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**Research report**

# Promoting research in nursing and the allied health professions

**A report to Task Group 3 by the CPNR, CHEMS  
Consulting, the Higher Education Consultancy Group  
and the Research Forum for Allied Health Professions**



Centre for Policy in  
Nursing Research



Research Forum  
for Allied Health  
Professions



Association of  
Commonwealth  
Universities



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## Abbreviations used

ACU	Association of Commonwealth Universities
AHPF	Allied Health Professions Forum
AHPs	Allied Health Professions
AMRC	Association of Medical Research Charities
BDA	British Dietetic Association
CADRE	Capacity building effort for Applied and Developmental Research and Evaluation
CEBN	Centre for Evidence-based Nursing
CHI	Commission for Health Improvement
CHSRF	Canadian Health Services Research Foundation
CIHR	Canadian Institutes of Health Research
CNPR	Centre for Nursing Policy Research
CoIR	Collaborative Research
CPD	Continuous Professional Development
CPSM	Council for Professions Supplementary to Medicine
CRD	Centre for Reviews and Dissemination
DfEE	Department for Education and Employment
DH	Department of Health
ENB	English National Board for Nursing, Midwifery and Health Visiting
ESRC	Economic and Social Research Council
ETCs	Education and Training Consortia
HEFCE	Higher Education Funding Council for England
HESA	Higher Education Statistics Agency
HTA	Health Technology Assessment programme,
NAO	National Audit Office
NCNR	National Centre for Nursing Research
NEAT	New and Emerging Applications of Technology
NHSE	National Health Service Executive
NICE	National Institute for Clinical Excellence
NIH	National Institutes of Health
NINR	National Institute for Nursing Research
NSFs	National Service Frameworks
MRC	Medical Research Council
PAMs	Professions Allied to Medicine
PNF	Priorities and Needs Funding
PRP	Policy Research Programme
QR	Quality Research
QUALY	Quality Adjusted Life Year
R&D	Research & Development
RAE	Research Assessment Exercise
RCN	Royal College of Nursing
RCM	Royal College of Midwifery
RCT	Randomised Control Trial
ROD	Research Outputs Database
SSCI	Social Science Citation Index
SCI	Science Citation Index
SCIE	Social Care Institute of Excellence
SDO	Service Delivery and Organisation
SfS	Support for Science
UCAS	Universities and Colleges Admission Service
UOA	Unit of Assessment

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## **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.

## Chapter 1 Introduction

### Terms of reference

1.1 In October 2000 the Association of Commonwealth Universities (ACU) and the Centre for Nursing Policy Research (CNPR) were contracted by HEFCE to undertake a mapping study of research in nursing, midwifery and the allied health professions (AHPs). The team comprised:

- John Fielden, of CHEMS Consulting, but formerly of CHEMS at the ACU
- Dr Anne Marie Rafferty and Dr Michael Traynor of the CNPR
- Allan Schofield, Head of the Higher Education Consultancy Group
- Dr Irene Ilott and Dr Elizabeth White from the Research Forum for Allied Health Professions.

1.2 The team was helped by Dr Grant Lewison of the Bibliometrics Research Group in City University and by Dr Steve Hanney of the Health Economics Research Group, Brunel University.

1.3 The tender specification for our study had two parts. In the first stage it was principally a mapping study with the following elements:

- i. “[To provide] descriptive data and commentary on the levels of the current (project and infrastructure) funding programmes for nursing and AHPs research in the UK.
- ii. [To provide] description of and commentary on nature and extent of research outputs.
- iii. [To provide] description of and commentary on the funding agendas of major funders.
- iv. Map the extent and nature of existing nursing and AHPs research-related links between HEIs and the health sector.
- v. Identify those links with the greatest potential for development.
- vi. Identify areas where improved research capacity could enhance practice, perhaps using a small number of case studies to illustrate the principles at work and their relation to funding policy.”

The results of our work in this area are presented in a separate Technical Annexe to this, the Main Report.

1.4 The second part of our work built on the first and is directed at policy makers. It is presented in this report and seeks to answer the following questions:

- What evidence is there of unmet demand for research from nursing and the AHPs?
- Is there any evidence that funders are now more inclined to consider funding research in this area?
- Have the benefits from nursing research been quantified?
- Does benchmarking the nursing and AHP professions against social work and education produce any lessons about how to create research capacity?
- Can we learn anything from international experience in the USA and Canada?

- How might HEFCE and the Department of Health (DH) fund capacity building? What level of funding would be appropriate?
- 1.5 In Chapter 1 of the Technical Annexe we describe the professions we are studying; they are the nursing, health visiting and midwifery professions together with the 12 allied health professions which are shortly to be grouped into the Allied Health Professions Council. As regards the nursing, midwifery and health visiting professions, each have their distinctive identities. Wherever we could, we have analysed nursing and midwifery separately, but we have used the term 'nursing' to refer to all three professions for the purposes of policy recommendations. In our bibliometric analysis we had to exclude the health visiting profession because our budget limited us to six studies and we needed to cover a number of the allied health professions.
  - 1.6 Some key statistics on eight of the allied health professions are shown in Appendix I to this report. One key point about them is that there is a great difference between nursing, midwifery and health visiting on the one hand and most of the AHPs on the other. The former group have strong professional bodies behind them and strategies for research; the latter are very heterogeneous with some well represented professionally and others still creating their infrastructure and collecting information about themselves. The implications of this for this study are that each grouping may well require a different set of policy solutions.
  - 1.7 It is easy to assume that the issues which arise in nursing, midwifery and health visiting are exactly repeated in the allied health professions. This is not the case. The AHPs contribute at different stages of the patient career pathway in a variety of ways: health promotion, screening, diagnosis, assessment, treatment, rehabilitation and palliative care. They work in acute, primary, secondary and community care settings. For example, many speech and language therapists work in schools, many occupational therapists work in the community, and many podiatrists are private practitioners.
  - 1.8 The AHPs are therefore a heterogeneous group judging on various criteria. For example, physiotherapy has a history going back more than a hundred years. Most of the professions came under statutory regulation in 1960 with the Professions Supplementary to Medicine Act, whereas some, such as the Arts Therapists, did so within the last three years. There are large differences in numbers. There are 734 Prosthetists and Orthotists and 30,602 Physiotherapists. Six of the twelve professions have a membership of less than 10,000. Size impacts upon the organisational infrastructure of the professional bodies as these are funded by membership subscriptions. There are also differences in the entry-level qualifications for state registration. For example, speech and language therapy became a degree profession in the late 1970s and has well-established links with the academic disciplines of linguistics and psychology. The arts therapies are postgraduate degree professions. Bachelor degree status was gained by three of the larger professions (occupational therapy, physiotherapy and radiography) in the 1990s.
  - 1.9 All these factors contribute to the differences in the research culture, capacity and productivity of each profession as well as the ability of individual practitioners to be informed consumers of research. Research utilisation assumes that primary or secondary research into profession-specific interventions or the black box of rehabilitation or service delivery has been undertaken. This, with a few notable exceptions such as the

assessment of elderly people, back pain and stroke rehabilitation, is a false assumption. An associated factor is that most AHPs work with people with complex, multiple problems as part of a multi-disciplinary, inter-agency team. The evaluation of such complex interventions adds to the research challenge.

### **Conceptions of research**

- 1.10 One major concern which should be voiced at the outset is the wide range of views within higher education and the NHS as to what constitutes research in nursing and the paramedical fields. In our mapping study, because we were relying on published indicators and statistics, we may have underestimated the scale of research activity and the numbers of staff who are research oriented, if not research active, in the sense that HEFCE uses the term.
- 1.11 In view of this confusion about what research is, within the disciplines concerned in Figure 1, we have constructed a matrix which identifies a number of different stages in enhancing both research itself and research-led practice and teaching. During our meetings we came across respondents who emphasised the importance of aspects of research in each of these stages, and there is a real need to try to conceptualise both what is meant by research and how the different conceptions relate to each other.
- 1.12 The stages in the matrix in Figure 1 are not intended to be rigidly demarcated steps, but rather suggest a way of mapping the main stages in enhancing research that the funding bodies will have to consider. For each stage we have tried to:
- summarise a number of 'typical activities' to support provision
  - identify a small number of key operational and organisational implications
  - suggest possible funding and resource implications.
- 1.13 A crucial point about the matrix needs to be noted at the outset: the stages are explicitly hierarchical in the sense that adequate provision is necessary at levels 1 to 3 (what we have called 'enabling activities') in order to ensure that excellent research can be undertaken at higher levels. This has a number of implications, for example, the effective dissemination of international quality research undertaken at level 9 will only influence practice if adequate provision is in place at levels 1 and 2. Similarly, integration between teaching, research and scholarship can only be achieved by different activities at different levels.
- 1.14 The matrix suggests that any funding to enhance research needs to be provided strategically, and because some funders are only interested in supporting research at certain levels it is imperative that a funding 'map' be drawn up to ensure that adequate support is provided for all levels. This clearly requires considerable coordination, and in the last column in Figure 1 we have tried to suggest some funding implications.

**Figure 1**  
**Stages of Enhancing Research and Research-led Practice in Nursing and the Allied Health Professions**

Stages	Typical Activities	Operational and Organisational Implications	Possible Funding and Resource Implications	
<b>ENABLING ACTIVITIES</b>				
1 ↓	Appreciation of research-led practice.	Basic research awareness. Understanding of the need for evidence in relation to practice. Ability to synthesise original research, etc. Clarifying expectations of entry grade practitioners.	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 issue in initial staff induction processes, etc.	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.	Practice-based professional development. Incorporation into clinical practice curriculum of research-led practice.	Operational support for professional development to 'good' or 'best' practice levels. Contractual recognition of time for engagement in practice-based professional development, etc.	Such support will have financial implications in respect of time allowed for CPD.
3 ↓	Acquisition of knowledge and skills in research.	Research-based professional development. Acquisition of appropriate professional and postgraduate qualifications. Within hospitals and trusts, commissioning research and development to address defined priorities.	Operational support to enable staff to obtain qualifications such as masters and PhDs. Coherent HRM strategies to match aspirations for career development. Consistent practice across hospitals/ trusts to ensure application of 'good' or 'best' practice, etc.	There will 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.
<b>DEVELOPMENTAL ACTIVITIES</b>				
4 ↓	Integration of research skills into practice.	Establishing research strategies in nursing and AHP departments and mechanisms to implement them. Internal professional development activities to embed research and other activities within teaching.	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, etc.	Appropriate funding methodology from HEFCE and within the formulae used to negotiate education contracts with the Workforce Confederations.

