/DOH Task Group had a wider brief (i.e. not just research skills training within the context of graduate education), and that the results of the 2001 Research Assessment Exercise (RAE) had not been available to the Task Group. Regardless of the criticisms that may be levelled at the RAE, its results were seen as extremely useful in providing a snap shot of the current state of research development within the healthcare professions across the higher education sector, particularly in respect of research capacity and capability, and the different stages of development of different professional groups. Furthermore, the Task Group 3 report had highlighted the underdeveloped research capacity within academic departments as

1 CPNR/CHEMS (2001). *Promoting research in nursing and the allied health professions*. Report to Task Group 3 by the CPNR, CHEMS Consulting, the Higher Education Consultancy Group and the Research Forum for Allied Health Professions (HEFCE 01/64).

2 Task Group 3 (2001). *Research in Nursing and Allied Health Professions*. Report of the Task Group 3 to HEFCE and the Department of Health. (HEFCE, 01/63).

one aspect of, and a key limiting factor in, lack of research development within the healthcare professions. It was therefore considered important that relevant information should be collated from the RAE 2001 results (and associated supporting data) to inform the work of the work of the group and its final recommendations. It was also considered important that the Working Group should be in a position where possible to synthesise and collate available data and opinion from member institutions for Scotland, Wales and Northern Ireland.

- 1.8 In carrying out its role, the Working Group recognised important differences in the issues facing the healthcare professions in developing research training, especially when compared to more established areas in which the UK Council had previously reported<sup>3</sup>. One key difference relates to the nature of research within the healthcare professionals, which is highly variable in focus and employs a range of methodological approaches, including qualitative and quantitative methods, none of which can be seen as inherently more valuable, but rather should be considered in terms of their appropriateness to the topic of inquiry<sup>4</sup>. In short, given the complex nature of healthcare, and the variety of research questions facing these professional groupings, there will always be need for a multilevel approach to research; in turn, this will require a multilevel approach to research training. Perhaps the fundamental imperative facing the healthcare professions is to develop a properly embedded research culture, the research capabilities to realise this culture, and (as part of this) to provide adequate opportunities for research skills training. In addressing this issue, the Working Group recognised that the necessary culture change cannot be effected through the efforts of any one group in isolation, but rather that there was a collective responsibility on the part of higher education institutions, the health service, and the relevant professional and statutory bodies. Within this context, we felt that the professional bodies in particular have a central role to play in changing what is perceived as a continuing and widespread ambivalence to research training within some professional areas. Finally, in addressing its brief, the Working Group recognised the potentially important link between high quality research and high quality patient care, and thus that an implicit but important aim of any initiative in this area should be to improve the care of patients and clients, including the prevention of disease and disability.

3 For an example of a recent report, see *'Research Training for Humanities Research Students'*, UK Council for Graduate Education, (2000). <http://www.ukcge.ac.uk>

4 Research within the healthcare professions can range from laboratory-based experiments on isolated cell lines, randomised controlled trials to investigate effectiveness of interventions, surveys of current clinical practice, interviews of patients or clients, to development of models of professional practice or care.

## 2. content and current provision

### Higher Education Provision for the Healthcare Professions

- 2.1 The last decade has seen major changes in the training of the healthcare professions, with pre-registration training (i.e. training to provide statutory registration as a practitioner) now mainly provided within higher education institutions<sup>5</sup>. This can be seen as part of a much wider change within the university sector over recent times, away from traditional disciplines towards more practice-based or vocationally-oriented subject areas, and equally as part of the drive of professional groups to advance their position and status through graduate level training<sup>6</sup>. Within the larger health professions, the current structure of academic training and awards can be summarised as in Table 1.

It is recognised that this structure is a somewhat simplified view of current provision across the healthcare professions. In particular, within nursing, the diplomate route is still widely available for entry into the profession. While this partly arises for historical reasons, it also reflects the challenge in recruitment of sufficient numbers of suitably qualified candidates to the profession to underpin the needs of the health service. In marked contrast to this, entry to arts therapy has to date been exclusively at postgraduate level<sup>7</sup>; within other professional areas (e.g. dietetics, physiotherapy, and speech and language therapy), postgraduate-level entry has been, or has recently become, available as an option (i.e. compared to baccalaureate entry), providing a route for suitably qualified graduates in cognate disciplines to enter these professions.

5 Provision in these areas has developed rapidly in the last ten years: by 2000/01, there were 233,320 students in UK higher education within the 'Subjects allied to Medicine', ranging from audiology (1380) to nursing (152,355), reflecting the essential contribution of the sector to the National Health Service. (HESA, Students in Higher Education 2000/01). The cost to the NHS for pre-registration training in nursing and allied health professions alone has been estimated at approximately £640 million. (Universities UK, Partners in Care. Universities and the NHS, 2003).

6 Barnett, R. (2000). Realizing the University in an Age of Supercomplexity. The Society for Research into Higher Education and Open University Press, Buckingham, pp36-38.

7 Research Forum for the Allied Health Professions.

**Table 1. Overview of Academic Training in the Nursing and Allied Health Professions**

Degree/Level	Professional Relevance
<b>Baccalaureate degree</b>	Pre-registration training for graduate entry to the relevant healthcare profession. Almost exclusively offered on a full-time basis.
<b>Postgraduate Diploma/ Masters degree</b>	Post-registration courses linked to professional specialisation or advanced practice; multidisciplinary specialisation. Typically undertaken on a part-time basis.
<b>Doctorate degree</b>	Research training; typically PhD but increasing number of professional doctorates are available. Almost exclusively undertaken on a part-time basis.

2.2 Notwithstanding the development of masters-level ‘entry’ courses in some professions, masters courses in the healthcare professions are typically offered as an underpinning to advanced professional practice or specialisation, e.g. MSc Advanced Practice in Nursing, MSc Manipulative Therapy (for physiotherapists), MMedSc (for radiographers) etc. While there is obvious and continuing demand for ‘uniprofessional’ courses within ‘named’ areas, there is also parallel demand for multiprofessional provision, either at programme or modular level (e.g. multidisciplinary Masters in Pain Management, or module on ‘Behavioural Aspects of Healthcare’), reflecting an increasing recognition of the importance of multiprofessional working within healthcare practice. In general, masters-level courses are typically offered (and undertaken) on a part-time basis<sup>8</sup>, which reflects both the current lack of funding available to healthcare professionals to support full-time study, and a commonly expressed concern of losing valuable clinical or professional skills during an extended period ‘away’ from practice. The structure of such programmes is typically based upon a mixture of profession-specific and optional modules in relevant areas, and will commonly incorporate a compulsory research component (i.e. the masters dissertation or thesis). However, there is variation in the structure of such masters-level courses, and the extent to which training in research methods is offered as part of these courses; it should be noted that such variability is not unique to the healthcare professions, but rather reflects the well-recognised and significant variability in the structure of masters degree courses across the higher education sector in the UK.

<sup>8</sup> Within nursing, 685 students were registered for full-time postgraduate courses in 2000/01, compared to 5020 students registered part-time. (HESA, Students in Higher Education 2000/01)

- 2.3 At the current time, there are in the UK no doctoral-level courses offering entry to the healthcare professions (at least as these were defined by the Working Group)<sup>9</sup>. In the main, the pattern has been that members of the nursing and allied health professions undertake PhDs as a research training some years after their first qualification, primarily to provide career advancement, and typically within the higher education sector. Beyond this, there are a limited but increasing number of professional doctorate courses offered for these groups, including Doctor of Nursing Science (DNSc) and Doctor of Medical Science (DMedSc) programmes, which are now offered at a number of institutions across the UK (e.g. University of Sheffield, University of Ulster). Despite the relatively recent introduction of such professional doctorates for the healthcare professions, at least in this country, these awards are already proving to be relatively popular with prospective students.
- 2.4 In an increasingly global education and training market, the situation in the UK (and elsewhere) is influenced by training developments in North America. The most salient influences within the UK higher education sector have been the development of the Doctor in Nursing Science as a professional doctorate for nurses, and the relatively recent introduction of a number of masters-level courses for entry to the physiotherapy profession, partly in response to the decision of the American Physical Therapy Association to become an exclusively masters-level entry profession. While such moves from baccalaureate to masters programmes are encouraged by the opportunities for institutions to offer provision more widely, and particularly to a buoyant global market for healthcare training (where standards are typically set against the norm for North America), commissioners of training have also been eager to support such development with funded places, either to ease workforce planning demands, and/or the promise of shorter training cycles (i.e. 2 years versus 3-4 years). In addition, the introduction of doctoral-level entry courses within some of the healthcare professions (Doctor of Occupational Therapy, Doctor in Physical Therapy or DPT; essentially clinical doctorates) at a number of institutions in the USA will undoubtedly have implications for the UK profession in the future.

9 As noted by several respondents during our informal and formal consultations, entry-level doctorates are already well-established in related fields, principally clinical psychology (DClinPsy). These degrees are essentially different from 'research training' doctorates, such as the PhD and DMedSc, and are perhaps better described as clinical doctorates.

- 2.5 Although in pursuing its terms of reference, the Working Group took an inclusive view of the issue of research training, our focus was clearly on such training at post-registration level; furthermore, and while we recognised its importance within pre-registration training, we did not consider the issue of research within the curricula of entry-level degrees (regardless of whether at undergraduate or postgraduate level) in any depth.

### **HEFCE/DOH Task Group 3**

- 2.6 The Working Group recognised the singular contribution of Task Group 3 in providing an overview of the current state of research development within the healthcare professions in higher education, and the timeliness of its report which appeared in late 2001<sup>10</sup>. While a number of groups had at various times previously considered the challenges of research development within the healthcare professions, usually from the perspective of a single profession or clinical area, with few exceptions, there had been relatively little attention paid to the wider issues and implications at the national level, particularly from the wider perspective of the higher education and health service sectors<sup>11</sup>.
- 2.7 Task Group 3 '*Research in Nursing and Allied Health Professions*' had been jointly established in 2000 between the Higher Education Funding Council for England, and the Department of Health, under the Chairmanship of Professor Janet Finch (Vice Chancellor of Keele University) to consider:

*How DOH/NHS and HEFCE might promote better integrated and better targeted public investment in high quality research relevant to Nursing and PAMS;*

*How HEFCE policies and DOH/NHS R&D strategic objectives might be achieved through high quality research led by or related to nursing and PAMS; and,*

*The contribution of DOH/NHS and HEFCE to supporting R&D led by or related to nursing and PAMS including capacity building.*

<sup>10</sup> Task Group 3 (2001). *Research in Nursing and Allied Health Professions*. Report of the Task Group 3 to HEFCE and the Department of Health. (HEFCE, 01/63).

<sup>11</sup> Notable exceptions include the joint position statement: *Research and Development in Occupational Therapy, Physiotherapy and Speech and Language Therapy: A Position Statement*, 1994; '*Towards a Strategy for Nursing R&D*', Department of Health, consultation; and, *Towards a Strategy for Research and Development in Allied Health Professions: Proposals for Action, A Discussion Paper*. Research Forum for the Allied Health Professions, 2001.

- 2.8 As background for its work, the Task Group commissioned a team led by the Centre for Policy in Nursing Research (London School of Hygiene and Tropical Medicine) to undertake an extensive research project to investigate the contemporary state of development of the research base within nursing and the allied health professions<sup>12</sup>. The salient findings from the research project are summarised in Appendix B, the key conclusion was that the research base in nursing and the allied health professions had been improving, based upon indicators such as RAE ratings, numbers of staff included in RAE submissions, research income, and postgraduate research student numbers. However, it also recognised that further progress within these areas was unlikely to be maintained without targeted funding to underpin the further development that was essential to these areas. The research highlighted an interesting observation in respect of research training: despite a 94% increase in postgraduate student numbers in nursing over the review period, at the time of reporting, only some 16% of staff within relevant academic departments had a PhD, clearly indicating the tension between pressures for increased graduate student numbers against a background of limited supervisory capacity.
- 2.9 The summary report of Task Group 3 is presented in Appendix C; its main recommendation was the establishment of a fund to develop and expand research capacity within nursing and the allied health professions; it was proposed that the fund should run for at least seven years and should be targeted at the development of capacity in priority areas, not simply to fund research projects. It was proposed that a portion of the new fund should support the development of collaborative research networks, and although it was accepted that funds should not be concentrated in a relatively small number of 'centres of excellence', it was considered that allocations should be based upon quality. A central tenet was that with such developmental funding opportunities, new centres of research excellence would naturally arise.
- 2.10 In focussing on the development of research capacity in these areas, the Task Group 3 Report highlighted the importance of supporting research career development and research training within the healthcare professions. Furthermore, the report recognised as important that teachers in Higher Education Institutions should be familiar with research techniques, and ideally should be research-active, particularly given the need to ensure that all healthcare

12 CPNR/CHEMS (2001). *Promoting research in nursing and the allied health professions*. Report to Task Group 3 by the CPNR, CHEMS Consulting, the Higher Education Consultancy Group and the Research Forum for Allied Health Professions (HEFCE 01/64).



professionals were research aware (highlighted as a key aspect of initial pre-registration training), and thus appropriately 'enabled' to use research findings in patient and client care.

- 2.11 The Task Group 3 Report identified nine levels of research skills that need to be developed within all the healthcare professions, ranging from 'research enabled' through to 'research leadership' (see Appendix D). We recognised that the focus of the activities and deliberations of the Working Group would primarily be on the upper levels. However, the skills underpinning the initial 'Research Aware' level (i.e. the skills to identify sources of relevant evidence, and to use such evidence in the care of treatment of clients) are essential for all healthcare professionals, and may need to be specifically developed in those 'diplomat' level candidates who undertake practice-related postgraduate training programmes.

### **Research Assessment Exercise (2001) and the Healthcare Professions**

- 2.12 Whatever the wider debates about its appropriateness, form and metrics, the relevant results of the Research Assessment Exercise provide a useful indicator of the state of development of research within the two main units of assessment linked to nursing and the allied health professions. It was recognised that the timing of the establishment of the current Working Group was fortuitous, as the availability of the 2001 scores provided a contemporary overview of the state of healthcare research within the higher education sector across the UK. For the purposes of the deliberations of the Working Group, results for Units of Assessment 10 (Nursing) and 11 (Other Studies Allied to Medicine) were considered as most relevant. However it was recognised that for strategic reasons institutions frequently entered healthcare staff within other Units of Assessment (e.g. Unit 13, Psychology), and that Unit 11 by its nature included a range of submissions which included multiprofessional or multidisciplinary groups, thus in some respects limiting the level of analysis possible with the RAE data. This notwithstanding, the results of the RAE 2001 were considered to provide an important indicator of research activity and capacity for these areas, and a basis for comparison with the findings of the research report commissioned for Task Group 3 (ibid).

- 2.13 The RAE 2001 results for Unit of Assessment 10 (Nursing), demonstrated that there had been a marked increase in research

ratings, and in the number of staff returned compared to equivalent data for 1996 (mean rating 1996 was 2.6 for 69 submissions, compared to a mean rating of 4.0 in 2001 across 68 submissions). This provided clear and encouraging evidence of continuing and significant developments in research quality and volume within the academic nursing community across the UK.

2.14 Within Unit of Assessment 11 (Other studies and professions allied to medicine) there were similar overall improvements in performance between 1996 and 2001 (mean rating 1996 was 3.5 for 66 submissions, compared to a mean rating of 4.7 in 2001 across 61 submissions). However, upon closer inspection the most notable difference was in the distribution of ratings. In 1996 there had been a clear distinction between the performance of ‘biomedical sciences’ departments, and those from ‘healthcare’ (largely therapy) departments, giving rise to a bimodal distribution in ratings awarded. Indeed this bimodal distribution had already been well recognised and cited by some groups as evidence in support of a proposed split of the Unit. In contrast, the distribution in 2001 was unimodal, reflecting to a large degree the improvement in ‘healthcare’ departments and submissions. Of the latter, speech and language therapy and physiotherapy seemed to have achieved the greatest improvement in ratings (see Table 2); in contrast, the research activities of some of the other professions appeared at best to be poorly developed.

**Table 2. RAE 2001: Performance of Allied Health Professions (UoA 11)**

<b>Dietetics</b>	5*	Ulster (Partial Submission)
	5	Kings College London (With Nutrition)
<b>Speech &amp; Language Therapy</b>	5	Manchester (With Audiology)
	5	University College London
<b>Physiotherapy</b>	4	Kings College London (Partial Submission)
	4	Ulster
<b>Occupational Therapy</b>	3a	Southampton

- 2.15 It was noted that despite the marked improvements evidenced by the 2001 RAE results, the decision to delay funding for such improvements, and the revised funding formula would be disastrous for those institutions that had made strategic investments in these areas. It was also noted by the Group that to maximise performance (and ultimately financial return) in the 2001 exercise, allied health professionals were in many cases returned under submissions for other research units other than 11 (including Unit of Assessment 10); within our survey of member institutions, a significant proportion (5/19) indicated that healthcare professionals were also returned within other units, including UoA 2 community-based clinical subjects, social work, epidemiology, and education; interestingly, with one exception, such submissions were in addition to returns in UoA 10 or 11<sup>13</sup>. Finally, it was recognised that – notwithstanding the welcome improvements noted in UoAs 10 and 11, results of the 2001 RAE demonstrated widespread improvement in other units (e.g. Pharmacy mean rating 4.7 1996; mean rating 2001 5.8).
- 2.16 As general trends, it was noted that better scores in these areas were obtained by older Universities, and by departments in which research links had been formed with other, more established areas of strength within the institution. However, it was recognised that there had been marked improvements in scores of post-1992 institutions between 1996 and 2001 (see Table 3), reflecting a not inconsiderable investment in resources within these institutions. It was also apparent that there was no evidence that the presence of a medical faculty within the same institution provided an advantage in terms of RAE result. Rather, the institutional strategy for research appeared to be more important: in particular, was development of high quality research in nursing and the allied health professions considered important at the institutional level, was research training in these areas well established, and were relevant staff supported to become research active? As part of such strategic plans, the priority given to research training, and to research students, was considered one of the key aspects of research development.

13 The Research Forum for the Allied Health Professions is undertaking an audit of institutions to clarify the true participation rate of allied health professionals in the 2001 exercise.

**Table 3. RAE 2001: Post-1992 Institutions Awarded Rating of 4 or Better (UoAs 10 & 11)**

	1996	2001
<b>Unit 10: Nursing</b>	None	Hertfordshire (4)
<b>Unit 11: Other Studies and Professions Allied to Medicine</b>	Greenwich (4) Portsmouth (4) Sheffield Hallam (Biomedical Sciences) (4) Napier (4)	Brighton (Biomedical Sciences) (5) De Montfort (4) Liverpool John Moores (4) Nottingham Trent (5) Portsmouth (Biomedical Sciences) (5) Sheffield Hallam (Biomedical Sciences) (5) Glasgow Caledonian - Vision Sciences (4) - Biomedical Sciences (4) Napier (4) Queen Margaret University College - Speech & Language (4)

2.17 The clear indication from our review of the relevant data from the RAE 2001 was that research performance within these areas, at least as assessed by the metrics of the assessment exercise, had continued to improve. Scores had improved overall, participation rates had improved, and more institutions had achieved the higher ratings; in short, the patterns of improvement reported by the CPNR Research Report for Task Group 3 report had continued, and were to be roundly welcomed. However, despite such improvements, capacity overall remains relatively limited, scores within these areas are modest by comparison to others, and there is a high degree of variation between professional groups (e.g. dietetics versus occupational therapy). While there has been some work completed on the factors important to success for medical research teams<sup>14</sup>, this is an area that has received scant attention within the healthcare professions. On the basis of our limited review, it would appear that a strong strategic plan or vision was perhaps the most important factor to success.

14 Ferlie, E., Harvey, J., Pettigrew, A. (2002). *Managing High-Impact Research Groups*. In: Ketteridge, S, Marshall, S., Fry, H. (Ed.s). *The Effective Academic*. Kogan Page, London. pp148-161. The five key factors identified within case studies of four high impact research teams were: strong leadership, finding and retaining talent, strategic diversification, strong links between theory (science) and application (clinical practice), and networks.

## 3. current provision and opinion

### Overview of Consultations

- 3.1 The Working Group consulted formally and informally to inform its deliberations; in the latter case this included discussions at UK Council meetings and workshops. Indeed, the first meeting of the Working Group in December 2001 was preceded by a workshop at which a number of the most important issues affecting this area were discussed. As part of the formal consultation, a detailed questionnaire (fourteen pages) was distributed to all UK Council member institutions via e-mail in late 2002. The questionnaire comprised four main sections: 'Background Information', 'Research Training for the Healthcare Professions', 'Networks and Support', and 'Recommendations'<sup>15</sup>, and included a variety of open and closed questions to seek information on current practice and opinion within member institutions. This stage of the formal consultation produced responses from 19 institutions, the details of which are summarised in Appendix E. Respondents to the consultation (n=19) represented the range of institutions across the higher education sector: i.e. geographically, 'new' and 'old' universities, and university colleges.

### Institutional Strategies for Research Development in the Healthcare Professions

- 3.2 The Working Group was interested to assess the degree to which institutional plans were specifically targetted at developing research activities within the healthcare professions, and respondents were asked to outline the key elements of their institutional or departmental strategy for the development of this area. Responses indicated that in most cases (13/19) relevant strategies had been developed at departmental level, perhaps reflecting the unique challenges and issues facing this area, or the targetted approach that might be expected within any department, against the background of wider institutional research strategy. Indeed, five of the respondents referred to elements of their Institutional/ University research strategy, and its relevance or implementation in support of research development within the healthcare professions. There were six common elements identified from the strategies described by respondents for the development of research in the healthcare professions: Selectivity: identifying specific research themes for development within the department, thus concentrating resources in the support of research development; Volume: increasing the volume of research activity

<sup>15</sup> The last section on 'Recommendations' provided an opportunity for member institutions to comment upon the draft recommendations of the Working Group; responses are discussed in outline in Section 5 of this Report.

amongst staff through targeted initiatives (e.g. teaching relief for potentially research active staff); Postgraduate Students: increasing numbers of research students, both part-time and full-time; Research Output: increasing the number of publications, and of presentations at conferences; Research Income: increasing external funding in support of research activities; and, Research Profile: increasing the departments research recognition and collaboration at an institutional, regional, national and international level.

- 3.3 Respondents described a variety of mechanisms implemented in pursuit of these strategic research development aims. These principally included Research Collaboration, through encouraging the development of collaborative research projects and links between staff within the institution (whether at a departmental level, across departments, or across faculties, as appropriate), with staff at other institutions, and with relevant external agencies including service providers, service users, or companies. Recruitment of Staff was also considered an important aspect of research development; this included the targeting of recruitment activities to attract research-active staff, or at least staff with the appropriate skills and background to become research active. Linked to recruitment of staff was development of Research Training, Support and Development, i.e. supporting and encouraging staff to become research active by allocating appropriate time and resources, e.g. through allocation of workloads, and by providing research training opportunities. Another aspect of development which was considered essential was Research Infrastructure, i.e. The development of appropriate infrastructure and associated activities to encourage and support research including: the establishment of research committees (typically at Departmental level); designation of key (experienced) staff to assist with, and advise on, research activities (e.g. applying for funding, writing for publication); and, introduction of research seminar programmes. Finally, respondents noted the importance of appropriate systems for Research Management and Administration, including the introduction of structures and mechanisms for managing and monitoring research activities, e.g. the appointment of research coordinators, the establishment of databases to record publications, conference presentation, grant applications etc.
- 3.4 Based upon these comments, it was clear that institutions, and healthcare departments in particular, are in the main adopting a selective approach to the development of research within the

healthcare professions, and – in common with departments in other academic areas or disciplines - an approach that was clearly targeted towards realising success in the Research Assessment Exercise. This notwithstanding, participation in the most recent (2001) Research Assessment Exercise varied. While less than a third (6/19) of respondents made submissions within Unit of Assessment (UoA) 10 (Nursing), twelve returned submissions within UoA 11 (OSAMS); as indicated above, a number of respondents also indicated participation by healthcare professionals in other UoAs. This notwithstanding, it was interesting to note that responses in respect of mechanisms adopted to underpin research development reflected, in some important respects, the developmental nature of research within these areas (e.g. provision of research training and support).

### **Research Degree Training in the Healthcare Professions: Supervision**

- 3.5 Given the particular problems identified by Task Group 3 (ibid), respondents were asked to indicate how, in providing research training for healthcare professionals, their institution had coped with the limited number of experienced supervisors in these areas? Respondents identified four main strategies to address this issue. These were, firstly, *Joint Supervision*, which worked on the accepted principle of teaming less experienced supervisors with those who had more experience, e.g. inexperienced staff, who have already completed their own PhDs, start by co-supervising with an experienced supervisor. However, it was recognised that the limited supervisor capacity within the healthcare professions might preclude joint supervision within the relevant department; instead, joint supervision might be required between healthcare professionals and staff from other disciplines within the same institution, and, where institutional regulations allowed such arrangements, joint supervision with external supervisors e.g. staff from other institutions, or suitably qualified individuals from clinical practice as appropriate. Respondents indicated that *Registering Students within other Schools/Departments* as an alternative to joint supervision. This was seen as necessary where there were no candidates suitably qualified to act as research supervisor within the relevant department or school, and institutional regulations did not allow the appointment of 'inexperienced' or non-research active staff within the healthcare department as research supervisors. *Recruitment of Staff Suitably Qualified to act as Supervisors*. This represented a fundamentally different approach to the issue of limited capacity, and was based

upon the appointment of staff (implicitly, from other institutions) who were already experienced supervisors, and therefore qualified to supervise research students. This is particularly interesting given the obvious and buoyant 'transfer market' for senior academic posts within the healthcare areas. *Formal Training for new Research Supervisors*, although widely recognised as an issue across the higher education sector, was identified as a particular priority for healthcare department, in part because of the likelihood that novice supervisors would often find themselves in a department with few (if any) senior colleagues with supervisory expertise. Thus it was reported that healthcare staff who had already completed PhDs would be targeted for supervisor training courses (both external programmes and internal seminars, as well as workshops, often at some considerable expense where 'local' expertise was unavailable). One institution (University of Paisley) reported that it had validated an 'in house' Postgraduate Certificate in Research Supervision, which is now a prerequisite for new supervisors. Beyond this, several respondents noted the importance of ongoing training and support for new supervisors.

- 3.6 While the measures adopted to address limited supervisory capacity within healthcare departments as described here probably represent common approaches to this problem across higher education (i.e. regardless of discipline), important differences remain which distinguish the healthcare area, and which need to be considered in recommending how this area might be developed. These differences are, for the main part, associated with the chronic and the widespread nature of the problem: limited supervisory capacity has been an ongoing problem within these areas, and, with few exceptions, this is a problem which is common across institutions.

### **Research Training: Challenges for Healthcare Professionals**

- 3.7 It was frequently reported during our early discussions and informal consultations that there were particular challenges which faced healthcare professionals when undertaking research degree training, and which had contributed to the perceived ambivalence towards this area within the healthcare professions. However, it was recognised that research students face a variety of challenges, some of which are not specific to any one discipline or field of academic research; rather, part-time students face different challenges to full-time students and therefore to what extent do notions of difference lie in the largely part-time nature of research study (and indeed graduate study generally)



within these areas. Thus, as part of our formal consultation, respondents were asked to identify, based upon experience at their institution, any significant differences in the challenges faced by healthcare professionals undertaking research degrees, compared to students in other areas. The majority of respondents (16/19) felt that there were indeed salient differences, which can usefully be considered under five main headings.