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5	Development and enhancement of research expertise.	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.	Removal of barriers to develop expertise to a high level. The need for specialist research careers. Appropriate funding from research councils.	Within HEIs, institutional resource allocation strategies to enhance research expertise, including linking to the RAE.
	<b>APPLICATION ACTIVITIES</b>			
6	Application of research capacity to local needs.	Planned collaboration with local trusts and related initiatives. Effective dissemination of research findings to local practice.	Need for incentives for all parties to disseminate and apply research, etc.	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.	Planned collaboration with local region and related initiatives. Effective dissemination of research findings to regional practice.	Need for incentives for all parties to disseminate and apply research, etc.	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.	Strategy to support research agreed with Government and funding made available to HEIs to implement. Effective dissemination of research findings to national practice.	Need for incentives for all parties to disseminate and apply research, etc.	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.	Involvement by HEIs in collaborative international research activity. Research outputs published in highly selective peer-reviewed journals.	Need for a stable institutional base for such activities to take place.	Importance of high quality international research needs to be recognised by all major international research funders.

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## **Structure of the report**

- 1.15 We begin in Chapter 2 by tackling the question of the demand for research and we take a range of approaches to seeking the answer. In the NHS the picture is complicated by the large number of recent initiatives, both as regards the organisation and operations of the core service and workforce capacity building. In Chapter 3 we summarise the findings from the mapping study, which are more fully set out in the Technical Annexe. Chapter 4 discusses the question of the benefits from investment in research in nursing and AHPs and then examines the conclusions of brief benchmarking studies of research in two other professions. Some examples are also given of the impact of research on NHS practice. Chapter 5 then studies questions of funding and discusses how capacity might be strengthened in the professions and what kind of funding would be required to make a difference. Finally, in Chapter 6 we pull the arguments together in a short business case for making investment in research in this area.

## **Chapter 2 The demand for research in nursing, midwifery and AHPs**

### **Contextualising demand**

- 2.1 In this chapter we seek to assess the demand for research in nursing, midwifery and AHPs. There is ample evidence of need, but little of demand. Demand is a complex concept with both common sense and technical meanings. For the purposes of this study we have defined it broadly as the call for research to meet the needs and priorities of the NHS and to develop a secure and sustainable academic base for nursing, midwifery and AHPs within HE. There is no neat way of measuring such demand and therefore we have used indicators derived from a range of sources.
- 2.2 For the purposes of this study we categorise demand in three ways, namely: professionally driven (that identified by the professional groups themselves); policy and R&D driven (that derived from the policy and R&D community); and relative demand (that is measured against some reference point, benchmark or comparator). In this chapter we deal mainly with the first two categories; professionally driven, and policy and R&D community generated demand. Chapter 4 considers the question of relative demand by benchmarking against cognate groups.
- 2.3 We are unaware of any previous attempt to ascertain or measure the demand for research in the above areas. Our approach was pragmatic and relied upon the collection of data from existing sources and through rapid response consultation exercises. The opinion of academic leaders was canvassed through the Council of Deans of Heads of Schools and Faculties of Nursing and Midwifery and the R&D Forum for the Allied Health Professions.

### **Indicators of demand**

- 2.4 Indicators of demand can be found in a wide range of sources: recent health and R&D policy, the Health Technology Assessment (HTA) programme, Centre for Reviews and Dissemination (CRD), nursing and AHPs liaison with the National Institute of Clinical Excellence (NICE), two case studies of regional R&D funding patterns and consultation with professional groups and practitioners.

### **Policy and R&D initiatives**

- 2.5 In considering this issue, attention should focus not only on currently articulated demand but also on that which will impact in the future. Several recommendations from the Foresight Health Care panel have relevance for nursing, midwifery and AHPs (DTI, 2000). For example, proposals to 'roll back' health care and move away from hospital-centric services to more home and community based care have significant implications for the roles of nurses, midwives and AHPs as key professionals involved in the delivery of home-based care (DTI, 2000, p 8). Recommendations for expanding home care as well as developing long-term active monitoring of systems will all impact upon these groups, and indeed symptom surveillance is already a major part of the work of these community staff (DTI, 2000, p 12). Research needs to take account of new technologies and how these can be used to best advantage in developing innovative ways of organising and delivering services to meet future demand. Second, given our definition of demand, it is vital

that the quality of the academic base be capable of meeting the demand made on it. Strong and strategic partnership working between the Department of Health and HEFCE is essential to the success of this mission. Nursing, midwifery and AHPs are academic subjects where synergy between the two agencies could produce long-term benefits to both sectors (see Chapter 4) (Department of Health and HEFCE, 2000).

- 2.6 Among the many features of the government's agenda has been the unprecedented weight given to evidence. Professional expertise alone is no longer sufficient guarantee of quality. Instead, an elaborate apparatus of accountability and audit has grown up to scrutinise and rationalise professional decision making. The Modernising Government White Paper (Cmd 4310, 1999) seeks to re-orient policy making towards strategic, outcome-based innovative and integrated goals. Subsequent documents sought to give substance to such proposals. Robust policy analysis was the plea at the centre of 'Adding It Up' (Cabinet Office, 2000), while 'Professional Policy Making' (Cabinet Office, 1999) considers what modernised policy making should strive to accomplish and how this might be achieved. A Performance and Innovation Unit has been established within the Cabinet Office to manage and monitor cross-department strategy in this area.
- 2.7 The launch of the NHS's first research and development strategy in 1991 articulated for the first time at a national policy level the need for the nation's health services to have a scientific basis. The strategy sought to promote a range of research from basic to applied, but with the ultimate aim of informing clinical and management decisions within the NHS (Department of Health, 1991). Subsequent policy sought to prioritise the need for research (Department of Health, 1993) and to organise funding for this work in as equitable a way as possible (Department of Health, 1995). Though early consideration was given to the issue of variable research capacity across the health professions and related disciplines (Lewis and Ritchie, 1995), this problem has never been the subject of sustained effective policy action. However, it was subsequently revisited (Workforce Capacity Development Group, 1998). The nursing and allied health professions have responded both to the challenge and to the problem of lacking the capacity to meet the challenge (Department of Health, 1992; Department of Health, 1999). The most recent document to emerge proposes a strategy to address the issue of a mismatch between demand for, and supply of, research from the nursing profession (Department of Health, 2000b).
- 2.8 Whatever the original motivation behind the drive for a strategic approach to NHS R&D at its inception ten years ago, it is now clear that health care research holds a central place in the present government's endeavour to establish performance management across the NHS. 'The New NHS' sets out a policy priority of assessing the delivery of healthcare against new national standards and the reduction of unacceptable variations in performance (Department of Health, 1997). Subsequent policy, both for the service as a whole, and for R&D itself, has reinforced this aim.
- 2.9 New bodies such as the National Institute for Clinical Excellence (NICE) aim to provide scientific guidance on current best practice regarding a range of specific issues. Though it is not the only body to produce them, NICE attempts to assemble the best research evidence in order to develop clinical guidelines for specific

situations and treatments. Many such guidelines reflect NHS priorities and relate particularly to the National Service Frameworks (see below).

- 2.10 The importance of research and development for the allied health professions is recognised in the draft legislation for the Health Professions Council (Department of Health, April 2001). For example, registrant or alternate members of the Council are expected to be 'wholly or mainly engaged in the practice, teaching or management of the profession, or in research into the profession for which he (sic) is registered and for which he seeks election' (p. 49).
- 2.11 The intention of National Service Frameworks (NSFs) is that they set national standards and define service models for a specific service or care group, put in place programmes to support implementation, and establish performance measures against which progress can be measured. Building on the frameworks for cancer and paediatric intensive care, the first two NSFs were for mental health (published in September 1999) and coronary heart disease (published in March 2000). At the time of writing, there are four: coronary heart disease, mental health, older people and diabetes. The NHS plans to produce one new topic a year. Each NSF has been developed with the assistance of an expert reference group that brings together health professionals, service users and carers, health service managers, partner agencies and others. In addition, each NSF includes a research agenda.
- 2.12 The next two NSFs – about children and people with chronic neurological conditions – are likely to highlight the research gaps in the allied health professions. Although the convincing evidence base for specialist, multi-disciplinary care, including occupational therapy, physiotherapy and speech and language therapy, has been incorporated in the Stroke Guidelines (RCP, 2000), there are considerable gaps in other areas. These are most striking in the smaller professions and for lower-incidence disabling conditions. This leads to unacceptable variations in practice and inequitable services, which compromise quality and value for money.

### **Research priorities in the NHS**

- 2.13 The NHS R&D programme has used a number of mechanisms to identify the NHS's needs for research, including wide-ranging consultation with health professionals, managers, patient and consumer groups. Priority needs for research were an integral part of the original R&D programme. The National Horizon Scanning Centre at the University of Birmingham currently provides intelligence to the Department of Health by assessing the possible impact on the NHS of any significant developments in the field of health that are likely to promote health, prevent and treat disease, and improve rehabilitation and long-term care. According to a recent document (Department of Health, 2001), the current health priorities – cancer, coronary heart disease and mental health – are receiving special attention as the first three NHS R&D priorities. A national R&D Portfolio Director co-ordinates NHS R&D activity for each priority. They are working with the National Directors for each of the health priorities to identify gaps in knowledge that need urgent attention and ensure that R&D is commissioned to fill them.
- 2.14 As mentioned above, the present government has sought to reform the funding and practice of the R&D funded within the NHS with the intention of increasing its quality,

efficiency and relevance to the management of the service. In March 2000 a new development programme was set out (Department of Health, 2000a) which proposed a new structure for funding NHS R&D:

- 'NHS Priorities and Needs R&D Funding' to support the development of the knowledge base required by the NHS; and
- 'NHS Support for Science' to provide the NHS contribution to the science base which underpins or could underpin the service.