- 3.8 **Finances.** It was recognised that many healthcare professionals are unable to afford to study full-time, thus they have to work full-time and study part-time, sometimes with little support from their employer. Beyond this, some respondents noted the lack of recognition of research degrees (particularly the PhD) in terms of NHS grading and thus salary scales; therefore completion of research training is unlikely to improve the earning potential for the average healthcare professional, at least within the service. Associated with these issues, and in part resulting from the lack of opportunity for promotion and advancement, respondents noted the reluctance of staff (and particularly more senior staff) in the nursing and allied health professions to give up salary for the standard PhD maintenance stipend or studentship.
- 3.9 **Balancing Part-time Study with Workload.** Respondents noted the lack of time for research activities, due to heavy (and apparently increasing) clinical workloads among healthcare professionals, coupled with the apparent difficulty in senior clinicians getting a career break. Such challenges associated with healthcare professionals' workload mean they may need to take a leave of absence or career break to pursue a period of research training, or if registered part-time, that they will take longer to complete their training compared to candidates in other areas. A related issue identified by several respondents was the female dominance within the healthcare professions, leading in turn to a predominantly female cohort of research students, typically with family responsibilities, e.g. as carers of children or elders, or maternity leave. Taken together with pressures of clinical workload, it was felt that these students were in some respects doubly disadvantaged compared to students in other areas. Interestingly, several respondents also made comments on the challenges faced by lecturers in the allied health professions, who sometimes experience few rewards for engaging in research activities, and may in fact face disincentives, e.g. increased workload if research activities aren't taken into account in determining teaching or

administrative allocations, and possible disapproval from peers and from line management. It was also highlighted that teaching commitments within these professional areas are onerous, due to pressures associated with clinical placements, and fulfilling the various requirements of relevant professional bodies.

- 3.10 **Lack of support from Employers/National Health Service.** There was a perceived lack of understanding of and support for healthcare professionals wishing to undertake research training programmes. In the first place, respondents commented upon the apparently limited understanding of the value of research (and thus training in research skills) by senior management, and staff generally, within the NHS. This was felt to be compounded by a lack of access to whatever R&D research support mechanisms might be available, which was frequently reserved for medical staff. Perhaps the most important issue raised by respondents was the lack of any clear career route for healthcare researchers in these professional areas within the health service, and coupled with this, the ambivalent attitude of workforce development confederations and other training commissioners towards the value of research skills, and by implication, research itself.
- 3.11 **Lack of Research Awareness of Healthcare Professionals.** Respondents noted that healthcare professionals typically have less appreciation of research methodologies at the outset of their postgraduate studies; e.g. significant numbers of healthcare professionals have ‘professional’ rather than ‘academic’ qualifications. There was felt to be little recognition among potential research students of the particular methodological and ethical challenges associated with clinical research, coupled with unrealistic research questions and goals. This lack of research awareness was seen as stemming in part from a lack of research training within the pre-registration or undergraduate curriculum, and because healthcare professionals embarking upon research studies are often more mature students, typically with little formal training in research methods. As a consequence, several respondents recognised that some form of ‘top up’ of formalised research training was required for these students before more advanced studies could occur. Equally, it was accepted that the healthcare professions have a relatively short history within higher education, and therefore these professions are still establishing their position within the sector, e.g. manifested in part by the lack of experienced research supervisors in these areas.

- 3.12 **Professional Attitudes.** The well-recognised lack of research ethos (and history) within the various professional groups was noted by respondents. Associated with this was the (continuing) lack of recognition of research degrees within the healthcare professions, stemming largely from the view that development and enhancement of clinical skills and practice are paramount. Essentially, it was recognised that there are few perceived advantages for healthcare professionals in undertaking research. One of the main consequences of this world view, as highlighted by respondents, was that graduating students within the healthcare professions are encouraged to take up clinical posts, and therefore don't apply (or, indeed, are actively discouraged from applying) for studentships.
- 3.13 Apart from the above, several respondents emphasised that these are relatively new subject areas within the UK University sector, and the various professional groups have faced the challenge of developing both their undergraduate or pre-registration programmes, and their research activities simultaneously. Against this background, the pressure on academic staff in these areas to become research active themselves while, at the same time, to develop suitable programmes of research training for healthcare professionals continues to be a challenge. Perhaps the greatest barrier to success in developing research training for healthcare professionals is the shortage of resource available for University infrastructure costs, and, at least for nursing/midwifery, the nature of the NHS contract. (Anglia Polytechnic University).
- 3.14 In summary, the majority of respondents had identified challenges that were specific to healthcare professionals undertaking research training; thus it was considered important that such differences were adequately recognised in making recommendations in respect of research training in these areas.

### **Research Training in the Healthcare Professions: Development Initiatives**

- 3.15 The Working Group regarded the identification of examples of current and best practice in providing research training for the healthcare professions as an important aspect of its work. Thus, as part of the formal consultation, respondents were asked to identify any research development programmes which had been developed specifically for the healthcare professions, to provide details of any specific initiatives undertaken at institutional level to underpin the development of

research training opportunities in these areas, and lastly, to provide details of any relevant collaborative networks or support arrangements. Responses to these questions (summarised in Appendices F-H) provided an interesting picture of the sheer variety and range of initiatives undertaken by institutions in support of the development of this area.

- 3.16 Twelve institutions indicated that they had developed programmes or degrees specifically for the delivery of research training for the healthcare professions (see Appendix F); indeed, a number of institutions had developed several such programmes. Responses indicated postgraduate degree programmes ranging in level from a Postgraduate Diploma in Health Research (Lancaster University), to various professional doctorates, including Doctorates in Professional Studies (Sheffield Hallam University), Medical Ethics (Keele University), Nursing Science (University of Ulster), and Health and Social Care (Anglia Polytechnic University). At masters level, respondents identified a wide variety of programmes, ranging from 'profession-specific' courses such as an MSc in Clinical Nursing (University of Liverpool), to the more generic MSc in Practitioner Research (Manchester Metropolitan University) which is offered for nursing and allied health professionals. It was felt by several respondents that there was much to be achieved through collaboration in addressing the particular research training needs of healthcare professionals. In particular, it was suggested that there was scope for developing an inter-institutional modular framework for research training of healthcare professionals at M level, drawing upon relevant staff expertise, possibly across several HEIs and agencies, thus providing sufficient critical mass through greater student numbers, widening access to high quality training, and enhancing module choice (Napier University).
- 3.17 All of the survey respondents identified institutional initiatives specifically undertaken in support of the development of research training for the healthcare professions (see Appendix G); a common feature (10/19) of these responses was the provision of institutionally-funded student bursaries for healthcare professions. Taken together with related initiatives such as research staff appointments, these responses provide evidence of the strength of commitment to the development of this area by higher education institutions, and contrasts sharply with the limited support provided to date via other agencies and players.

- 3.18 Networks and Support Arrangements. Collaborations in Support of Research Training for the Healthcare Professions. Nine respondents stated that their institution had developed such links. Details of links are described in the table. It is clear from these responses that institutions had developed a variety of collaborative measures to underpin research activities in the healthcare professions, and in turn to enhance research training opportunities for these groups.

### **Developing Research Training for Healthcare Professionals: Factors in Success**

- 3.19 Respondents were asked to identify, based upon the experience at their institution, the three most significant factors in their success to date in the development of research training for the healthcare professions. Responses are summarised in Appendix I, which highlight the range of factors identified by respondents; however several common themes emerged. For institutions, these factors included, in the first instance, availability of established research expertise and groupings (and thus supervisory expertise) pertinent to the needs of healthcare professionals, and to the needs of the service. A second key theme was the provision of (formalised) research training modules and courses, (whether as part of dedicated M level programmes or as stand-alone courses), together with support for clinically-based students completing such modules. Finally, a number of respondents identified the importance of collaborative working across departments, institutions, and with relevant external agencies, typically NHS Trusts.
- 3.20 Other factors cited as essential or desirable for success in developing research within the health professions included: the identification of clear incentives as a rewards for research productivity, coupled with some protected time for staff to become research active (or to maintain such activity), good collaborative links with experienced researchers (and, where possible, one-on-one support and mentorship). It was also felt important that staff and postgraduate students should be exposed to high quality research through seminar programmes or similar fora, which might include presentations from a variety of established researchers external to the institution or department (University of Liverpool; De Montford University).
- 3.21 A number of respondents provided additional comments on this topic in the open response section of the questionnaire. One respondent

noted interesting parallels with the challenges associated with developing research within the the clinical arena; it was noted that the nursing literature indicates that important factors in such success include the appointment of a research facilitator to help manage such development, and the creation of a dedicated centre or unit, preferably within the clinical site, to provide a focus and profile for research development. In such circumstances, solid partnerships between the relevant Trust and University were seen as particularly important to underpin any new developments, as were research seminars and staff development programmes, e.g. leadership programmes (De Montford University). Other responses highlighted the importance of adequate support, not only in terms of resources, but also from departmental management: one respondent specifically identified the main factor in success as research leadership and the culture of the University itself.

### **Developing Research Training for Healthcare Professionals: Barriers to Success**

- 3.22 Respondents were similarly asked to identify what they have perceived as the three most significant barriers to the development of research training for the healthcare professions. Responses (see Appendix J) identified a variety of barriers; common themes among these responses included the problems associated with lack of funding and resources (whether lack of research funding through HEFCE/RAE, NHS, or lack of available funds through the institution or department). Another recurring theme in responses - and indeed one that was highlighted elsewhere - was the shortage of suitably experienced researchers who could supervise research students, thus limiting the development of postgraduate research within these areas. This would appear to be compounded by another common problem: the pressures of clinical workload on part-time research students in the healthcare professions. Finally, and perhaps most importantly, respondents commented upon the lack of recognition of the importance of research by the service (e.g. managers, workforce confederations etc), perhaps associated with the existing cultural barriers or ethos within the various professional groupings.
- 3.23 Several of these issues were highlighted again in the open response section of the questionnaire: barriers to success cited here included the relative lack of research expertise (and critical mass) within the academic community of health professionals, and the perceived lack of priority accorded to this area by line managers (University and

NHS), resulting in a lack of support, indifference or even negative attitudes from some quarters. It was felt by several respondents that the NHS, and NHS managers in particular, have been slow to recognise the potential importance of research to service delivery; it was noted that the apparently ambivalent attitudes to research extended equally to research training, and particularly (according to at least one respondent) from workforce development confederations. In a similar vein, there was a perceived need to raise awareness in the NHS of the potential value of having doctorally qualified staff to lead R&D, rather than the prevailing view that masters degrees (almost regardless of the research element) should suffice (St Martins College). It was also noted (again) that NHS staff were not generally given time from their work for the purpose of research-related study, and that non-managerial NHS workers were not generally considered suitable (by their employers) for research training (Anglia Polytechnic University). On a related management issue, it was noted by one respondent that research governance guidelines were differently interpreted across Hospital and Social Services Trusts, and that this can potentially stifle opportunities for smaller projects, e.g. research and clinical audit opportunities for students on placement.

## **Overview of Consultation**

3.24 Our consultation provided a view of institutions, and of healthcare departments, which was characterised by a clear commitment to the development of research training opportunities within these professional areas, in the face of ongoing challenges associated with limited resources compared to other similar areas, and limited supervisory capacity across the sector. Despite these challenges, the evidence from our consultation demonstrated that institutions have been proactive in developing appropriate research training programmes, establishing collaborative arrangements and initiatives to support such development activity, and in providing support for research studentships.

## 4. future directions and challenges

### **Appropriate Research Training Routes for the Healthcare Professions**

- 4.1 In considering the most appropriate routes for research training for the healthcare professions, it was recognised that any recommendations must take into account the needs of the individual healthcare professional, and inter alia, the needs of the service, the professional and statutory bodies, as well as the requirements and capabilities of the higher education sector. At the individual level, needs might include a motivation to undertake personal as well as career development, including a desire to develop more generic skills, as well as specific research skills. The Working Group recognised the following as three important factors in reviewing potential routes for research training delivery: What is deliverable within current research capabilities? A recurrent theme in the current report is the relative lack of research-active staff within the nursing and allied health professions in higher education, and in particular the lack of supervisor capacity within these areas. This is an area that needs to be targeted in a systematic fashion, within institutions and at the national level. What is achievable for health professionals? As already indicated, the majority of health professions who undertake some form of graduate education do so on a part-time basis, while continuing to work in professional practice. This gives rise to particular challenges in the largely female healthcare professions, especially where there are continuing staff shortages. For doctorate-level courses in particular, low completion rates would appear to be a common, but largely unrecognised problem. In contrast to full-time students, completions by part-time research students have generally not been monitored to date (nor have poor part-time completion rates had the same significance for institutions, at least until now); however, informal research would suggest 5 year completion rates of between 17-25% for nursing and allied health professionals. Given these issues, to be effective, and achievable, research training needs to be targeted and delivered in a flexible format, taking account of the needs of the individual healthcare professional. Even where support is available for full-time study, part-time training would seem still to be the preferred route, being less expensive, and allowing the individual to continue in clinical practice and thus to maintain highly-prized clinical skills. What is affordable? Whatever might be recommended as appropriate research training models for the healthcare professions should be cost effective, for the individual as well as for the service. Support for part-time research training courses (but not doctorates) has previously been available through the NHS R&D Offices, through bursary or



similar funding schemes. However the uptake of such awards (in contrast to better resourced fellowship and studentships schemes for full time research training) was generally poor. While the precise reasons for this remain occult, this may have been due to lack of awareness of relevant schemes, or ineligibility of postgraduate courses for such support due to a limited research training component. Whatever the reasons for previous under-utilisation of such schemes, we consider that bursary or equivalent similar schemes might represent an ideal support model for part-time research training courses, specifically targeted for healthcare professionals.

## **Doctor of Philosophy (PhD)**

- 4.2 The Working Group considered three degrees, each of which has relevance as a type of research training route at the postgraduate level for healthcare professionals: the Doctor of Philosophy (PhD), the Professional Doctorate, and the 'masters degree'. In the first instance, we considered the doctor of philosophy degree as representing the gold standard for research training within any academic discipline or area (including the healthcare professions), and as the preferred, if not essential, degree for the professional academic or academic researcher. However, we recognised that both the process (the research training itself) and the product (the outputs) are usually geared toward academia, and typically, although not exclusively, the 'scientific' or theoretical dimensions of the relevant discipline, which in the case of practice-based disciplines like the healthcare professions may not always be directly relevant to practice. Furthermore, we accepted that the numbers of healthcare professionals who were likely to undertake the degree would probably, even given ideal circumstances, would always be relatively small<sup>16</sup>. This notwithstanding, given its unique position and recognition as the premier research training degree, we would endorse this as the preferred route for those healthcare professionals aspiring towards an academic or research career. We further suggest that this route is encouraged for suitably qualified candidates to complete, where possible, on a full-time basis immediately after completion of the pre-registration (usually undergraduate) degree. While this is an accepted career route in related fields such as medicine, there appeared from our consultations to be continuing resistance (and in some cases outright hostility) within some of the healthcare professions towards those individuals who choose to pursue this option. We would suggest

<sup>16</sup> Estimates vary, but even if studentships were freely available, it would not be anticipated that more than 2-3% of healthcare graduates would pursue PhD training immediately following training.

that this is an issue which needs to be urgently addressed, by academics and by relevant the professional bodies.

## **Professional Doctorates**

- 4.3 We recognised the increasing popularity of the professional doctorate as a route for research training. Professional doctorates are well-established in other practice-based disciplines in the UK: e.g. Doctor of Education (EdD), Doctor of Business Administration (DBA), Doctor of Engineering (DEng). Such doctorates are already well developed in nursing, particularly in the USA where the first such degrees originated; the Doctor of Nursing (DNurs) or Doctor of Nursing Science (DNsc, DNS) are now degrees that are recognised and accepted well beyond the profession. The main difference between PhDs and professional doctorates is the professional focus of the latter, both in terms of the research training provided, and in research outputs. The professional doctorate has been described as the degree of the scholarly professional, in contrast to the PhD, which is the degree of the professional scholar. The professional doctorate would appear to offer a number of advantages over the traditional PhD as a route for doctoral level research training for healthcare professionals. In the first instance, entry to the professional doctorate degree is usually restricted to candidates with specified professional qualifications, and professional or clinical practice. This has particular importance given the integral nomenclature of some professional doctorates, e.g. Doctor of Nursing Science. In addition to professional requirements, entry to professional doctorates may (subject to the structure of the programme) also be restricted to candidates who have already completed appropriate advanced postgraduate training at masters level within a relevant professional area. The effect of such entry requirements is to provide a doctoral candidate who is fundamentally different from the typical PhD student, even those part-time, mature students who make up the majority of doctoral students within the healthcare professions. The structure of the professional doctorate is also different to the PhD, and will usually incorporate formal 'taught' elements of research training (which may be assessed), within the framework of a class or student cohort. This provides potential opportunities for the professional doctorate candidate to interact with others within a 'learning community', and to benefit from an immediately available research network of contacts and peers, which in most cases will be quite unlike that available to the part-time PhD student.

- 4.4 Our consultations would indicate that this route is potentially more attractive to some healthcare professionals than the PhD. Indeed, it would appear that availability of the professional doctorate route may have increased participation in doctoral level training by healthcare professionals, rather than it simply being a preferred alternative to the PhD for applicants from these professions. An intrinsic part of this is undoubtedly the degree title itself, especially for candidates who intend to continue working and researching in a professional or clinical context, rather than move into academia. However, the attractiveness of professional doctorates depends upon the wider recognition (within the healthcare professions and beyond) of the relevant degree. The DNSc is already well recognised as a doctoral degree, and has a profile beyond the nursing profession; it remains to be seen what degree titles might be appropriate, and achieve equivalent popularity, within the allied health professions. Current titles include Doctor of Medical Science (DMedSc), and Doctor of Clinical Sciences (DClinSc), and may also include a professional designation, e.g. DMedSc (Dietetics), however there is currently no clear consensus on title or titles for the allied health professions. As a Working Group we are concerned that there should not be a proliferation of degree titles; indeed, we consider that restriction to a limited number of options would result in accelerated recognition and acceptance of the professional doctorates within the healthcare professions. Another important factor in the popularity of the professional doctorate route, to professional bodies and employers as well as individuals, is the professional relevance of the research skills and outputs. For the healthcare professions, outputs from professional doctorate programmes are perceived to be grounded in, and contribute directly to, the distinct body of knowledge that characterises the profession, rather than – as is more common for PhD programmes – an expectation of contribution to the ‘wider’ body of academic knowledge. For the health service and other healthcare employers, the outputs (in terms of skills as well as findings) from professional doctorate training programmes may well have more immediate benefits for day-to-day practice than those from traditional PhD programmes.
- 4.5 Notwithstanding the increasingly structured nature of the PhD, we considered that the professional doctorate potentially provides a more formalised structure for research training, and for the development of key generic and research skills. Assessment can also be wider and more comprehensive in scope than the PhD thesis and viva voce examination. The structure of the degree may therefore be more

appropriate, and its cohort-based completion more accessible, to busy part-time students. In considering the structure of a professional doctoral programme for the healthcare professions, we would suggest the following as a minimal list of the most important components:

**Professional development.** This may be represented by entry requirements framed in terms of previous completion of advanced practice postgraduate courses at masters level, or the inclusion of relevant professional modules as part of the doctoral programme.

**Relevant skills to underpin Evidence-Based Practice.** This should be considered an essential element of any masters or doctoral level training programme within the healthcare professions.

**Research design and planning.** Research within the clinical environment presents particular problems and issues (e.g. power analysis, reliability and validity of outcome measures, research governance, patient or client access, ethical permission etc), which should be addressed as an integral part of formal research skills training.

**Data analysis.** Analysis of clinical research data requires specialised approaches (e.g. in the case of clinical trials methodologies: intention to treat analysis, numbers needed to treat, minimal clinically important difference etc.); these should therefore be considered an essential component of formalised research training.

**Generic Training.** This will include time management, presentation and communication skills, problem solving and critical thinking etc.

## **Masters Degrees**

- 4.6 We considered masters-level research training as an important research training route in its own right, and afforded a potential model that could be relatively easily developed for part-time delivery to the healthcare professions on a wider basis than doctoral degrees alone. Indeed, our consultations highlighted the range of masters-level courses already available, but indicated that some degree of rationalisation might be useful. We considered that a 'clinical' version of the already established Masters in Research (MRes) degree would appear to be an ideal vehicle for the formal delivery of the type of research and generic skills already identified above, and to a wider

audience of healthcare professions<sup>17</sup>. Offered part-time over two years (in common with other part-time masters), such a course would satisfy the needs of busy healthcare professionals, and employers, who prefer study alongside professional practice. Appropriately designed, the clinical MRes degree would allow the development of appropriate research and generic skills, in a format and over a timescale that professionals would find achievable on a part-time basis.

- 4.7 We were concerned, as for the professional doctorate, that proliferation of title should be avoided; thus Masters in Clinical Research (MClInRes) is suggested as an appropriate title for such courses. It was anticipated that the opportunities arising from the introduction of this type of degree might also include: potential collaboration in delivery between institutions or groups of institutions, distance learning to facilitate completion, realisation of a 1+3 model of research training, using the MClInRes to determine suitability and desire of candidates for doctoral level training etc. At a stage when there is as yet limited research capacity and skills within HEIs, the MClInRes might also be recommended as a minimum requirement for all academic staff in these areas.
- 4.8 It is recognised that the structure of a clinical masters of research will represent a key consideration for any institution developing such a course. It is not our intention as a Working Group to be prescriptive (or proscriptive) about the precise structure or content of any clinical MRes programme or similar programme, which would need to be appropriately embedded within the culture (and derived from the expertise available) within the relevant HEI, and should be designed to meet the particular needs of the relevant professional or local constituency. Thus, the example structure presented in Table 4 is designed to be illustrative. It our recommendation that a part-time clinical MRes degree programme should be eligible and supported by targeted funding schemes, based upon the R&D Office bursary programmes. Additionally, for the health service this would be a cost effective option for providing research training to a relatively wide group of healthcare professionals, and in turn helping to realise the stated vision of a service based upon evidence of clinical effectiveness. The impact, both in terms of timescale and numbers of candidates, of the widespread introduction of part-time MRes-type degrees targeted at

<sup>17</sup> The Masters of Research (MRes) degree was introduced in the mid 1990s in the UK in response to the recommendations of the Dearing Report; it has subsequently proved to be a popular route of formalised research training, undertaken as a precursor to the PhD, and as a masters degree in its own right. Where provided, MRes degree courses are almost exclusively offered on a full time basis, usually over a period of one year, and within a specific discipline or area.

the needs of healthcare professionals, could potentially be enormous, particularly if institutions were to collaborate (through consortia or networks) to enhance training or delivery by distance learning.

**Table 4: Outline Module Structure: Master of Clinical Research (University of Ulster)**

Module	Credit Points	Overview of Content
<b>Clinical Research Techniques</b>	30 points	Research planning and design; qualitative and quantitative methods in clinical research; randomised controlled trials, ethics, research governance, data analysis etc.
<b>Evidence-based Practice</b>	15 points	Critical appraisal of evidence, application of evidence in relevant area of student's practice.
<b>IT and Communication Skills</b>	15 Points	Information gathering; library and research resources, presentation skills etc.
<b>Research Policy and Resources</b>	30 Points	Government policy; funding for research; intellectual property; entrepreneurship.
<b>Research Project</b>	90 Points	Supervised Masters-level research project, leading to submission of thesis and manuscript suitable for submission for publication.

## Future Challenges for HEIs

- 4.9 Our consultations confirmed the lack of research tradition within the healthcare professions, and associated with this, that the research infrastructure within higher education is limited in several important respects: limited numbers of staff with research training to act as supervisors and research leaders, limited research 'mass' within HEIs, leading in turn to a lack of research culture within academic departments. The net effect is of a vicious circle, as the lack of research culture and a visible research specialty within professional groups does not provide student and junior members of the profession with suitable researcher role models. The main challenges for HEIs in developing this areas in the future therefore include: facilitating research development in what may be regarded as 'teaching only' departments, development of appropriate supervisory expertise, securing adequate resource provision, and the challenges associated with new Research Assessment Exercise. To date, institutions have invested in research development of these areas, in many cases with little return thus far.

- 4.10 Training for supervisors and development of capacity and culture to support research training initiatives are considered to be perhaps the most important challenge for institutions. At least one of the professional bodies has articulated the view that while only a limited percentage of its members will ever aspire to research training, 100% of its membership should be research aware. The Task Group 3 Report (ibid) identified nine stages in enhancing research within nursing and the allied health professions; the first three levels were described as enabling activities and focused on appreciation and application of research-led practice, and acquisition of basic knowledge and skills in research. Such enabling skills should be developed at a pre-registration level, regardless of the academic entry level into the profession.
- 4.11 In developing a model of research training and development that extends beyond doctoral studies, it is recommended that HEIs should consider putting in place arrangements for supervision and mentorship in conjunction with clinical and academic centres of excellence, based either regionally or nationally. It was recognised that given current lack of capacity in these areas, creation of appropriate regional and national networks would be important to ensure effectiveness, and the quality of research training environment both at Masters/Doctoral, and at post doctorate levels. It was considered that the existing focus on ILT membership and requirements for new staff for completion of formal training in learning and teaching should be balanced with formalised training in research techniques, perhaps using the proposed MCLinRes or similar courses as the vehicle. The case for this is strong, as subject review scores in these areas are typically superior to research ratings. While it is recognised that in the majority of cases, institutions are funded to provide pre-registration training for healthcare professions, and not necessarily to develop research in these areas, it should be beholden on any academic department of healthcare studies to contribute to the realisation of evidence-based healthcare through research-based teaching, and research.
- 4.12 The main barriers to research training in these areas were recognised as funding for research training programmes, lack of opportunities for full time PhD study following initial degree, and lack of recognition of the importance of research degrees in clinical practice. Full time research fellowships for existing healthcare professionals are frequently not popular because of concerns about losing clinical skills, however we suggest that little research can be successfully

undertaken without devoting more than 3 days per week to the project. Thus it is proposed that clinical research fellowships should be made available, based upon a 60:40 split in favour of research to optimise the chances of success. Additionally, we consider that academic careers need to be made more attractive to healthcare professionals, and health service careers more attractive to research-trained healthcare professionals; a review of career structures within these professional areas would appear an urgent priority.

### **Future Challenges for the NHS and the Professions**

- 4.13 It is our view that research (and in turn research training) needs to be recognised as an essential activity within the healthcare professions, and embedded within the ethos of professional bodies, as well as clinical and academic departments. In developing a research culture within these areas, research has to be regarded and promoted as an integral part of, rather than as an alternative to, professional practice, particularly for student and recently qualified healthcare professionals.
- 4.14 We also consider it important that appropriate career structures and opportunities should be available to the research-trained healthcare professional. To date, there has been a limited number of research-oriented posts for healthcare professionals within academia and the health service; this needs to be addressed. Furthermore, it is important as consultant-level posts for nurses and allied health professionals are developed, these are clearly identified with a research leadership role. The importance of creative thinking in developing flexible careers beyond the doctorate was recognised, and agreed as an issue which needs to be addressed. The central role of the professional bodies in developing a research culture within the relevant healthcare groups (e.g. research as area of specialism, research training as essential to promotion and career development, PhDs following initial training) was also noted as an area which needs to be addressed.
- 4.15 It was also considered important that researchers and research students from the healthcare professions should be able to avail of the same opportunities as those in other professions within the health and social services (e.g. medicine). We have concerns about the loss of the regional R&D Offices in England, and with them the well-established support schemes for Fellowships, Studentships and Bursaries. Recent funding initiatives from Wellcome and from PPP Trusts were welcomed.