Aware of the implications for research capacity, the document also states that: 'Where there is a shortage of the research skills needed to deliver these programmes, there will be specific initiatives to strengthen R&D capacity in particular disciplines, professions and service sectors' (para. 2.5).

2.15 In addition, a 'New Research Governance Framework', published on March 1<sup>st</sup> 2001, defines the broad principles of good research governance, sets standards, details the responsibilities of the key people involved in research, outlines the delivery systems and describes local and national monitoring systems. It also sets out:

- arrangements to define and communicate clear quality standards
- delivery mechanisms to ensure that these standards are met; and
- arrangements to monitor quality and assess adherence to standards nationally.

2.16 In 1999, a Strategic Review Sub Group, set up under the chair of Professor Michael Clarke, published its report (Department of Health, 1999b). Among its aims were to develop a strategy for the planning and review of spending in the NHS Research and Development Levy, in accordance with the previous policy objectives; to examine opportunities and spending in areas of national priority; and to advise on the terms of reference and methods of working of expert groups reviewing these areas and other topics. One of its recommended areas for priority was the development of research capacity in terms of research training and career prospects (para. 7d). The group considered that a major weakness in the present Research & Development programme was the shortage of experienced health service researchers in well-developed career structures and that this shortage was a major threat to the Research & Development programme as a whole. It recommended that the NHS should focus capacity building on research skills vital to the NHS which were in short supply (para. 27).

2.17 The Group issued a report specific to the need for research in primary care, where 85% of all health care problems in the NHS are managed (Department of Health, 1999b). The group identified a particular evidence gap in this sector, one characterized by the involvement of nurses and AHPs and their management of chronic conditions. This gap ranged across the whole range of research levels, from a 'basic science gap' to an 'implementation gap'. The incomplete nature of rehabilitation research was also highlighted in the MRC Topic Review of Primary Health Care (1997), the King's Fund/Audit Commission Reports (Nocon and Baldwin, 1998; Sinclair and Dickinson, 1998) and a critical review of the evidence commissioned by the British Society of Rehabilitation Medicine (Turner-Stokes, 1999).

## **R&D community and the professions**

- 2.18 Drawing on the method of the original NHS R&D strategy, the nursing, midwifery and health visiting professions developed their own priorities for research after an eighteen-month consultation process that involved over 100 managers, clinicians and researchers (Kitson, McMahon et al, 1997). Priorities were identified in care and caring practices, the health care environment, organisation and management and the health care workforce. Many topics had a 'read-over' to health services research such as team work, informal carers, new technologies, the effectiveness of health alliances, workforce planning, or continuity of care. Fourteen topics were submitted to the HTA in 1998 although none were prioritised, but a number of themes (such as workforce, information technology and continuity of care) emerged for commissioning within the Service Delivery and Organisation (SDO) arm of the R&D programme. The SDO's own themes were generated by a national listening exercise conducted with a wide range of lay, policy and professional constituencies (NCCSDO, 2000). Follow-through work has been conducted to try to engage the research charity sector proactively in focusing upon research in nursing, midwifery and health visiting. Efforts have been made to influence the R&D funding agenda indirectly by identifying priorities that are relevant to that agenda, and encouraging a focus on nursing, midwifery and health visiting questions and interventions.
- 2.19 In the AHPs, some of the larger professional bodies have similarly invested resources in conducting research priority identification exercises. For example, in 1997 the Chartered Society of Physiotherapy conducted an extensive, three-stage consultation involving a range of stakeholders. These included consumer groups, medical research charities, all Directors of Public Health and R&D, a random selection of GPs and other professional bodies. The first stage, a call for suggestions for physiotherapy research, resulted in 200 topics. These were refined and categorised in preparation for a second round of stakeholder consultation. This asked for the topics to be prioritised according to benefit, value for money, variations in practice, feasibility, disease burden, and likelihood of the research findings being implemented. In the final stage, the priority topics were developed into 24 vignettes, each with a rationale, known research activity and suggested research design. As with the exercise carried out in nursing, the results of the priority identification exercise were disseminated and used to submit topics to the NHS R&D Health Technology Assessment Programme. This exercise has been repeated in 2001.
- 2.20 Between October 1997 and July 1998, the College of Occupational Therapists conducted a nationwide consultation exercise. A total of 25 workshops were attended by 766 people, most of whom were occupational therapy practitioners working in NHS trusts. The majority thought that assessing the effectiveness of specific interventions, either as stand-alone interventions or as part of a multi-professional, inter-agency package of care, was the top priority topic for research. The second priority was related to occupational science. This involves understanding the relationship between occupation, health and well-being; and the impact of occupational deprivation on the health of individuals, groups and communities. The third priority focussed upon service delivery and organisation concerned with occupational therapy, occupational therapy services in a wider health and social care context, and support for service innovation.

2.21 The above professionally driven exercises come as close to defining demand as is possible: they tell us what the people working in practice want on the research agenda. It is therefore disappointing that their messages have not been taken up by funders. Significantly, many priorities have a generic appeal and potential to impact on NHS services. Even if these exercises have not led directly to funding, they have provided in some cases the opportunity to engage the support of the wider R & D community. This was one of the strengths of the RCN / Centre for Policy in Nursing Research (CPNR) exercise, where funders and other stakeholders supported the initiative by agreeing to become members of the Strategic Alliance for Research in Nursing and Midwifery. Lack of resources meant the alliance remained a virtual entity. But significantly, the difficulties that many groups have experienced in influencing priority-setting exercises have led the HTA to launch a consultative exercise led by Professor David Foxcroft of Oxford Brookes University, aimed at identifying ways of improving the participative process for agreeing the research agenda.

### **Health technology assessment**

2.22 Another way of assessing research needs is to use the list of topics submitted to the HTA, a national R&D programme, for prioritisation for later funding. Such topics are generated by more than 200 organisations, the broadest range of NHS constituencies and stakeholders. The HTA has three advisory panels: diagnostic technologies and screening, pharmaceuticals, and therapeutic procedures. A number of these panels have relevance for nursing, midwifery and AHPs.

2.23 Between 2000 and 2001, some 1600 topics were submitted for consideration by HTA. HTA gave us access to a stripped-down version of the database of these topics so that we could survey a sample and see which were potentially applicable to nursing, midwifery and AHPs. We identified those topics where they impacted on practice or were traditionally associated with research in the fields. Approximately 10% of all the HTA's topics fell into this category. They included:

- the effectiveness of nursing observation on the prevention of self-harm in mental health patients
- evaluation of nurse specialist managed care in the delivery of out-patient chemotherapy
- the effectiveness of different models of care on patients with dementia
- the effectiveness of intermediate care for the elderly patient after a stroke.

2.24 A number of topics related to midwifery, specifically interventions surrounding breastfeeding, birthing positions and practices. Within the AHPs area, physiotherapy was represented in relation to the impact of different exercise regimes on intermittent claudication, patterns of care for back pain and podiatry, and orthotics with design of foot orthoses for children with cerebral palsy.

2.25 The systematic reviews in the Cochrane Library are another proxy indicator of research interest and activity, since they review the key research in particular fields. A survey reported in the Cochrane Newsletter (2000) noted the limited involvement of the nursing and allied health professions in the Cochrane Review Groups. The completed reviews also highlight the lack of research that has been conducted into

common interventions. For example, the review of life skills programmes for chronic mental illness (Nicol et al, 2001) found only two studies. However, there is a growing interest and involvement. For example, in June 2000 the Rehabilitation and Related Therapies Field's database contained nearly 5,000 articles, with 100 new articles (reporting trials, reviews and guidelines) being added each month.

2.26 The HTA works closely with the National Institute for Clinical Excellence (NICE) and commissions priorities on its behalf. There are a number of routes through which topics from nursing, midwifery and AHPs may enter this commissioning cycle. One is through the topics submitted by the effectiveness bulletins produced by the Centre for Reviews and Dissemination (CRD). The only advice given to the panel is to consider whether there is an evidence base, whether the topic is a priority issue for the NHS, and also whether it thinks there is uncertainty, or variations in practice across the NHS. A list of these topics has recently been short-listed by CRD for submission to NICE and a number have a bearing on nursing, midwifery and AHPs. These include:

- preventing hospital-acquired infections
- effectiveness of therapies for anorexia nervosa
- effectiveness of therapies for severe behavioural disorders
- wound care-management of leg ulcers
- wound care-management of pressure sores
- compression therapy for venous leg ulcers
- home parenteral nutrition.

2.27 In a consultation on future work programmes, NICE has invited the identification of research topics from RCN members through its specialist forums and fields of practice. Practitioners were asked to identify areas of uncertainty or concern. These covered the areas of acute care, tissue viability, orthopaedics, stoma care and occupational health.

2.28 The allied health professions have also contributed to NICE consultations on where research was needed. For example, in April 2000 the Council of the College of Occupational Therapists identified 'interventions where there is evidence either of widespread variations in current usage, or evidence of inappropriate usage or under-usage'. A total of 58 interventions were identified. Those mentioned most frequently were pre-discharge home visits, provision of community equipment, wheelchairs and environmental controls, orthoses, hand therapy, pre-joint replacement interventions, anxiety management, sensory processing and multi-sensory environments, and community rehabilitation for stroke. Proposals related to pre-discharge home visits and the provision of equipment to assist independence were submitted to NICE.