## 5. recommendations

- 5.1 In formulating our main recommendations (presented below and summarised in Appendix K), we took the opportunity to consult widely: with member institutions as part of the formal questionnaire-based consultation exercise; with key stakeholders such as the National Health Service, the Department of Health, and equivalent departments in Scotland, Wales and Northern Ireland; and lastly through publicising our draft recommendations through the UK Council's Newsletter which is distributed to all member institutions. While details of the feedback received is presented below, the overall level of support for our recommendations was noteworthy. As such, the draft recommendations were confirmed for the purposes of this report.
- 5.2 ***Recommendation 1. Stakeholders, including Higher Education Institutions (HEIs), the National Health Service, and the professional and statutory bodies, should recognise the development and provision of research training for the healthcare professions as an urgent national priority.***

This was seen as the cardinal recommendation by the Working Group, and as an affirmation of the main recommendation of Task Group 3. We recognise that little will be achieved by way of development of research training opportunities within this area without common cause and effort across all relevant stakeholders: i.e. higher education institutions, the National Health Service, and the relevant professional and statutory bodies.

The majority of survey respondents supported this statement. However there were some concerns regarding commitment and implementation, and in particular the limited capacity of higher education institutions to act alone, e.g. structural and financial barriers need to be identified and appropriately acknowledged (University of Liverpool). It was noted that the role of HEIs is often restricted to trying to respond appropriately and imaginatively to moves from the other stakeholders (Keele University). Several respondents highlighted the importance of institutions taking a considered, strategic approach to development of this area: e.g. ensuring research familiarisation training at the undergraduate level for all professional groups (University of Strathclyde), recognising that research training may require a different focus for different professional groups (University of Wolverhampton), and ensuring that any training was well conceived and delivered (University of Liverpool).

A set of related concerns focussed on the importance of health and social services managers and leaders recognising the key importance of research: as part of this it was seen as essential to inform and educate management professionals on the value of research and of research skills, e.g. in underpinning making policy decisions that are evidence-based (Universities of Strathclyde, Teeside, Wolverhampton). There was a call for research to be formally acknowledged by NHS employers as a core skill, and involvement in research training by healthcare professionals to be formally encouraged (Lancaster University). As sine qua non of such recognition, it was felt important that real incentives should be provided for those with research training through enhanced career opportunities, e.g. by making research training and experience a criteria for promotion to consultant grades (University of Liverpool). Equally, it was recognised that balance was important, and thus research training had to be matched against other competing perspectives and demands (e.g. for skill development and maintenance of competency, skill-mix, etc.; University of Paisley). Furthermore, research training had to demonstrate relevance and applicability in the real world, and help to strengthen the evidence base for users and practitioners (Manchester Metropolitan University).

The essential requirement for adequate funding to support the development of research training in this area was stressed by a number of respondents. It was proposed that only targeted funding initiatives would be able to adequately address the research training needs of the healthcare professions (as recommended by Task Group 3), and that funding levels should be reviewed regularly to ensure that these are adequate to the task, and comparable to those provided for medicine (University of Ulster, De Montford University). On a related issue, it was noted that availability of funding to support research studies are key issues for individual professionals (University of Paisley), and that the stated commitment to the development of key research skills within the healthcare professions could be best demonstrated through provision of fully-funded fixed term clinician/researcher posts to enable clinicians to continue with clinical work whilst engaging in research training (St Martins College).

- 5.3 **Recommendation 2.** *In line with the recommendations of the Task Group 3 Report (2001), research training provision for healthcare professionals should be comprehensively reviewed by HEIs, to ensure consistency (across professions and institutions), and a clear*

*progression from research enabling activities at pre-registration level, essential research skills development at post-registration level, to doctoral level skills. This will have implications for research training within courses at every level from pre-registration to doctoral degrees.*

We regarded this as an essential pre-requisite to any further development at postgraduate level, recognising that the variable extent and depth of teaching of research at pre-registration level and its implication for research training at more advanced levels.

Although it was suggested that a clear element of progression already existed in some institutions (De Montford University), survey respondents expressed overwhelming support for this recommendation. However, it was proposed that such review needed to be undertaken collaboratively across institutions (e.g. through training networks), as internal reviews by individual HEIs would not achieve the desired outcome (Sheffield Hallam University). As part of such review, it was considered important to pay equal attention to development of the various levels of research skills (i.e. not just at doctoral level), to ensure inclusivity, and to adequately meet the needs of clinical practice (Manchester Metropolitan University); in particular, and regardless of any framework or benchmarking that may be undertaken, it was seen as important that research training continues to be focussed on individual students' needs (Liverpool Hope University).. Equally, respondents stressed that existing postgraduate research training provision may not be adequately targeted to address the specific needs of healthcare professionals (Keele University), and thus more tailored, formalised programmes might be required, perhaps structured around nationally agreed standards or frameworks such as those adopted by the research councils (University of Teeside). It was thought that a common, clearly mapped framework for research training would address current deficits in research training at pre-registration training, which in turn lead to problems in postgraduate delivery (University of Liverpool, York St Johns College), facilitate the marketing and delivery of such training, and also enhance research activity (University of Paisley). As an integral element of these developments, the quality of materials and training, at all levels, was seen as particularly important (University of Teeside; University of Wolverhampton), and these in turn depended upon adequate provision of time and resources to ensure wider access to relevant training (University of Strathclyde). Furthermore, mutual recognition across professions would enhance opportunities

for multiprofessional and cross-institutional collaboration in training delivery and in research activity (University of Paisley).

- 5.4 **Recommendation 3.** *Given its success to date, the Masters in Research (MRes) degree represents an eminently suitable model for the development of new masters-level courses for formalised training in clinical research skills for the healthcare professions at post-registration level. To facilitate delivery and completion by healthcare professionals, such Masters in Clinical Research (MClinRes) should be available on a part-time basis, and, where possible, made available through distance and e-learning.*

Respondents agreed in principle with this statement, and it was noted that MCLinRes degrees were already offered by at least two institutions in the UK, and had proved to be a welcome and popular development (University of Ulster). Several other institutions had already developed, or were in the process of developing similar provision, some with profession-specific elements (University of Teeside; York St John College). Although it was noted that careful consideration might need to be given to market research (University of Strathclyde), the introduction of such courses was seen as an essential development for healthcare professionals, and particularly those working within health service as researchers (De Montford University, Napier University). However, the current lack of benefit in terms of career progression and promotion was noted as a potential barrier to such development (University of Liverpool). A number of respondents commented on what they considered essential research skills or topics which needed to be addressed within the MCLinRes, including clinical trials methodology, regulation and governance, including European issues (De Montford University), clinical research design, data collection and analysis (Napier University), or alternatively commented upon the need for further debate to produce a common understanding about what the MCLinRes might include, and its relationship to other research training provision, e.g. professional doctorate or PhD (University of Sheffield). Several respondents were unsure of the particular benefit of the title of MCLinRes, i.e. in comparison to MRes (Keele University, University of Wolverhampton), or in comparison to PGCert in Research, or Masters in Health Research or equivalent (Manchester Metropolitan University, Sheffield Hallam University); one respondent proposed that research training could be offered in a variety of ways, including short courses, postgraduate certificates and diplomas as well as the proposed MRes

programme (University of Wolverhampton). Again, respondents noted the critical importance of adequate resourcing to underpin development and delivery of such programmes (Lancaster University, University of Liverpool, University of Paisley).

There was widespread support for the development of distance-learning provision to facilitate part-time study, however it was proposed by several respondents that this should not completely replace face-to-face interaction with experienced researchers, nor opportunities for classroom discussion and interaction with peers (University of Liverpool, Napier University, St Martins College). It was also noted by one respondent that the quality of distance learning materials and provision should be rigorously monitored (University of Liverpool).

- 5.5 **Recommendation 4.** *In developing Masters in Clinical Research or similar degrees, institutions should consider making the core elements or modules available to all research students within the healthcare professions. Such an initiative would provide all research students in these areas with a common grounding in research methods, and facilitate the efficient delivery of formalised elements of research training regardless of degree programme (i.e. PhD, professional doctorate etc).*

Notwithstanding the utility of this approach within the context of the healthcare professions, we felt that this might also serve to address likely requirements for formalised skills training as part of research degree programmes following the current HEFCE consultation on 'Improving the Quality of Research Degree Programmes'.

The majority of respondents agreed with this statement, and noted the potential popularity and benefits associated with such an initiative, particularly where such provision may be facilitated by multiprofessional delivery, or even through inter-institutional collaboration (York St Johns College, University of Ulster). Indeed, several respondents already offered common research training modules across a range of programmes for the healthcare professions (St Martins College, University of Ulster).

Respondents noted the necessity of adequate resources and staff development to underpin such proposed developments (University of Liverpool, York St Johns College). Equally, several respondents

highlighted the importance of balancing ‘core’ research training elements, which were common to all fields of enquiry with others targeted to specific professional areas or types of research (University of Liverpool, St Martins College); one respondent, while agreeing with the recommendation, suggested that it would be important to provide doctoral students with an opportunity to make a case for prior learning to avoid repeating research training modules unnecessarily (Sheffield Hallam University). Notwithstanding such developments at postregistration level, the importance of providing a sound grounding in qualitative and quantitative methods at pre-registration or undergraduate level was reiterated by several respondents (e.g. University of Strathclyde).

- 5.6 **Recommendation 5<sup>18</sup>.** *The PhD degree should be recognised as an important route for research training for members of the healthcare professions, particularly for those who may be expected to provide a research leadership role within their relevant professions, and for those individuals who wish to specialise in research at an early stage in their career.*

The majority of respondents agreed with this recommendation; indeed, several respondents went further and suggested that given the international currency and recognition of the PhD, it represented the preferred route for research training, and that no argument was required in its support of its relevance for these (or indeed any other) professional groups (Anglia Polytechnic University, University of Strathclyde, University of Teesside). However, and while most accepted a difference in focus (although equal value) in the PhD compared to the professional doctorate, some disagreed with the initial suggestion that PhD has a wider focus than the latter, and thus this was dropped from the wording of the recommendation (Lancaster University, Liverpool Hope, University of Sheffield, University of Wolverhampton). It was proposed that in comparison to the PhD, the key distinction between the degrees was that the professional doctorate may be more suitable for those whose professional remit includes, but is not limited to, ‘active’ research (Keele University). Alternatively, the difference was seen as one of accessibility for practitioners studying on a part-time basis (i.e. availability of cohort study and manageable chunks; St Martin’s College).

There were differing views on the relevance of the PhD for those expected to provide a leadership role in research: it was proposed that there was no particular advantage in the PhD over the professional

18 The wording of this recommendation was changed following consultation: references to the wider focus of the PhD were dropped, and ‘research leadership’ replaced the original ‘leadership’.

doctorate as a training for leadership per se (Lancaster University; University of Wolverhampton), and that the new route PhD or DMedSc have the potential to provide an equally important, if not more appropriate, training route for those with a leadership role (University of Sheffield). Alternatively, a number of respondents recognised the PhD as the most appropriate degree for career researchers, and the professional doctorate for professional leaders (Sheffield Hallam University).

While the relevance and importance of the PhD as a research training route for the healthcare professions was widely accepted, respondents highlighted the problems associated with lack of funding opportunities for suitably qualified and motivated candidates from the professions. It was suggested that many healthcare professional are capable of carrying out this level of work, but it is unlikely the numbers embarking on this route will increase given low availability of grants (University of Strathclyde).

- 5.7 **Recommendation 6<sup>19</sup>.** *The professional doctorate, combining formalised profession-specific and research training modules, as well as a professionally-oriented doctoral-level research project, provides an ideal model for research training provision for the healthcare professions, and particularly for those studying part-time. With their professional focus, such degrees represent an appropriate alternative doctoral qualification for senior professional appointments, e.g. consultant therapist or nurse appointments.*

Although there was some degree of agreement with this statement (8/19), and particularly in terms of its suitability for part-time study, a number of respondents expressed reservations regarding the assertion in the draft recommendation that the professional doctorate represented ‘the preferred academic qualification for senior professional appointments’, as many felt that a PhD should be just as acceptable (University of Liverpool, St Martin’s College, University of Paisley, University of Strathclyde, University of Ulster, University of Wolverhampton). In addition some respondents were concerned about ensuring the appropriate level of challenge and professional development required for a doctoral degree (De Montford University, Manchester Metropolitan University, University of West of England).

Those that agreed suggested that the professional doctorate might represent an important route to underpin research as part of continuing professional development, and that the professional doctorate would indeed become the preferred doctorate training route

19 The wording of this recommendation was changed following consultation: references to ‘preferred’ route for professional appointments were dropped.

for healthcare professionals over time (Anglia Polytechnic University). It was equally felt that this might also represent a preferable route for those considering management positions in the health service (University of Teeside). Others indicated that although this might be the preferred route, it should not be the exclusive route (Sheffield Hallam University), and that the new Route PhD might be an equally valuable pathway if appropriately structured (University of Sheffield).

- 5.8 **Recommendation 7.** *Given the relatively low volume of research activity and expertise within these areas, HEIs and relevant clinical centres should establish networks to facilitate the development of relevant research training packages and opportunities, which may include joint supervision of projects and delivery of research modules, including distance and e-supported learning where appropriate.*

The majority of respondents agreed with this recommendation, which was seen as particularly relevant to the development of higher level or doctorate work (University of Teeside); however, many acknowledged that additional resources, including funding and staffing, would be required to fully realise this proposal (University of Liverpool, University of Paisley, University of Wolverhampton). Indeed, it was suggested that much of what was required was already in place, but was not currently available due to lack of such funding (University of Strathclyde). In taking this forward, several respondents commented upon the need to take a carefully managed approach to development, including scoping the existing range of research training provision (including non-award bearing and short courses) to ensure appropriateness of any developments (Manchester Metropolitan University, University of West of England), and establishing formal consortia to underpin collaborative provision between HEIs and relevant clinical centres (University of Sheffield, Sheffield Hallam University). It was noted that arrangements for joint (inter-institutional) research supervision was already in place in some cases (e.g. De Montford University), however there were concerns that any future requirements arising from the HEFCE consultation on improving research degree standards might limit such collaboration in the future, or indeed the ability of some departments to offer supervision because of RAE performance or lack of critical mass in research (St Martin's College).