### **Research workforce capacity issues**

2.29 In 2000, the Director of R&D for the NHS and DH, and the Chief Nursing Officer for England hosted a workshop to explore ways of strengthening the nursing, midwifery and health visiting contribution to national R&D. A paper, 'Towards a Strategy for Nursing Research and Development: Proposals for Action' was released in October of that year (Department of Health, 2000b). Its authors considered that the nursing profession's failure to make a maximum contribution was because of a mixture of lack of professional confidence and co-ordination, as well as institutionalised barriers.

Because of these problems, it suggested, the profession had never built up the theoretical and scientific knowledge base that could have accumulated out of synthesisable programmes of research.

- 2.30 The authors further considered that previous attempts to raise the nursing R&D contribution had largely failed because they had not been adequately funded, properly managed, or sustained for long enough for the profession to escape from a vicious circle of disadvantage. The report recommended that: 'The Department of Health needs to agree with its partners a concerted and sustained programme of remedial action. This means pooling effort and directing resources towards common goals... to promote synergistic rather than disparate investment' (para. 9). The report noted the lack of information about research capacity or reliable estimates of what that capacity should be. The report called for attention to basic research training and research careers, new uses of the NHS education and training levies, and more effective pre and post-doctoral support. It noted that there was a strong case for additional investment to seed and develop a handful of designated centres of research excellence, each required to focus on an NHS priority and work with less advanced units in order to develop them.
- 2.31 Similar problems have been reported for the AHPs over the last decade, for example in 'Research and Development in Occupational Therapy, Physiotherapy and Speech and Language Therapy: A Position Statement' (Department of Health, 1994), and most recently in 'Towards a Strategy for Research and Development in the Allied Health Professions: Proposals for Action; A Discussion Paper' (May 2001). The latter advocates an integrated strategy which links entry-level competencies through consultant-level practitioner posts, to research leaders (British Dietetic Association (BDA), 2000). The aim is to promote an evaluative culture in the workplace that will complement clinical and research governance initiatives (Department of Health, 2001). The discussion document contains percentage targets for research leaders in each profession as a means of promoting research as an appropriate career choice both for new graduates and for experienced practitioners. The targets are set within the context of succession planning from a range of flexible, career pathways including research assistants, fellows, senior fellows and professors. However, security of tenure and appropriate remuneration are required for career researchers. The latter is particularly important to reduce the financial disincentives if clinical specialists wish to embark upon a research career or a supervised project. This discussion document notes that all these are essential elements for creating a self-sustaining community of researchers. It recommends that fellowship awards should be established for research development, career scientist and postdoctoral awards as appropriate for each profession.

### **Regional and other case studies**

- 2.32 One way of assessing the demand for research is to study the number of research proposals that are not funded. Two regional R&D offices, London Region and Northern and Yorkshire, were selected as case studies to assess this. The regional databases were searched for evidence of proposals submitted that were professionally led, or concerned with relevant professional topics. Rejection rates were used as a proxy of unmet demand, although clearly this may also reflect poor

quality proposals. Data were selected from 1999 to the present time, marking the period of regional reconfiguration.

- 2.33 Within London Region, some 218 proposals were submitted across all commissioning groups, with some 24 (11%) being in the professional arena. The submission rate was highest in the Organisation and Management Panel, at 7 out of 59 proposals. Significantly, nurses and occupational therapists were the most numerous groups applying for education and training awards for Master Studentship schemes. Nurses represented almost half of the applicants, or 21 out of 51, of which 8 were funded. Seven occupational therapists applied with no awards being made.
- 2.34 Within Northern and Yorkshire over the same period, some 14 training fellowship projects were funded out of a total of 29 requested. The split of applicants favoured medical as opposed to non-medical (39 out of 71 in 2000). Overall, only 15% of applications are ever funded.
- 2.35 Clearly there is significant demand for research training for these professions although the success rate of their applications varies. A rare empirical study of applications by nurses to one regional R&D office demonstrated that, although fewer applications were submitted by nurses, once over that hurdle the peer review process enabled nurses to do proportionately better than other groups in attracting awards. In absolute terms however the numbers remained small (Mead, 1997).

### **Professional communities**

- 2.36 Recent research on decision support in nursing has identified significant areas of uncertainty and gaps in clinical decision making where research could make a difference. This is the most comprehensive project of its kind, using qualitative interviews, observation and statistical modelling to explore and describe data from 108 nurses working in acute care settings in three hospitals in the UK. The study took place in medical, surgical and coronary care units in each of the three sites.
- 2.37 The work was carried out through the Centre for Evidence-based Nursing (CEBN), University of York, and concluded that nurses routinely encounter clinical questions for which they do not have answers, and that nurses can readily formulate clinical questions. The majority of nurses interviewed for that project expressed a desire to integrate research findings into their practice. Clinical questions arising from interview and observation data in this project included topics such as: pre-operative preparation, choice of dressings in wound care, timing of interventions, cardiac care, service delivery questions about the appropriate skill mix, and primary care issues such as the management of patients (Cullen, 2001).
- 2.38 At a recent workshop convened by the RCN Research Society, Trust Nurse Executive Directors identified the demand for research in a number of areas to help them meet their corporate objectives. These included research on essentials of care associated with the quality agenda, such as dignity and nutrition, and research to underpin different models of service development in order to identify new areas for investment as well as those targeted for disinvestment. They recognised the importance of investment in infrastructure, such as career pathways and information technology, and were keen to collaborate with academic partners in joint ventures, subject to

evaluation. Nurse consultants and nurse executives must be brought into the research frame and enabled to work across service and academic sectors.

- 2.39 Finally, we undertook a short consultation exercise with members of the Council of Deans. We canvassed their views on the basis that their Schools receive the bulk of their funding from the NHS rather than HEFCE, and also remain close to their market. The turnaround time for responses was very short, but we received replies from 10 members. These are summarised below.
- 2.40 There was strong support for increasing the capacity for undertaking randomised control trials (RCTs), evaluation studies, and a quantitative skill base to test nursing interventions as well as complex interventions with a nursing component. Suggested research topics included nurse-led initiatives, input to NSFs, public health contribution, impact on chronic care and primary care.
- 2.41 There was a clear sense of the need to build up strong research leadership, since the absence of this was one of the key barriers to success. A strategy of investment was needed in career structures, both at the doctoral and post-doctoral levels, to train the next generation of research leaders. Post-doctoral investment was seen as crucial. These structures should be capable of combining the traditional fellowship and dual clinical/research functions. There was debate and concern around the familiar tension between rewarding excellence or encouraging new growth areas and proposals about how such ventures should be organised. One proposal was to create academic clinical nursing practice units with a critical mass of research/clinicians and a robust infrastructure.
- 2.42 Other areas where the Deans considered research was needed included: complex clinical or organisational issues where there are multiple interventions or outcomes with several agencies or professional groups involved; evaluation of practice development strategies; the use of certain concepts in practice such as hope or helplessness. The main reasons they cited for not applying for specific research funding opportunities included: lack of high level proposal writing; shortage of PhD personnel to lead bids; collaborators tied up at the time; lack of appropriate collaborators; and not enough dedicated time for bidding.
- 2.43 The Deans' list of ideas to promote capacity building included:
- new ring-fenced funding for capacity building in nursing, midwifery and AHPs
  - the Workforce Confederation NHS Contracts for education to contain funds for research at 20% minimum
  - new blood investment in this area to match skill and age profile of HE culture to that of research culture
  - pump priming for posts (for experienced researchers) to bridge NHS/HE collaborations
  - strategic partnerships between universities
  - funded sabbaticals
  - specific staff development for research leadership
  - linking of institutions with successful track records with those 'on the up'
  - small grant schemes

- pump priming for pilot work
- support and pump priming for programmes of research rather than projects.

### **Research Forum for AHPs**

- 2.44 This new group was established in November 2000 as a subsidiary of the Allied Health Professions Forum (AHPF). The AHPF comprises 12 professions currently regulated by the Council for Professions Supplementary to Medicine, and represents 130,000 members working in the public, private and voluntary sectors. In May 2001 the discussion document 'Towards a Strategy for Research and Development in the Allied Health Professions: Proposals for Action; A Discussion Paper' was endorsed. This document acknowledges both the heterogeneity of the AHPs and each professions' distinct contribution to health and social care. This includes health promotion, diagnosis, assessment, treatment, rehabilitation and palliative care. While recognising the different stages of research development within each profession, the Forum works towards a common purpose. This has been agreed so as to increase the capacity of AHPs to undertake and use research to improve the quality of patient-focussed health care.
- 2.45 The discussion document (May 2001) proposes a national, co-ordinated whole-system approach for improving the research capacity and productivity of the allied health professions. There are six recommendations. These relate to creating a strategic framework which recognises the heterogeneity of the AHPs; substantial, coherent programmes of research; establishing multi-professional research environments, networks and collaborations; and establishing a community of researchers through fellowship awards. The recommendations are intended to optimise the growing capacity of AHPs to validate their contribution to health and social care.

### **DH consultation exercise on 'Towards a Strategy for Nursing R&D'**

- 2.46 The consultation exercise in this strategy document received 46 responses which, unsurprisingly, repeated many of the comments above from the Council of Deans. The thrust of responses is summarised below:
- *Topical and methodological areas.* There was a strong emphasis on the need for research 'around the whole patient': pain, rehabilitation, health promotion, wound care, and how research could be sustained in smaller areas such as learning disabilities. The focus should be on 'the nursing contribution' to care. Research priorities should be determined by patient needs which cross speciality boundaries; research should not be determined by hospital research agendas; research should be multi-disciplinary.
  - *Capacity issues.* Strong support was given for the establishment of pre and post-doctoral fellowships. The need for 'support on the ground', protected time for research, and for research time to be included in education contracts were also emphasised.

## Conclusion

- 2.47 In this chapter we have summarised different sources of evidence that show us what the demand is for research in nursing and the AHPs. There is a great deal of common ground between the perspectives of national policy-making groups and groups within the professions themselves. There is an inevitable overlap between professionally-led and policy-driven research as both tend to inform each other.
- 2.48 Some of our evidence has identified the need for research on specific clinical problems because research evidence is currently lacking in these areas. In some cases, clinicians themselves appear to be demanding such evidence. This customer-driven demand is represented by the topics submitted to HTA for prioritisation, as well as the professional agendas of nursing, midwifery and AHPs. Similarly, the topics identified for nursing and midwifery are in tune with those identified by the National Listening Exercise conducted by the National Co-ordinating Centre for NHS Service Delivery and Organisation (NCCSDO).
- 2.49 There is clear evidence, which we report further in Chapter 5, that funders outside government are also willing to invest in this area since they perceive a demand and a need for research. Trust nurse executives and Deans and Heads of Schools are keen to establish and extend collaborative relationships. Our informants have also raised more general issues, concerning, for example, a desire for more viable research careers leading to a greater pool of research-capable nurses and AHPs, and the need to reorient the research trajectory towards the priorities identified by the NHS. They suggest that if research activity is to have an impact on frontline service delivery a major boost will be needed in building a cadre of researchers.

### **Chapter 3 Findings from the mapping study**

- 3.1 The Technical Annexe presents mapping information we obtained on the research undertaken in nursing, midwifery, health visiting and some of the 12 allied health professions. We summarise it in this chapter.
- 3.2 Because other recent researchers had great difficulty in obtaining data on this topic we sought it using several routes. This included a bibliometric analysis of publications held in the Wellcome Trust's Research Outputs Database, a questionnaire survey of 121 departments in universities, visits to 12 institutions, and extensive interviews and correspondence.
- 3.3 Unfortunately, the response to the questionnaire has been poor because its appearance coincided with the preparation of the submissions for the Research Assessment Exercise. Nonetheless, 50 departments replied and the trend data and qualitative information it provided has proved very useful.
- 3.4 In general, the AHPs are 'invisible' in most of the classifications and categories used by HESA, HEFCE and others, because they are aggregated with other disciplines. As soon as they come together into the Health Professions Council there must be a case to revisit the designations and categories now used, to identify them as a group.

#### **Funding for research**

- 3.5 There is evidence that nursing and AHP departments are generating more research income, since the 50 departments providing us with figures showed an increase from £3.0m in 1996–97 to £9.7m in 1999–2000. However the lion's share of income is going to the nursing and midwifery departments: in 1999–2000 receiving 83% of the total of £9.7m.
- 3.6 From all our searches of the databases, and from the questionnaire survey of 50 departments, we have been able to identify the following sources of research income:

**Table 3.1**  
**Research funds by donor**

	<b>Evidence from Providers</b>	<b>Evidence from Recipients (n=50)</b>
Department of Health/NHS (E)	23 funded projects from PRP, HTA, SDO and NEAT projects	14 of the 50 departments received funding of £3.4m in 1999–2000 (total: £7.8m over four-year period)
Regions and NHS trusts	Not available	14 of the 50 departments received funding of £1.4m in 1999–2000 (total: £4.1m)
Charities	Details not identified by discipline or by AMRC	18 had funding of £1.5m in 1999–2000 (total: £3.6m)
HEFCE	Nursing depts get QR funding of approx £3m pa. AHP depts get some of the QR funding for UOA 11 of £7.7m pa. Depts may have received CollR funding of c£0.6m pa	
Professional bodies	£1m pa from four bodies	
Research Councils		6 received funding of £879,000 in 1999–2000 (total: £1.3m).

3.7 In the charity field, the Wellcome Trust have not been strong supporters of nursing research, although they have helped dietetics/nutrition. Their nursing profile may change as their new corporate plan favours patient-centred research.

3.8 The two groups of professions are covered by Units of Assessment 10 and 11 of the RAE. In 1996 the ratings for the UK as a whole were as follows:

**Table 3.2**  
**Analysis of 1996 RAE results (in UK)**

	UOA 10: Numbers of submissions	UOA 10 Numbers of Category A staff	UOA 11 Numbers of submissions	UOA 11 Numbers of Category A staff
In 5 *rating			1	7
In 5 rating	1	32	2	30
In 4 rating	2	33	10	115
In 3a rating	4	38	5	47
In 3b rating	7	47	5	56
In 2 rating	10	59	21	144
In 1 rating	12	108	9	73
Totals	36	317	53	472

*[This shows that 61% or 22/36 departments or groups submitting for nursing were rated 1 or 2]*

3.9 HEFCE support has been £3m a year of QR funding to 11 departments in Unit of Assessment 10 (UOA), which covers nursing, and some of the £7m a year which has gone to UOA 11 will have reached AHP departments, although we do not know the proportion.

### **Research capacity and research outputs**

3.10 The capacity to do research has been increasing: over the five-year period to 1998–99, nursing and AHPs 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 similar disciplines are: education – 7.6%, social studies – 13.3%.

- 3.11 In the RAE submissions for 2001, the number in UOA 10 increased by 19% – the second highest increase of any discipline. In addition, the number of Category A and A\* staff increased by 50% over the 1996 figure – this is the second highest percentage of any discipline. However, the number of such staff at 623 is still low in comparison to the total of full-time teaching staff. In UOA 11, 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 AHPs disciplines.
- 3.12 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.
- 3.13 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.
- 3.14 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.
- 3.15 A high proportion of 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 biomedicine overall, the UK government provides funding for the research behind 33% of publications.
- 3.16 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 1900 staff. They also told us the present number of PhDs among their staff, which was an average of 16% of the total number.
- 3.17 In February 2001, the Research Forum for Allied Health Professions identified the barriers to research. Most were common to all disciplines, although there were variations according to the stage of research development within each profession. The major barriers were related to a lack of infrastructure (i.e. centres of excellence), lack of a community of career researchers and leaders, lack of funding for coherent programmes of research, and lack of influence at policy-making levels. One difference was the priority given to post-doctoral opportunities, particularly by the more research-active professions. The 1999 version of the Register of Therapy Researchers reinforces this need, indicating an upward drift in qualifications, with nearly a 100% increase in PhDs from 63 in 1997 to 114 in 1999. Another barrier to research is the current recruitment and retention crisis for the AHPs. The salary differentials between practice and research are a further disincentive.

- 3.18 The discussion document 'Towards a Strategy for R&D in the Allied Health Professions' (May 2001) proposes a national, co-ordinated whole-system approach for improving the research capacity and productivity of the allied health professions. The recommendations are designed to tackle the barriers. They are predicated upon a strategic framework that recognises the diversity of the AHPs. A strategy would require a gap analysis, priority setting and targets for investing in a sustainable, critical mass of centres, people and programmes to make a real difference.

### **Collaboration with the NHS**

- 3.19 Our survey enquired about the number and type of links which nursing and AHP departments had with other departments or institutions. The answers were that 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 than for nursing.
- 3.20 Part of our study involved visits to 10 institutions, as a result of which we obtained three case studies, which are in section 6 of the Technical Annexe. These helped us to identify the different institutional strategies in building research capacity and the key factors which can help it to grow. The three main drivers of this change are the attitude of the NHS region to research, the institution's central strategy to funding capacity development, and the financial arrangements with the Education and Training Consortia, which fund the teaching contract.
- 3.21 Two case studies show how it is possible to reach practitioners in a region which does not fund much research (University of Central Lancashire), and how research capacity can be rapidly developed, given a benevolent central strategy from the university (City University). The third describes an impressive network of jointly funded posts and appointments with 15 local trusts that helps to bring the department into the front line of the service (University of Northumbria).

### **Conclusions**

- 3.22 The main conclusions from the mapping study were that one should not generalise about the two groups of professions since they are at very different stages of development.
- We have seen an increase in the capacity for undertaking research, in the numbers of postgraduates and the research outputs in the period since the last RAE.
  - In nursing, we have seen a large increase in the number of research-active staff, but the absolute number is still lower than it should be in proportion to other similar professions.
  - This growth in capacity is recognisable in nursing and midwifery, but less so in the AHPs, many of which still have a long way to go to develop their capacity.
  - The Department of Health and the NHS Regions are the biggest funders of research and their support has been growing over the period, although it is not given to all the AHPs.

## Chapter 4 Payback from research and comparisons with benchmarks

### Payback and the benefits of research

- 4.1 The aim of this chapter is to present the evidence and arguments for further investment in nursing, midwifery and AHPs research. In doing so we have drawn upon the research policy literature on payback, and output data derived from a range of funding and disciplinary models. These have been used as reference points to benchmark research in nursing, midwifery and AHPs. As part of this exercise, we took education and social work as comparators and reviewed funding and capacity building strategies of bodies other than the DH and HEFCE, in the national and international arenas.
- 4.2 As a first step in attempting to ascertain the potential benefits of further investment in research, we commissioned Dr Steve Hanney from the Health Economics Research Group (HERG) at Brunel University to explore the feasibility of applying the payback model to nursing, midwifery and AHPs (Buxton and Hanney, 1996). Devised originally for the evaluation of the NHS R&D Programme, the payback model assesses research across five categories (see Figure 4.1). Dr Hanney's full report is presented in our Technical Annexe.