Several respondents specifically commented on what they saw as the particular appropriateness of e-supported and distance learning as



means of underpinning the wider delivery of research training in this area (De Montford University); indeed, at least one institution was already in the process of developing online material in support of its research training for healthcare professionals (University of Ulster).

5.9 **Recommendation 8.** *Development of research training initiatives for healthcare professions needs to be matched with enhanced career opportunities within the health service, and particularly for those with high level clinical skills, coupled with doctoral-level research training.*

There was, with one exception, broad support by respondents for this recommendation; while it was recognised that the development of consultant posts went some way to addressing this, respondents confirmed this as an important, ongoing issue which needed to be addressed as a priority by health service managers (De Montford University, University of Liverpool, University of Strathclyde, University of Teeside, University of Ulster). Proposals to address this included the provision of NHS R&D funding streams specifically for research conducted by healthcare professions, incentives for research-trained staff within the NHS, and the requirement for research leaders within the NHS to have a PhD (University of Liverpool). More radically, it was proposed that there should be a clear commitment from workforce development confederations that staff they fund through HEI contracts should be engaged in primary research, and all commissioned pre-registration programmes should be required to have a research element (University of Liverpool).

Creating enhanced opportunities within the service was also seen as an equality issue: it was considered essential that nursing and allied health professionals should be treated the same as colleagues within other professions, in which research training is matched with enhanced career opportunities (University of Ulster). However, it was recognised that current professional attitudes and practices may be a barrier to progress; in particular, it was suggested that there was a need to encourage high level, research trained practitioners to stay in clinical areas, and to act as role models to colleagues rather than moving into higher education or management as many have done to date (University of Wolverhampton). In this respect, the development of professional doctorates was seen as an important driver for, and response to, the new job opportunities such as consultant posts which are becoming more widespread within the NHS (Sheffield Hallam University). Equally, it was argued that research-based, critical, reflective practice should be

recognised as important, and rewarded, across the NHS, not just for 'research leaders' (Liverpool Hope University).

Several respondents noted important implications for HEIs, including increased competition for research-trained staff, particularly given increasing salary differentials between higher education and the health service: increasing opportunities and rewards in the NHS would need to be matched within higher education sector (University of Sheffield).

# appendices

## Appendix A

### Membership of Working Group

<b>Name/Position</b>	<b>Contact Details</b>	<b>Area</b>
<b>Professor Annie Anderson</b>	Centre for Public Health Nutrition Research Department of Medicine, University of Dundee	Dietetics
<b>Professor Cliff Bailey</b>	Regional Director of R&D Northern & Yorkshire Region	R&D Office
<b>Professor David Baxter</b>	Head of School of Rehabilitation Sciences University of Ulster	<b>Convenor/UKCGE</b> Rehabilitation
<b>Tracy Bury</b>	Head of Research & Development, Chartered Society of Physiotherapy/ World Confederation of Physical Therapy (Europe)	Professional body Physiotherapy
<b>Dr Mike Davies</b>	Medical Research Council	Research Council
<b>Professor Pam Enderby</b>	Dean of Faculty of Medicine Institute of General Practice and Primary Care, University of Sheffield	Speech & Language Therapy
<b>Dr Irene Ilott</b>	Group Head: Research and Development College of Occupational Therapists	Professional body Occupational Therapy
<b>Professor Alison Kitson</b>	Executive Director (Nursing), RCN	Nursing
<b>Professor Gerry McKenna</b>	Vice-Chancellor & President University of Ulster	<b>Chair</b> Chair of RAE Panel/UoA 11
<b>Professor Jackie Oldham</b>	Centre for Rehabilitation Science University of Manchester	Nursing/ Rehabilitation
<b>Professor Julius Sim</b>	Dept of Physiotherapy Studies Keele University	Physiotherapy
<b>Wesley Vernon</b>	Chair, Society of Chiropractors & Podiatrists Research Forum	Podiatry Professional Body
<b>Professor Pat Williams</b>	School of Applied Sciences, Anglia Polytechnic University/ University of East Anglia	Radiography

## **Appendix B**

### **Promoting Research in Nursing and the Allied Health Professions (HEFCE Research Report 01/64) Executive summary**

#### **Background**

1. This report is the culmination of a nine-month study undertaken for HEFCE by a team from the Centre for Policy in Nursing Research, CHEMS Consulting, the Association of Commonwealth Universities, the Higher Education Consultancy Group and the Research Forum for Allied Health Professions.
2. We were asked to map the present position as regards university research in nursing, midwifery, health visiting and the allied health professions (AHPs), to study the demand for such research, and then to explore the case for further investment by HEFCE and the Department of Health.
3. Our findings have been presented in two volumes: this main report focuses on the demand and on the business case, while the Technical Annexe gives our findings as regards research activity in the disciplines concerned.
4. The mapping study used several approaches to collecting data, since it was clear from previous studies that very little data already existed. A wide-ranging questionnaire survey was sent to 121 academic departments. Visits were made to 11 institutions (from which three case studies were developed). A bibliometric analysis was commissioned of the publications for six professions in the Wellcome Trust's research outputs database, and extensive interviews and consultations were held with research councils, NHSE and Department of Health staff, charity officers and members of institutions.

#### **Demand for research**

5. The demand for research is rarely identified or quantified, so we decided to categorise it in three ways: policy- and R&D-driven demand, that identified by professional groups, and relative demand compared with other benchmarks.

6. Recent policy changes in the NHS such as the move to more home and community-based care imply an extension in the roles of nurses, midwives and AHPs. Government is now stressing the weight to be given to evidence in all aspects of health and social care, placing the onus on the service and the academic community to deliver such evidence. Recent policy statements have identified a gap between the demand for, and the supply of, research in many areas. Bodies such as the National Institute for Clinical Excellence (NICE) are looking for research evidence in order to inform clinical guidelines for practitioners; evidence is also required for other priority areas such as the National Service Frameworks.
7. The shortage of health service researchers is considered by some to be a threat to the NHS's R&D programme as a whole, and research in primary care is a particular gap. A recent study referred to a vicious circle of disadvantage, in which because there were few well-qualified researchers (and little sustained investment in developing this capacity), the research outcomes were limited in number and quality.
8. Three of the relevant professions (nursing, physiotherapy and occupational therapy) have recently carried out consultation exercises asking their members in which topic areas they thought research was a priority. These findings have been passed on to funders, but have had disappointingly little impact so far. A similarly wide range of opinions is collected by the panels of the Health Technology Assessment (HTA) programme, whose role it is to prioritise topics for later NHS funding. We analysed a sample of the topics put forward and found that 10% were potentially applicable to nursing, midwifery and AHPs. NICE has also been presented with a number of research topics to appraise in the same disciplines.
9. Our survey of demand involved an analysis of research proposals submitted to two NHS Regional Offices; this showed that a significant number of proposals from the relevant professions were not funded (although this may have been due to poor quality). Discussions with the Council of Deans of Nursing and Heads of UK Nursing, Midwifery and Health Visiting and the Research Forum for Allied Health Professions served to confirm both the areas where they thought research was needed and the demand for more research capacity and investment in novice researchers.

10. We compared research activity in nursing, midwifery and AHPs with that in education and social work, two professional areas with similar profiles. In the case of education the weakness in research capacity and outputs was recognised in 1998 by the creation of a special teaching and learning research fund managed for HEFCE by the ESRC. This now has a budget approaching £23m, which is used, inter alia, to 'enhance the system-wide capacity for research-based practice in teaching and learning'.
11. Social work as a discipline shares many of the same concerns as nursing, midwifery and the AHPs – no co-ordinating body for funding research, the need for an evidence base to inform practice, and remaining invisible as a discipline as far as many funders are concerned. Despite this, however, its academic departments have succeeded in the RAE, with 16% of departments gaining a rating of 5 or 5\* (compared with 3% in nursing and midwifery).
12. A comparison of the 1998–99 research income between academic departments shows that nursing and AHP departments received the lowest proportions of QR and research council funding of all subjects.

#### Findings from the mapping study

13. There is evidence that nursing, midwifery and AHP departments are generating increasing research income, since the 50 departments responding to our survey showed an increase from £3m in 1996–97 to £9.7m in 1999–2000. The principal funders have been the Department of Health, NHS regional offices and trusts. HEFCE support for research has been £3m a year of QR funding to 11 departments in Unit of Assessment 10 (UOA), which covers nursing and midwifery. Some of the £7m a year which has gone to UOA 11 will have reached AHP departments, although we do not know the proportion.
14. The capacity to do research has also been increasing: over the five-year period to 1998–99 nursing, midwifery and AHP research staff in universities have grown in number from 97 to 240; however, this represents only 3.9% of the total staff of 6,174. Comparable figures for other benchmark disciplines are from education with 7.6% and social work/studies with 13.3%.

15. In the RAE for 2001 the number of submissions in UOA 10 (which covers nursing, midwifery and health visiting) increased by 19% – the second highest of any discipline. In addition, the number of Category A and A\* staff increased by 50% over the 1996 figure – the second highest percentage of any discipline. However, the number of such staff, at 623, is still low in comparison with the total of full-time teaching staff. In UOA 11 (which includes the allied health professions) the submissions were 10% higher than in 1996 but the number of academic staff increased dramatically by 57% (the highest of any discipline) to 1,066. However, we do not know what part of this increase can be attributed to the AHP disciplines.
16. Postgraduate student numbers in nursing have also grown over the same timescale by 94% and amounted to 3,700 in 1998–99. All but 435 of these are part time.
17. The bibliometric analysis we commissioned has shown a matching increase in published papers over the last ten years, although the outputs for nursing and midwifery have not increased since 1995. Authors from hospitals and practice account for a substantial minority of the papers in all disciplines.
18. In dietetics, midwifery and speech and language therapy, we found that one in six of the papers had a foreign author (as a sign of international collaboration) and the same disciplines had a high number of authors from different addresses, indicating inter-university collaboration within the UK.
19. A high proportion of published papers revealed no funding source, implying they were self-funded: this percentage was 83% for occupational therapy, 73% for nursing, 71% for physiotherapy, 57% for midwifery, 46% for speech and language therapy and 38% for dietetics. In the NHS as a whole, 47% of funding of published papers is unacknowledged, which means largely unfunded. The UK government provides funding for the research behind 33% of publications in all of biomedicine.
20. Respondents to our questionnaire gave us information on their research outputs, which averaged out at only 1.8 papers over the whole of the last four years for the 1900 staff involved. They also told us the present number of PhDs among their staff, which was an average of 16% of the total number.

21. Finally, our survey enquired about the number and type of collaborative links which nursing and AHP departments had with other departments or institutions. In nursing and midwifery it was usual to have two formal links with other disciplines and two with other institutions, but to have more than five collaborative arrangements with NHS-related organisations. These figures were lower for all the AHP disciplines.

#### The case for investment

22. We explored some of the arguments for more investment in research and commissioned a brief paper from Dr Steve Hanney, an expert in this area. It is surprising that no serious study has been made of the cost benefit of investing in health research generally. However, Dr Hanney's paper (presented in the Technical Annexe) identified five different arguments for further investment in line with a payback model he and Professor Martin Buxton had earlier developed for health service research in general. The five benefits are: knowledge generation, future research and research use, enhanced executive decision making, cost and effectiveness of different interventions and broader benefits such as economic gain from a healthier workforce.
23. As part of our benchmarking activity we looked at funding for nursing research in the USA and Canada. In the USA, the National Institute for Nursing Research was established as an entity of the National Institutes of Health in 1993 and now receives some \$90m annually from Congress. This sum is equivalent to \$36 per registered nurse. In Canada, a capacity building exercise has been launched providing research support for ten years for a programme of nursing research and training awards centred on newly-created chairs in institutions. This has been very successful in attracting matching funding from other agencies and sponsors.
24. One chapter in our report reviews the options for providing research funding in future. It is clear that there are partners other than the HEFCE and the Department of Health (DH) that will be willing to share in the programme. Some charities and the Medical Research Council have already expressed interest. In examining funding models we reached the following conclusions:
  - i. Support will be needed for capacity building, research programmes and also research environments such as centres and networks.



- ii. Dedicated funding must be available for the AHPs because their starting points and needs differ so much from the other professions.
  - iii. Discussions will be needed with Workforce Confederations concerning the research element in their training contracts.
  - iv. All NHS Regions will have to be committed to working closely with universities in collaborative ventures.
25. On the basis of calculations that bring research expenditure into line with other disciplines, we suggest that HEFCE and the DH might need to set aside funds of between £6m and £17m.
26. The business case for investment is summed up in Chapter 6 with five arguments:
- i. The investment is needed by the NHS as the public is being poorly served by the current capacity for research in nursing, midwifery and the AHPs and the outputs from it.
  - ii. There is a demand for research which is not being met.
  - iii. If one interprets 'payback' in a broad sense, there are economic arguments for such investment.
  - iv. Research in these disciplines is underweight compared with two of the obvious national peer groups and the UK is less generous than the USA and Canada which are investing in research capacity.
  - v. The RAE ratings for research in these disciplines show that they need to be strengthened nationally and the departments need more of the right capacity so that they can respond to demand.