#### Figure 4.1 Categories of payback

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- a) Knowledge.
  - b) Benefits to future research and research use:
    - the better targeting of future research;
    - the development of research skills, personnel and overall research capacity;
    - a critical capability to utilise appropriately existing research, including that from overseas;
    - staff development/educational benefits.
  - c) Political and administrative benefits:
    - improved information bases on which to take political and executive decisions;
    - other political benefits from undertaking research.
  - d) Health sector benefits:
    - cost reduction in the delivery of existing services;
    - qualitative improvements in the process of service delivery;
    - increased effectiveness of services, e.g. increased health;
    - equity, e.g. improved allocation of resources at an area level, better targeting and accessibility;
    - revenues gained from intellectual property rights;
    - organisational development.
  - e) Broader economic benefits:
    - wider economic benefits from commercial exploitation of innovations arising from R&D;
    - economic benefits from a healthy workforce and reduction in working days lost.
- 

- 4.3 These categories elaborate upon the possible criteria suggested to ascertain the benefits of health research:

- knowledge generation – measured by traditional academic approaches through the quality and quantity of publications
- cost savings – attributable to effectiveness of implemented interventions
- life years or QALYs (quality adjusted life years gained) – usually applied to health care but could be relevant to research
- monetary value – the common perception of payback, but the difficulties associated with calculating the return from investment in health care are compounded in assessing the return from research.

4.4 Using the payback model, it is clear that many of the benefits identified are relevant to research in nursing, midwifery and AHPs. Five different arguments can be advanced for further investment in nursing, midwifery and AHP research. These can be summarised as follows:

- knowledge generation (of all kinds)
- future research and research use (to target research towards relevant local and national priorities and to enhance the capacity of the service to use, as well as to generate, research within a 'learning organisation')
- enhanced executive decision making (especially with regard to clinical governance)
- cost and effectiveness of different interventions (cost saving and health care quality and coverage improvement)
- broader benefits (contribution to the 'social' capital of organisations through participation in research, benefits to the health care workforce, and economic gain from a more healthy workforce generally).

4.5 The payback model also maps neatly onto the enabling, developmental and application activities outlined in the matrix presented in Chapter 1. For example, being involved in a research project may make it more likely that nurses, midwives and AHPs will be more receptive to evidence-based approaches to health care. As was argued in Chapter 2, graduate nurses, most of whom will have been exposed to research in their educational preparation, appear to be more receptive to research than nurses trained in more traditional ways. Second, with regard to therapies, interventions can reduce days off work due to illness or disability. Taking the example of back pain, the cost to the NHS has previously been estimated to be around £400m per annum (Klaber, Moffett et al, 1995). In contrast, the costs of NHS physiotherapy for back pain have been estimated at £150m per annum. Physiotherapy has been shown to help individuals to return to normal physical activities and get back to work as soon as possible (Maniadakis and Gray, 2000).

4.6 While studies which claim that nursing, midwifery or therapies can reduce mortality are rare, such an association has been demonstrated by Aiken et al. They showed that mortality rates for patients were lower in hospitals known for good nursing care, when compared with matched controls (Aiken et al, 1994).

4.7 Buxton and Hanney's work illustrates the wide range of potential benefits of research. Earlier work on payback included a case study of occupational therapy research using sensory integration for adults with severe learning difficulties (Soper and Thorley, 1996). In this case, the academic partnership suggested by the commissioning panel strengthened the proposal and the research process. Benefits included the spread and

acquisition of research skills in the service, and an enhanced sense of the potential of evidence-based approaches. Audit, standard setting and resource allocation practices were all improved as a result, as was community outreach of the service to other units. The research applied knowledge generated internationally to a local context, and some marginal gain was identified in employment participation rates for clients. Payback in this case covered a range of categories yielding multiple benefits.

- 4.8 Based on the evidence presented, and on the research studies described in Appendix II, it is reasonable to claim that further investment in research in nursing, midwifery and AHPs is likely to deliver benefits across a wide range of payback categories, as defined by Buxton and Hanney.

### **Comparisons with education**

- 4.9 We were asked to benchmark nursing, midwifery and the allied health professions against such disciplines as education and social work. Educational research, like that in nursing, midwifery and allied health professions spans a broad spectrum of activities, actors and categories. Teaching and learning are only one small part of the endeavour and are the subject of several social science disciplines. In terms of its categorisation, therefore, educational research may find its way into psychology or sociology, even social policy. Superficially, there are some parallels between education, qua teaching and health in the fields under study. Teachers and nurses, midwives and therapists are concerned with the delivery of front line personal services. Both groups are being urged to drive up standards, deliver performance management targets and ensure their practice is 'evidence-based'. Both may be 'subject' or specialist group based. Health and education are both delivered in primary, secondary and tertiary settings. They also have recognised the importance of the practitioner as researcher, indeed, nursing and midwifery have drawn from education in many of its teaching innovations. The 'teacher as researcher', in which the practitioner is engaged in action research in his or her own practice (Stenhouse, 1975) is a familiar model of the lecturer practitioner role. Hospitals and school are increasingly regarded as learning organisations or 'knowledge-creating' (Hargreaves, 1999). Teachers and schools as users and generators of research have their parallel in trusts as local consumers and beneficiaries of research.

- 4.10 This suggests a great demand for applied research. Moreover, it also emphasises the critical importance of partnerships between researching schools and academic research institutions. This brings into sharp relief the familiar tension of the need to produce theoretical or generalizable knowledge sought by professional academic researchers, versus approaches which stress the local context, the role of practitioners, and the need for direct guidance on teaching and learning strategies.

### Mapping educational research

- 4.11 Educational research has been subjected to scrutiny and analysis and critical reviews of the quality of its research publications. It has been argued that 'despite the expenditure of over £65m of public funding on educational research each year, there are surprisingly few studies which individually or collectively, contribute systematically to the development of a comprehensive body of high quality evidence' (Millett, 1992, p 2). Much of the concern about educational research was stimulated by an

excoriating critique by David Hargreaves who decried such research as: 'second rate ... which does not make a serious contribution to fundamental theory or knowledge; which is irrelevant to practice; which is unco-ordinated with any preceding or follow-up research; and which clutters up academic journals which virtually nobody reads' (Hargreaves, 1996, p 7).

- 4.12 A mapping exercise conducted by the National Foundation for Educational Research (NFER, 1998), following the 1996 RAE, noted that the majority of research was policy-oriented – some 47% of output, with papers on institutional effectiveness and improvement accounting for only 7%. There has been no systematic analysis of RAE data for nursing, midwifery or AHPs following the 1996 exercise, but these findings chime with some of those from the mapping exercises and with bibliometric data discussed in the Technical Annexe in terms of the under-representation of effectiveness reviews (NFER, 1998). Similarly, in all cases there was a skew towards higher ratings in the old universities. Like education, a number of new universities were fresh to the exercise and for some this was their first submission. Some used the exercise to benchmark their baseline to build for the future. Similarly, consistent with the trend in nursing and midwifery, the majority of education postgraduates are part-time, and indeed this proportion has risen between 1994–9 from 63% to 67% of the total. With respect to research income, as the bibliometric studies show, of externally generated income the UK Central or Local Government were the largest funders (46%). There were higher levels of funding both from research charities (14%) and research councils (8%) than for nursing and AHPs overall (NFER, 1998, p 29). Significantly, papers reviewed for an Ofsted-commissioned study revealed that some 80% had no funding source given. One of the consequences of the lack of external funding means that studies are undertaken with a design that makes little demand upon resources. Not only does this exclude such research from the usual quality control mechanisms but it curtails the opportunity for embarking upon the kinds of studies likely to impact on practice (Tooley and Darby, 1998).
- 4.13 In 1996 some 104 institutions participated in the RAE. Of these 30 scored 4 or above, with 57 scoring 3b or below. All top 30 departments were in the 'old university' sector. Some 7% of all academic staff were classified as research-only staff by HESA in 1998–9, compared with 3.9% for nursing and AHPs. An analysis of the sources of research funding for HE departments in 1998 (see Figure 4.2 below) shows that education departments gained a higher proportion of their research income from HEFCE's QR (c.60%) compared to nursing (c.20%) and AHPs (c.40%). However, education received fewer funds from government departments (15%) compared with nursing (40%) and AHPs (30%), which were better supported in this area. An equal balance from academic and governmental sources might be the better mix. Although education compares favourably with both nursing, midwifery and AHPs in QR funding, its performance was regarded as sufficiently worrying to stimulate the establishment of a research programme to build capacity within the field.

#### ESRC Teaching and Learning Programme

- 4.14 The Economic and Social Research Council (ESRC) Teaching and Learning Research Programme owes part of its existence to recent critiques of the quality of educational education. With a cumulative budget now approximating £23m, it has embarked upon a programme of research into learning and teaching in the United

Kingdom. One of its unique features is its national focus and partnership funding model. The Higher Education Funding Council for England, the Scottish Executive, the Welsh Assembly and the Department for Education and Employment (DfEE) all contribute funds. The Programme is large-scale and is designed to achieve long-term benefits, not the least of which will be an increase in the capacity of practitioners to promote further improvements in learning through the conduct of research. The primary objective of the programme is to improve the outcomes for learners of all ages across a wide range of educational and training contexts including pre-school, primary and secondary school, further education, higher education, community, adult and continuing education, and the many forms of professional, industrial and commercial training.

4.15 The core objectives of the Programme are to:

- enhance the achievement of learners at all ages and stages in education, training and life-long learning
- develop the capability for transforming the knowledge base relevant to learning into effective and efficient teaching and training practices
- enhance the system-wide capacity for research-based practice in teaching and learning
- promote and extend multi-disciplinary and multi-sector research in teaching and learning
- foster partnership between practitioners and researchers in undertaking research and make sure it has impact.

4.16 Four sub-fields of research into teaching and learning are distinguished:

- research aimed at applying knowledge from social science disciplines to policies and practices for teaching and learning
- educational research aimed at achieving improved understanding of teaching and learning practices, processes and contexts
- research designed to provide direct evidence of effective approaches to teaching and learning
- practitioner research and especially in schools as research and learning institutions.

4.17 The first two phases of work are well underway and involved the funding of research networks (from an enhancement fund of £2m, across multi-disciplinary teams, including users across at least three universities) and career development awards in February 1999. The call attracted 94 research network proposals and 67 career development awards, of which eight networks and four career development bids were short-listed. Phase 1 and Phase 2 are aimed at developing inter-disciplinary consortia and priorities. Both of these programmes are designed to investigate ways of raising attainment ( <http://www.ex.ac.uk/ESRC-TLRP> / <http://www.esrc.ac.uk/fundops.htm>).

4.18 A new Phase 3 on capacity building is currently underway, and was informed by a review commissioned from the University of Cambridge (McIntyre Report, 1998). Significantly, it argued that there was no overall shortage of relevant capacity in the system (except in respect of capacity to conduct large scale quantitative studies). It

was noted that there is a mismatch of available capacity in favour of those who have the skill and opportunity to conduct relevant research, but who do not have the opportunity to impact on practice, while those in practice do not have the skills to do the research.

4.19 In January 2001, the establishment of a Teaching and Learning Research Capability Building Network was announced. This has resulted in an £8.5m capacity building programme run over three years from the University of Cardiff. The Network is managed by a team based in the School of Social Sciences, led by Dr Stephen Gorard. The Network aims to foster collaboration between the Programme's researchers and with the wider teaching and learning research community to support their professional development and facilitate the sharing of skills and experience. The Network began work in spring 2001. Priorities are:

- to develop skills in the design, conduct and management of quantitative studies, including experimental, quasi-experimental and survey techniques, capable of evaluating the effects of teaching and learning on learners' attainment across various contexts
- to enhance the theoretical and conceptual bases for such studies
- the articulation and combination of qualitative approaches with quantitative studies
- greater utilisation of inter-disciplinary theories and methods
- transformation of research-based knowledge through to its embodiment in practices relevant to enhancing learner attainment.

4.20 Research in education has been the subject of much criticism. Concern about quality, as well as volume, and capacity to impact upon and improve national standards led to the establishment of a time-limited, targeted capacity building programme. Efforts to develop networks across multi-disciplinary teams, introduce career awards and focus on outcomes could also be applied to good effect to nursing, midwifery and AHPs. The recently announced capacity building network potentially provides a useful template for skills audit and augmentation within these groups.

### **Comparisons with social work**

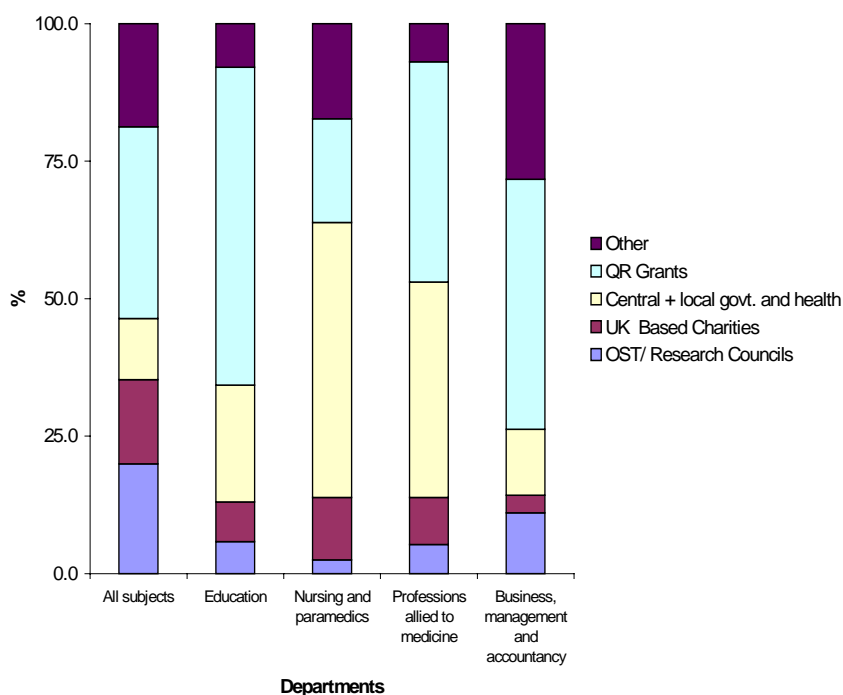
4.21 Debates in social work research resonate in many ways with those in nursing, midwifery and AHPs. These arise in part from the reform of social work practice through the new regulatory frameworks and from the need for high quality evidence to underpin the modernisation of social welfare. Many of the concepts current within the NHS R&D agenda have become the stock-in-trade of the social work research: user involvement, research/practice relationship, cross-sectoral working. Plans are progressing to create a parallel body to NICE in social care – the Social Care Institute of Excellence (SCIE). Nevertheless, there is the sense within social work that it has had to struggle to lay claim to an academic base and has been marginalised within the social sciences (Fisher, 2000). Like nursing, midwifery and PAMs, no single public body or funding agency has co-ordinated or promoted research for social work. Equally, demand and professional support for such a strategy has been slow to crystallise. Indeed, it is argued that those who share enthusiasm for evidence-based social care are a minority voice (MacDonald, 2000, p 120). Similarly the focus of social care is difficult to articulate (MacDonald, 2000, p 118). One major difference

between social work and nursing, midwifery and AHPs is that the social care workforce, although very large (1.25m – exceeding that of engineering), is diverse, as only 55,000 of them are social workers. Any research agenda therefore needs to stretch across a wide range of workers and practice domains.

- 4.22 Although a number of funders, notably the Joseph Rowntree Foundation, DH, and ESRC fund research in social care, policy, administration and social research, this is not necessarily directed towards social work as the destination discipline. The research can also be hosted in a range of social policy related departments. The invisibility of social work as a subject category was one of the factors stimulating the setting up of an ESRC seminar series in 2000. The series aimed to raise the profile of social work as a research discipline in its own right. To this degree, social work is something of an orphan since grant applications to ESRC for example need to be submitted under other headings – such as sociology, social policy, socio-legal studies or education (see <http://www.nisw.org.uk/tswr>: ESRC-Funded Seminar Series, 'Theorising Social Work', p 6). Like nurses and others, the contribution of social work to these disciplines remains hidden and unaccounted for.
- 4.23 Debates about the coherence of social work, and its invisibility as a discipline recognised by funders, mean it is more difficult to benchmark against nursing, and subjects allied to medicine. Subject categories within social work tend to be blurred in cost centre terms. Furthermore, there are concerns about the volume of evidence and critical mass of researchers available to inform evidence-based policy and practice developments.
- 4.24 The quality of the data is significantly lower for these areas, allowing less clear-cut conclusions to be drawn. Social work was selected since it is both a personal service and, like nursing, midwifery and AHPs, often regarded as a practice discipline: 'a "doing" rather than a reflective' occupation (MacDonald, 2000, p 133). The performance of social work in the last RAE was better than that of education. Thirty-two departments entered the RAE, and of these 11 were in the category of 4 or above, five gaining a 5 or 5\* rating. The category of social work is rarely consistently used in research returns and is often subsumed into other categories. HESA, for example, refers to social studies, whereas the ESRC refers to social policy.
- 4.25 Some 13% of staff in social work departments were research active, the highest of any of the groups under consideration. In terms of postgraduate numbers a similar trend is demonstrated, with a preponderance of candidates being part-time and this proportion increasing between 1994–9 from 60% to 65%. Social work, however, has the second lowest ranking in the ESRC's quinquennial rank order of success. Only management and business studies are less successful in terms of their awards. Education is ranked 10 out of 15, but nursing and AHPs do not even feature as part of ESRC categorisation.
- 4.26 As part of the government's drive for evidence-based care and policy, social care received some funding from the DH Policy Research Programme. About £9.6 billion a year is invested in social services. The DH is a major funder of research in this area, providing some £5.3m between 1999 and 2000. The inclusion of social care within the remit of the NHS R&D Programme signifies the intention to break down

boundaries between the two. Similarly, the establishment of the Campbell Collaboration as a close cousin to the Cochrane Collaboration suggests the intensification of effort geared towards identifying effective interventions. Also, the Centre for Evidence-Based Social Services has recently been established at the University of Exeter, funded by the DH and Social Services Department of the South and South West England (Sheldon et al, 2000). Interestingly, this initiative was launched at the School of Public Policy, directed by the first Director of the NHS R&D Programme, Sir Michael Peckham, in February 2001.

**Figure 4.2**  
Sources of research funding UK HE departments (1998-9)



4.27 As Figure 4.2 demonstrates, nursing and AHPs attracted the lowest levels of QR and research council funding of the subjects shown. Business studies, management and accountancy scored higher on all quality indicators, even though this is the lowest ranked ESRC subject.

**USA - National Institute of Nursing Research**

4.28 The single most important factor promoting research into nursing within the USA has been the establishment of the National Institute for Nursing Research (NINR) within the National Institutes for Health (Hinshaw and Merritt, 1988). The stimulus for establishing the NINR arose from the findings of an Institute of Medicine report in 1983 recommending mainstreaming nursing research within biomedical and behavioural research. A subsequent NIH taskforce study found nursing research activities to be relevant to the NIH mission. These twin initiatives resulted in legislative action setting up the then National Center for Nursing Research (NCNR) in April 1986. Subsequent legislative measures by President Clinton and DHHS Secretary Donna Shalala changed the Center to a fully-fledged NIH entity, the NINR, in 1993. It is argued that placing NINR within NIH adds a clinical and nursing perspective that

enriches the mainstream of the American biomedical and behavioural research effort. The broad spectrum of the research portfolio focuses on patients, families and communities, especially those that are at risk in under-served populations or affected by health inequalities and social exclusion. People with special needs receive particular research attention, including women, ethnic minorities, the elderly, residents of rural areas and the economically disadvantaged. Interventions are designed to enrich the clinical practice and improve the health of the American people.