## Appendix C

### Task Group 3 (HEFCE Report 01/63)

#### Summary of recommendations

1. The HEFCE and the DH should establish a fund to enhance the volume of high quality health-related research.
2. There should be a seven-year minimum period for additional funding to be channelled through the new fund.
3. A board consisting of nominees of the funders should be established to oversee the set-up and strategic direction of the fund. The role of the board would be to review the processes, programmes and priorities of the fund and to nominate peer reviewers where appropriate. This board would have responsibility for monitoring the need for research and the development of capacity, and adjusting funding priorities accordingly.
4. The HEFCE and the DH should enter into discussions with other funders at an early stage to establish mechanisms for co-ordinating investment in health professions research.
5. At the mid-point of the life of the new fund, the governing board or the funders should report upon the state of the research landscape in nursing and AHPs. This report should be sufficiently detailed to enable HEIs to focus their planning upon areas of research where they are likely to enjoy a comparative advantage, should they choose to do so. It should also provide the fund's stakeholders with a reliable account of the researchers and research groups working in key sub-fields.
6. Workforce Development Confederations should be mandated, as a core responsibility, to support research training for teachers in higher education. And in the long term confederations should aim to ensure that all teachers in HE possess research degrees, or have access to the support necessary to acquire them. Support for research training should cover the full costs of providing staff with study leave as well as the costs of tuition.
7. NHS units should continue to work closely with HEIs to develop research training partnerships, using the framework for collaboration developed by HEFCE/DH Task Group 2.

8. It should be within the remit of the proposed fund to support HEIs in providing opportunities to study for research degrees, for academic staff in HEIs whose posts are not funded for teaching. This support should cover the full costs of providing study leave as well as the costs of tuition.
9. The governing board should be able to take a broad view of the best means to enhance research capacity. For example, it should be within its remit to fund:
  - post-doctoral research posts
  - sabbatical leave to enable teachers in HEIs and practitioners to engage in research
  - senior research posts, including professorships, where the development of research capability at a national level is inhibited by a lack of research leaders in particular areas.
10. The HEFCE and the DH should ensure that the proposed fund supports innovative approaches to the creation of roles straddling academia and practice.
11. The governing board should consider proposals for developing interdisciplinary research capacity on the same basis as those for developing capacity within the professional disciplines, but should not consider funding proposals which exclude nurses and AHPs altogether.
12. The funding bodies should consider these proposals as a starting point for discussion about how such a fund should be distributed and administered.
13. The final outcome of the discussions should be clear performance targets, enabling the success of the fund in building capacity to be objectively measured.
14. A portion of the fund should be earmarked to support leading institutions in designated fields within health-related research in developing mutually beneficial research networks, drawing in researchers attached to other institutions.

## Appendix D

### Task Group 3 (HEFCE Report 01/63) Stages of enhancing research

#### ENABLING ACTIVITIES

- 1 Appreciation of research-led practice.

**Typical activities:** Basic research awareness. Understanding of the need for evidence in relation to practice. Ability to synthesis original research. Clarifying expectations of entry-grade practitioners.

**Operational and organisational implications:** HR practices which provide time, resources, incentives and appraisal of performance. Effective supervision and basic support mechanisms for dissemination of research to be in place. Recognition of issues in initial staff induction processes.

**Possible funding and resource implications:** Workforce Confederations may need to review curriculum for nurse training to ensure this aspect is covered.

- 2 Basic application of research-led practice and teaching.

**Typical activities:** Practice-based professional development. Incorporation of research-led practice into clinical practice curriculum.

**Operational and organisational implications:** Operational support for professional development to 'good' or 'best' practice levels. Contractual recognition of time for engagement in practice-based professional development.

**Possible funding and resource implications:** Such support will have financial implications in respect of time allowed for CPD.

- 3 Acquisition of knowledge and skills in research.

**Typical activities:** Research-based professional development. Acquisition of appropriate professional and postgraduate qualifications. Within hospitals and trusts, commissioning research and development to address defined priorities.

**Operational and organisational implications:** Operational support to enable staff to obtain qualifications such as Masters and PhD. Coherent human resource management strategies to match aspirations for career development. Consistent practice across hospitals/ trusts to ensure application of 'good' or 'best' practice.

**Possible funding and resource implications:** There will also be a cost to allowing staff to take time off for study, as well as the need to provide fellowships and assistantships to those who are studying.

## DEVELOPMENTAL ACTIVITIES

- 4 Integration of research skills into practice.

**Typical activities:** Existence of research strategies in nursing and AHP departments and mechanisms to implement them. Internal professional development activities to embed research and other activities within teaching.

**Operational and organisational implications:** Within HEIs, time for teaching staff to integrate research and related professional activities into practice. Within the curriculum, a planned interaction between research and teaching is needed.

**Possible funding and resource implications:** Appropriate funding methodology from HEFCE, and within the formulae used to negotiate education contracts with the Workforce Confederations.

- 5 Development and enhancement of research expertise.

**Typical activities:** Integration and synergy between related activities in HEIs. Development of specialist research centres and research staff. Enhanced inter-institutional collaboration, both within HE and with the NHS.

**Operational and organisational implications:** Removal of barriers to developing expertise to a high level. The need for specialist research careers. Appropriate funding from research councils.

**Possible funding and resource implications:** Within HEIs, institutional resource allocation strategies to enhance research expertise, including in relation to the RAE.

## APPLICATION ACTIVITIES

- 6 Application of research capacity to local needs.

**Typical activities:** Planned collaboration with local trusts and related initiatives. Effective dissemination of research findings to local practice.

**Operational and organisational implications:** Need for incentives to all parties to disseminate and apply research, etc.

**Possible funding and resource implications:** Support and appropriate funding from local trusts. Need for funding to be available over time and not wholly project based in order to develop sustained capacity.

7 Application of research capacity to regional needs.

**Typical activities:** Planned collaboration with regional and related initiatives. Effective dissemination of research findings to regional practice.

**Operational and organisational implications:** Need for incentives to all parties to disseminate and apply research.

**Possible funding and resource implications:** Support and appropriate funding from NHS regions. Need for funding to be available over time and not wholly project based in order to develop sustained capacity.

8 Application of research capacity to national needs and priorities.

**Typical activities:** Strategy to support research agreed with Government, and funding made available to HEIs to implement. Effective dissemination of research findings to national practice.

**Operational and organisational implications:** Need for incentives to all parties to disseminate and apply research.

**Possible funding and resource implications:** Support and appropriate funding from research councils, NHS, charities nationally. Need for funding to be available over time and not wholly project based in order to develop sustained capacity.

9 Achieving excellence in research and engaging in international activities to enhance capacity.

**Typical activities:** Involvement by HEIs in collaborative international research activity. Research outputs published in highly selective peer reviewed journals.

**Operational and organisational implications:** Need for a stable institutional base for such activities to take place.

**Possible funding and resource implications:** Importance of high quality international research needs to be recognised by all major international research funders.

## Appendix E

### Consultation with Member Institutions: Overview of Survey Respondents

Respondents (n=19) to the survey consultation represented the range of institutions across the higher education sector, not only geographically, but also included both 'new' and 'old' universities, as well as university colleges (see Table).

**Table. Consultation with Member Institutions: Summary of Respondents**

Institution	School/ Department (where appropriate)
De Montford University	Nursing and Midwifery
Keele University	Dept of academic Affairs
Lancaster University	Institute for Health Research
University of Liverpool	Faculty of Medicine
Liverpool Hope University College	
Manchester Metropolitan University	Department of Health Care Studies
Napier University	Faculty of Life and Health Sciences
University of Paisley	
University of Sheffield	Graduate Research Office
Sheffield Hallam University	
St Martins College	Faculty of Health and Social Care
University of Strathclyde	Speech and Language Therapy
University of Teesside	
University of Wales in Cardiff	School of Health and Social Sciences
University of West of England	Faculty of Health & Social Care
University of Wolverhampton	Graduate School
York St John College	School of Professional Health Studies
University of Ulster	School of Rehabilitation Sciences
Anglia Polytechnic University	Centre for Research in Health and Social Care

All of the respondents offered research degrees within the nursing and allied health professions. Of the sample, 15/19 of respondents provided pre-registration courses in nursing, midwifery, or health visiting, while 16/19 provided such courses for at least one of the allied health professions. Just over half (n=10) identified pre-registration courses in other relevant areas, including pharmacy, clinical psychology, play therapy, music therapy, dental technology, health studies, complementary therapies, and social work.

Responses in respect of post-registration courses were almost identical: 15/19 of respondents provided post-registration courses for the nursing professions, and 15/19 of respondents provided such courses for allied health professionals. As might be expected, in almost all cases, the same institutions provided both pre- and post-registration courses within a given professional area. In only one case was a professional post-registration course provided by an institution that had no pre-registration provision in the same area (Strathclyde). Nine respondents also provided details of other relevant post-registration courses, including programmes in the areas already identified at pre-registration level above (e.g. pharmacy, music therapy and social work), as well as a variety of programmes which were more multidisciplinary in nature: Health Research, Homeopathy, Health and Healing Science, Public Health and Health Promotion, Health and Social Services Management, and Primary Care.



## Appendix F

### Consultation with Member Institutions: Programmes Developed for Research Training in the Healthcare Professions

Institution	Title of programme	Professional groups	Outline structure
<b>Anglia Polytechnic University</b>	Professional Doctorate in Health and Social Care	Health and social care/ services managers, nurses, social workers, local authority senior staff, university lecturers	Part-time 3 years: 2 stages (6 workshops of 2 days each) Stage 1: 3 papers (7,000 words each); Stage 2: Thesis (60,000 words)
<b>Keele University</b>	MA & MSc programmes with research modules (MA Music Therapy, MA Mental Health Innovations, MSc Public Health etc)	Medical & nursing staff, health and social services managers, social workers, local authority staff	Mostly part-time: delivery 24-48 months, module structure with final dissertation
<b>Lancaster University</b>	Doctorate in Medical Ethics	All healthcare professions	At least 4 years, block release, with early exit point: MRRes
	Master in Health Research	All healthcare and allied professions	Full-time 1 year, part-time 2 years: 6 taught modules and dissertation
	Postgrad Dip in Health Research	All healthcare and allied professions	Full-time 1 year, part-time 2 years: 4 taught modules & research project
	Masters by Research in Health and Social Care	All healthcare and allied professions	Full-time 1 year, part-time 2 years: 3 taught modules & extended dissertation
<b>University of Liverpool</b>	(Modular) Masters in Clinical Science	All healthcare professions	Full-time 1 year: taught modules and research dissertation
	MSc Clinical Nursing	Nurses	Full-time 1 year, part-time 3 years: taught modules and research dissertation
	MSc in Ethics of Health Care	All healthcare professions	Full-time 1 year, part-time 3 years: taught modules and research dissertation
	MSc in Health Research and Policy	Nurses	Full-time 1 year, part-time up to 6 years: taught modules and research dissertation

Institution	Title of programme	Professional groups	Outline structure
<b>Manchester Metropolitan University</b>	MSc Practitioner Research	Nursing and Allied Health Professionals	Part-time 2 years: 120 credit points, taught, and research thesis
<b>University of Sheffield</b>	DMedSci	Nursing and Midwifery	Full-time 3 years, part-time 6 years: 240 credits taught plus doctoral research thesis
<b>Sheffield Hallam University</b>	Doctorate in Professional studies	Nursing and Allied Health Professionals	Part time 4 years: Max 180 'taught' credits including planning of 3 work based projects with linking narrative and critique for examination
<b>University of Teesside</b>	MSc Evidence-Based Practice	All healthcare professions	Part-time 2 years min, 5 years max; 120 credit taught and dissertation
	MA Advancing Practice	All healthcare professions	Part-time 2 years min, 5 years max; 120 credit taught and dissertation
	MSc Health Sciences	All healthcare professions	Part-time 2 years min, 5 years max; 120 credit taught and dissertation
<b>University of West of England</b>	MA in Applied Social Research (Health & Social Care)	All health & Social Care professionals	Full-time 2 years: Total 180 credits Year 1: 60 credits in core university modules, 60 credits, in faculty-specific modules Year 2: dissertation (60 credits)
<b>University of Wolverhampton</b>	Clinical Doctorate	Nursing and Allied Health Professionals	Under development, not yet validated
	MRes	All healthcare professions	Under development, not yet validated
<b>York St Johns</b>	PGCert/PGDip/MSc in Professional Health Studies (PHS)	All healthcare professions	Part-time, credit rated per module, MSc students undertake dissertation
<b>University of Ulster</b>	Masters in Clinical Research (MClinRes)	All healthcare professions	Part-time 2 years, taught modules and research project (90 points)
	Doctor of Medical Science	Allied health professions	Part-time at least 3 years; masters entry (relevant), doctoral thesis
	Doctor of Nursing Science	Nursing	Part-time at least 3 years; masters entry (relevant), doctoral thesis

## Appendix G

### Consultation with Member Institutions: Institutional Initiatives in Support of Research Training for the Healthcare Professions

Institution	Details of initiative	Professions
<b>Anglia Polytechnic University</b>	Centre for Research in Health and Social Care, approved in 2001, with brief to develop research capacity through multi-disciplinary research teams across the University's Schools and Departments	Nursing, midwifery, social work, social policy, allied health professions, population & demographic research, bio-engineering, environmental sciences and human health, statistics & epidemiology
<b>De Montford University</b>	Funded studentship (bursary awarded to allow doctoral student to study full-time)	Nursing and midwifery
<b>Keele University</b>	Departmental studentships  University-wide research training with generic modules available to all students, including those in the healthcare professions	Physiotherapy  All students
<b>University of Liverpool</b>	Allied Health Professions Resources Group has given 4 research student bursaries every 2 years; currently restricted to one studentship annually.  Appointment of a senior research fellow as research Director for Allied Health Professions  Research pump-priming funding	All allied health professions  All allied health professions  Physiotherapy, Occupational Therapy, Orthoptics, Medical Imaging, Therapy Radiography
<b>Manchester Metropolitan University</b>	University-funded PhD studentship in collaboration with clinical areas; jointly-funded studentships	All healthcare professions
<b>University of Paisley</b>	University funded studentships based upon bids from schools/faculties. The health cluster is a recognised area for development	All healthcare professions

Institution	Details of initiative	Professions
<b>Sheffield Hallam University</b>	<p>School-funded full-time studentships (No RAE funding available for 3b)</p> <p>Successfully competed for studentships, funded 60% by university and 40% by partner organisation. No groups prioritised and partner still to commit to 3 years funding</p>	<p>All healthcare professions</p> <p>All healthcare professions</p>
<b>University of West of England</b>	<p>Faculty-funded PhD bursary</p> <p>University-funded PhD and postdoctoral bursaries bid for in the present planning round</p>	<p>Nursing</p> <p>Nursing and allied health professions</p>
<b>University of Wolverhampton</b>	<p>Small but steady number of studentships, jointly funded with NHS Trusts and private sector</p> <p>Postgraduate, credit-rated continuing professional development course programmes under development</p>	<p>All healthcare professions</p> <p>All healthcare professions</p>
<b>York St Johns College</b>	<p>Readership to aid development of the research profile of the School of Professional Health Studies</p> <p>Appointment of Visiting Professor with excellent research profile</p>	<p>All allied health professions</p> <p>All allied health professions</p>
<b>University of Ulster</b>	<p>University-funded studentships are provided in selected areas. Healthcare professions have been identified as a priority area for support through such studentships</p>	<p>All healthcare professions</p>

## Appendix H

### Consultation with Member Institutions: Networks and Collaborations in Support of Research Training

Institution	Details of collaboration	Professional groups
<b>Anglia Polytechnic University</b>	Joint Chair in Mental Health with NHS Trust	Clinical nursing, social work
	East London and Essex Primary Care Network of Researchers (ELENoR) 1999 to end March 2003	Medical, nursing, dental, and pharmacy
	Essex Primary Care Research Network (EPCRN) from 1 April 2003	Medical, nursing, dental, and pharmacy
	Research Governance Framework Support. Development of University/NHS Agreement with 7 acute NHS Trusts, and 13 Primary Care Trusts in Essex (EPCRN)	All healthcare professions
	40 day/annum secondment of R&D Manager funded by NHS Trust to University's Centre for Research in Health and Social Care. Development of University and NHS Trust Agreement on Research Governance Framework	Allied health professions and MEHT consultants in research collaboration (inc. bioengineering)
	Helen Rollason Centre for Cancer Research (funded by Helen Rollason Cancer Research Charity and the University). Laboratory research on site at the University (from Autumn 2003) School of Applied Sciences (inc. allied health professions) partnerships with Royal Colleges and Chartered Institutes. Visiting Professors with research expertise	All healthcare professions
	School of Community Health and Social Studies Collaboration with Dept of Psychiatry, Cambridge University; Cambridgeshire Mental Health NHS Trust, and Homerton College Cambridge. Mental health research seminar (from April 2003)	Health professionals in mental health research
<b>De Montford University</b>	Nursing & Midwifery Research Network (set up Oct 02) with online support with WebCT. Discussion over the internet and monthly face-to-face meetings	Nursing and Midwifery. Open to clinical staff in local Trusts
	Regular meetings for research students in the faculty	All health and community students
<b>University of Liverpool</b>	The AHP Inter-Departmental Committee, attempted to set up networks for research, not necessarily training	All allied health professions

<b>Institution</b>	<b>Details of collaboration</b>	<b>Professional groups</b>
<b>University of Liverpool</b>	Part of seminar programme includes sessions with local practitioners, clinicians and Trust research leaders	Physio, OT, Orthoptics, radiotherapy
<b>Manchester Metropolitan University</b>	'On-site' delivery of PG modules from MSc in collaboration with various NHS Trusts	All healthcare professions
<b>University of Paisley</b>	'On-site' delivery of short programmes on research awareness, research utilisation, and writing a research proposal within the local Primary Care Trust	All healthcare professions
<b>University of Sheffield</b>	'Partnership Group' between the School of Nursing and Midwifery, Sheffield Hallam University, local Trusts and Trent Institute for Health Service Research, - shares research information and encourages research bids; this group has a biennial conference	Nursing, midwifery and associated healthcare professions
	School of Nursing and Midwifery Liaison Committee Involves Sheffield Hallam University, hospital trusts and Trent Institute for Health Service Research, plus social care representatives: shares research information and encourages research education	Nursing and midwifery, health visitors, and social workers
	Postgraduate tutor in Nursing and Midwifery. Advises postgraduate research students on research issues	Nursing and midwifery, health visitors
<b>Sheffield Hallam</b>	External validation of PGCert Health Research Practice with Sheffield Teaching Hospitals NHS Trust	All healthcare professions
	Credit rated research-related courses delivery in local trusts	All healthcare professions
<b>University of Teesside</b>	R&D support clinics delivery on-site to local Trusts  R&D support clinics for any health and social care staff free of charge at the University site	All healthcare professions
<b>University of Ulster</b>	R&D support clinics for own staff. Workshop series for NHS staff and own staff, and a seminar series and Postgraduate Institute conference held annually, open to all	All healthcare professions
	Joint appointments with Health and Social Services Trusts	Nursing and physiotherapy
	Formal agreements with local Health and Social Services Trusts, including research collaboration. Bursaries funded by Trusts to support staff to undertake part-time PhDs	All healthcare professions

## Appendix I

### Consultation with Member Institutions: Development of Research Training in the Healthcare Professions: Factors in Success

Institution	Significant factor 1	Significant factor 2	Significant factor 3
<b>Anglia Polytechnic University</b>	Package of research programmes delivered jointly across relevant Schools	Bio-engineering Research Group in the School of Design and Communication Systems	Optometry Research in the School of Applied Sciences
<b>De Montford University</b>	Availability of supervisors with relevant experience	Support in terms of funding for students	Availability of good quality, centrally delivered courses for research issues
<b>Keele University</b>	Framework for research training	Research foci in which to 'house' research students	
<b>Lancaster University</b>	Expansion of training and increased funding from NHS purchasing confederation	Increasing emphasis on evidence-based practice in the NHS	Programme moved from NHS to University (2001). University resources have helped considerably
<b>University of Liverpool</b>	Links with other departments, especially for co-supervision	Targeted studentships and pump-priming funding	Internal research meetings
<b>Liverpool Hope University</b>	Emphasis on epistemological relationship to methods	Focus on research as a social process of knowledge production- focusing on reflective researcher	Making statistical data and its analysis 'user friendly' and relevant
<b>Manchester Metropolitan University</b>	Applicability	Accessibility (both language and programme)	Flexibility
<b>Napier University</b>	Provision of M level research modules from MSc Nursing/ Midwifery taught programmes		
<b>University of Paisley</b>	Partnership with NHS Trusts to enable further development of their research development and governance agendas	Known track record of delivery of quality practice-related academic programmes	On-site delivery of material at mutually agreed time and at a reasonable cost. This has led to further developments
<b>University of Sheffield</b>	Encouragement of academic staff wishing to undertake research degrees	Development and delivery of professional doctorate (DMedSci)	Recruitment of PhD qualified staff

<b>Institution</b>	<b>Significant factor 1</b>	<b>Significant factor 2</b>	<b>Significant factor 3</b>
<b>Sheffield Hallam</b>	Responsiveness	Flexibility	
<b>St Martins College</b>	Excellent interpersonal relations between staff and students	Use of academic subject specialists as experienced supervisors alongside healthcare professions in supervisory teams	Recognition of health professional qualifications having breadth rather than depth and building on that in the development of PGT and PGR projects
<b>University of Strathclyde</b>	Good applied honours level research training in undergrad degree (SLT)	Good applied research methods classes as part of PhD and MSc courses	Departmental expertise and ongoing research
<b>University of Teesside</b>	MSc Evidence-Based Practice	R & D support clinics	R & D workshop series
<b>University of West of England</b>	Dedicated postgraduate research studies coordinator	Careful selection of supervisory teams	Emphasis placed upon research student days
<b>University of Wolverhampton</b>	Mature collaborations with other HEIs	Research topics relevant and responsive to service and clinical needs	Staff development to address research training needs
<b>York St Johns</b>	The initiative of individual research active staff		
<b>University of Ulster</b>	Reputation for Research Quality/Excellence, and high completion rates	Clinically-based research projects	Variety of research themes in which supervision can be offered



## Appendix J

### Consultation with Member Institutions: Development of Research Training in the Healthcare Professions: Barriers to Success

Institution	Significant factor 1	Significant factor 2	Significant factor 3
<b>Anglia Polytechnic University</b>	Cost of delivery in terms of time & resource to both the University and members of HCPs	Lack of critical mass of research experience among healthcare professionals in University	The nature of NHS contract for delivering nursing & midwifery
<b>De Montford University</b>	Difficulty for part-time students to juggle work, family commitments and study	Staff shortages causes pressure on clinicians to undertake extra work in the clinical area	Perception that research is not relevant to the clinical area
<b>Keele University</b>	Availability of supervisors	Access to project funding for the costs of research	Resource issues related to providing courses across a range of departments
<b>Lancaster University</b>	Insufficient funding outside pre-registration funding/ commissioned places	New HEFCE guidelines: would appear to restrict supervisory teams. If unable to utilise NHS research supervisors will severely stretch existing resources	Shortage of staff with the competencies to teach relevant research methodologies (based upon recruitment and retention difficult)
<b>University of Liverpool</b>	Cultural barriers to change	Lack of identifiable incentives, including career incentives	Time pressures due to workloads
<b>Liverpool Hope</b>	Fear of 'statistics'	Students' perceived gap between research and their own experiences of professional practice	
<b>Manchester Metropolitan University</b>	Lack of applicability	Inaccessibility	Inflexibility
<b>Napier University</b>	Lack of resources	Lack of experienced supervisors	Lack of research ethos and associated career structure
<b>University of Paisley</b>	Specification of 'area of spend' by funding body: i.e. within given time scale without an accompanying source of continued research development support	Competing demands for continuing professional development can contribute to reduction of applicants for module which must be a viable number to run	

Institution	Significant factor 1	Significant factor 2	Significant factor 3
<b>University of Sheffield</b>	Inadequate resources to release University and NHS staff for sufficient time to undertake a higher degree by research	Lack of PhD and Post Doctoral studentships. Lack of funding; workforce confederation gives low priority to research	Relatively low volume of research activity and expertise in these areas in the past
<b>Sheffield Hallam University</b>	Having been early providers for AHPs and Nurses, unable to compete against massive investment by regional HA in universities with medical schools when 'new' R&D programme came into force in 1990s		
<b>St Martins College</b>	Pressures of their workloads detracting from time available for part time research	Risk of loss of professional practice credibility if full-time research is undertaken	New graduates prioritise clinical experience and salaries over f/t PGR: no tradition of postgraduate research studies
<b>University of Strathclyde</b>	Poor uptake/few applicants	Lack of rewards for research expertise in NHS	Time taken for ethics approval
<b>University of Teesside</b>	Time (projected time) for NHS staff to undertake training	Protected time for implementation of skills into practice	
<b>University of West of England</b>	Lack of RAE income	Work pressures upon part time PhD students	Centralisation of health research funds blocks progress of new comers
<b>University of Wolverhampton</b>	Need for critical mass of experienced researchers in the NHS/social care sectors and in some areas of higher education	Management perceptions and poor understanding of research in the NHS and social care organisations	Limited funding steams for research
<b>York St Johns</b>	Lack of a person experienced in obtaining research grants and supervising research	Lack of available money for research development within the University	
<b>University of Ulster</b>	Lack of specific PhD studentships	Lack of general funding	Lack of resources compared to other regions

## **Appendix K**

### **Summary of Recommendations**

#### **Recommendation 1**

Stakeholders, including Higher Education Institutions (HEIs), the National Health Service, and the professional and statutory bodies, should recognise the development and provision of research training for the healthcare professions as an urgent national priority.

#### **Recommendation 2**

In line with the recommendations of the Task Group 3 Report (2001), research training provision for healthcare professionals should be comprehensively reviewed by HEIs, to ensure consistency (across professions and institutions), and a clear progression from research enabling activities at pre-registration level, essential research skills development at post-registration level, to doctoral level skills. This will have implications for research training within courses at every level from pre-registration to doctoral degrees.

#### **Recommendation 3**

Given its success to date, the Masters in Research (MRes) degree represents an eminently suitable model for the development of new masters-level courses for formalised training in clinical research skills for the healthcare professions at post-registration level. To facilitate delivery and completion by healthcare professionals, such Masters in Clinical Research (MClinRes) should be offered on a part-time basis, and, where possible, made available through distance and e-learning.

#### **Recommendation 4**

In developing Masters in Clinical Research degrees, institutions should consider making the core elements or modules available to all research students within the healthcare professions. Such an initiative would provide all research students in these areas with a common, sound background in research methods, and facilitate the efficient delivery of formalised elements of research training regardless of degree programme (i.e. PhD, professional doctorate etc).

#### **Recommendation 5**

The PhD degree should be recognised as an important route for research training for members of the healthcare professions, particularly for those who may be expected to provide a research leadership role within their

relevant professions, and for those individuals who wish to specialise in research at an early stage in their career.

### **Recommendation 6**

The professional doctorate, combining formalised profession-specific and research training modules, as well as a professionally-oriented doctoral-level research project, provides an ideal model for research training provision for the healthcare professions, and particularly for those studying part-time. With their professional focus, such degrees represent an appropriate alternative doctoral qualification for senior professional appointments, e.g. consultant therapist or nurse appointments.

### **Recommendation 7**

Given the relatively low volume of research activity and expertise within these areas, HEIs and relevant clinical centres should establish networks to facilitate the development of relevant research training packages and opportunities, which may include joint supervision of projects and delivery of research modules, including distance and e-supported learning where appropriate.

### **Recommendation 8**

Development of research training initiatives for healthcare professions needs to be matched with enhanced career opportunities within the health service, and particularly for those with high level clinical skills, coupled with doctoral-level research training.



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