- 4.29 Congress now votes nearly \$90m to the NINR annually. Between the 2.5 million nurses in the USA, this works out at a per capita expenditure of \$36. This, more than any other factor, has been identified as the key vehicle for raising the visibility and credibility of nursing research within the National Institutes of Health (NIH) and scientific and health services research communities at large. The key point here is identified funding for, and high visibility of nursing within, the most prestigious health research organisation in the USA. NIH works through funding health research in fields like ageing and cancer – nursing was afforded similar status. There is concern that in order to benefit from research the capacity must be sufficient for, and responsive to, present and future national health research needs, for which a focus on developing the next generation of nurse researchers is a priority. The NIH proclaims this clearly: 'To ensure that the cadre of nurse researchers is maintained and expanded we continue to support the continuum of research training needs – from attracting nurses to the field of research, to providing pre and post-doctoral training and research opportunities'.
- 4.30 The pool of graduates upon which funding bodies within the USA have to draw is larger than that within the UK. A recent survey conducted by the American Nurses Association noted that almost 40% of nurses had a bachelor's degree as their highest qualification, 18% had masters and 2% doctorates (ANA, 2001). The vast majority of the budget (74%) is invested in extramural research project grants with 7% reserved for pre and post-doctoral training. NINR collaborates with other institutes and centres in areas of mutual interest including joint funding of projects within the Department of Health and Human Services and across other government sectors.
- 4.31 Built into the planning cycle for the next five years is a prospective evaluation of projects commissioned. Part of NINR's mission is to ensure its outputs are communicated to the public as well as to members of the policy and research communities. Examples of research that have made a difference to patient care and produced scientific advances in care processes are presented.
- 4.32 A series of vignettes have been produced as illustrations of cost and clinical effectiveness and 'payback' from investment. These include:
- the cost/quality model of care – early discharge from hospital to home of patient, followed up by advanced practice from nurses can improve the cost and quality of care
  - high blood pressure reduction programmes for young African-American men and other hard-to-reach populations reduces risk of cardio-vascular events
  - home visiting by nurses improves the health and quality of life of low-income mothers and children.

- 4.33 The twin emphases on health and funding through specific broad research fields make this model distinctive, although some of its characteristics can be identified in other countries.

#### **Canada - Canadian Health Services Research Foundation (CHSRF)**

- 4.34 The Canadian government has just embarked upon a major capacity building exercise in funding six professorships with ten-year one-off research programmes to a total of C\$25m in health services research and C\$25m in nursing research. There are 228,450 practising registered nurses in Canada, of whom 22% have a bachelor's degree as their highest qualification, 1.6% masters and 0.1% doctorates ([www.cna-nurses.ca/pages/resources/stats/salary/htm](http://www.cna-nurses.ca/pages/resources/stats/salary/htm)). The per-capita expenditure on nursing from this government source is approximately C\$100. Educational and mentoring activities are central parts of the programme and the funded research programmes provide a vehicle for this training (Canadian Health Services Research Foundation, 2000). A unique and distinguishing feature of the programme is that it involves a 'buy-in' from stakeholders and decision-making partners. Moreover, the quality of the educational and research environment plays a key role in the funding strategy.
- 4.35 This exercise was part of a wider capacity building effort for applied and developmental research and evaluation (CADRE) in health services research and nursing. The modus operandi of the CHSRF is very much one of partnership and such arrangements have been developed between the Canadian Institutes of Health Research.
- 4.36 One of the Canadian Institutes of Health Research's (CIHR's) goals is to address the urgent need for increased capacity in health services and systems research. The CIHR founding documents not only highlight the need for more health services and systems research capacity, but also the need to increase the orientation of both the existing and the developing stock of health services researchers toward the application and use of research, i.e. to better serve the needs of evidence-based decision making. The portfolio of CADRE programmes is designed to address both short-term and long-term capacity building for applied health services research on a regional and a disciplinary basis.

#### CHSRF/CIHR CHAIR Awards in nursing and health services research

- 4.37 The six research Chairs are the flagship projects within the CHSRF portfolio. Their intention is to develop an infrastructure to strengthen and stabilise future training opportunities across the country. The objective here is to give recognition to mid-career, applied health services and nursing researchers in Canada and to facilitate the addition of significant mentoring and training activities to their existing research endeavours. Incumbents will form a network of regional focal points for leadership in training and mentoring. The aim of the programme is to provide leadership for nursing research by freeing up some of the time of established top-flight nursing researchers through salary support. In addition to co-sponsorship from relevant organisations, the Fund was able to support chairs for ten years, each with salary support and discretionary funds to underwrite the incumbent's research programme and encourage development of training opportunities. Each chair carries the name of a

renowned nurse researcher (nominated by its co-sponsoring organisation) and covers one of following areas: nursing policy, management, human resources or nursing care. There are four other types of award or programme, as follows.

- 4.38 *Career Renewal Awards*: These awards are intended to provide a quick route to increased capacity by retooling existing researchers to give interested non-health researchers an opportunity to reorient their research programmes to applied health services or nursing research. This is through a one-year award of C\$50,000 to support affiliation and training. The annual expenditure is C\$500,000.
- 4.39 *Post-doctoral Awards*: These provide the opportunity for the next generation of researchers to maximise their research dissemination and uptake. The objective is to construct postdoctoral awards that expose young researchers to decision making by managers and policy makers, as well as affiliating them to sites where they can acquire skills that maximise the dissemination and uptake of their research. Two-year awards for up to 12 postdoctoral students are made each year, with CHSRF assisting in identifying and placing awardees in the settings and sites where they can acquire the applied research skills they require. Annual expenditure: C\$1m.
- 4.40 *Regional Training Centres*: The Foundation establishes training programmes across the country to ensure a future flow of applied health services researchers. The aim is to identify, develop, and provide core funding for four regional training programmes with a steady-state annual output of at least 20 masters and PhD graduates skilled in applied health services research. (For further details see [http://www.chsrf.ca/english/programs/loi2000\\_e.html](http://www.chsrf.ca/english/programs/loi2000_e.html).) Annual expenditure: C\$1.5m.
- 4.41 *Regional Partnerships*: These facilitate the development of research funding opportunities in under-developed regions with the objective of providing an incentive for governments and agencies in those provinces with an under-developed health services research capacity to invest in applied health services research. Annual expenditure: C\$1.5m. (See [http://www.chsrf.ca/english/programs/loi2000\\_e.html](http://www.chsrf.ca/english/programs/loi2000_e.html).) Several other training, research funding and knowledge dissemination awards are available.
- 4.42 The rationale for such an investment was that a 10-year programme would develop research capacity for, support research on, and disseminate knowledge about, solutions to the clinical, policy and workforce challenges facing nursing in the forthcoming decade. The spend-down rate was estimated at C\$2.5m per year.
- 4.43 In keeping with a recognised need to extend subject matter, the Canadian Medical Research Council has been re-titled the Canadian Institutes of Health Research. It remains to be seen whether this changes the ways in which proposals beyond the bio-medical range of disciplines are received and funded.

#### **Comparisons with international experience: AHPs**

- 4.44 The pattern of R&D in AHPs in other countries is as diverse and complex as it is in the United Kingdom. It is also hidden, as there are few comparative studies, so that the evidence is mainly anecdotal. In 1997, Snyder-Mackler et al summarised the opportunities and problems in physical therapy research in the United States.

Although they reported increased funding opportunities for doctoral and post-doctoral studies, these were hampered by a lack of research culture, infrastructure support and mentorship to develop the next generation of principal investigators, particularly in Colleges of Allied Health. Other factors were the recruitment of doctorally trained faculty and the increasing teaching loads. For example, the professional body had set a target of 60% doctorally trained faculty by 1997 but this has fallen short, with only 40% in place. In Europe, a survey of occupational therapy programmes indicated that research activities were being undertaken in Belgium, Denmark, France, Greece, Malta, the Netherlands, Sweden, Slovenia, Spain, Switzerland and the UK (European Network of Occupational Therapy in Higher Education (ENOTHE) 2000, p 63–64). Most respondents were receiving departmental or institutional funding. There was no evidence of transnational collaborations or funding. Finally, the opinion of members of the Research Forum for Allied Health Professions was that there was more arts therapy research, particularly music therapy, being undertaken in the USA than in the UK; that the USA and Australia were active in radiography research; but that the UK was ahead of most European countries.

### **Lessons from benchmarking and conclusions**

- 4.45 The long-term investment in research centres and infrastructure, which has been one of the hallmarks of the NINR approach, has enabled programmes of research to deliver the benefits to under-served groups prioritised within the NIH portfolio. Standards of research have been able to benefit from networks and peer review processes associated with NIH in the effort to drive these up within nursing. There is now a range of investigator awards for which nurses can apply, albeit from a more mature research base than in the UK.
- 4.46 The mentoring and training objectives at the centre of the Canadian approach give this model a distinctive appeal. The 'buy-in' from the host institution, and links with decision-makers and practitioners, means that impact and dissemination are factored in as part of the research process. As Buxton and Hanney's payback model demonstrates, this would appear to lend itself potentially to delivering benefits across a range of domains. Moreover, the leverage produced by government funding in this case has demonstrated a multiplier effect in which the overall investment has been increased.
- 4.47 By most of the main measures of research activity, nursing, midwifery and AHPs appear to be out-performed by cognate disciplines. Concerns about the quality of research in education led to the establishment of a time-limited, targeted programme of research managed to Research Council standards. The £23m allocated to the Teaching and Learning Programme alone allows for a per capita spend of approx £58 per teacher over 10 years. The high profile of health as well as education policy within the government's policy portfolio suggests that this too should be considered for similar treatment. Significantly, the decision to invest seems to have been taken on indicators more favourable than those applying to nursing, midwifery or AHPs. On that basis, the lower threshold of achievement and 'weight' of these groups suggests an even stronger case for investment.
- 4.48 Data submitted by CHSRF demonstrate that, once government investment is made, there are others who are willing to contribute and therefore more money will be

levered in. For instance, even though 2000 was only the first full year of the fund (and, therefore, it was still in start-up) the Foundation's expenditure of C\$1.5m attracted an additional C\$1.9m of direct funding in 2000 from other agencies and groups with an interest in nursing research (for a total expenditure by the foundation on nursing research of C\$3.4m). The involvement of other funders in the field suggests that the opportunity for synergy is great.

- 4.49 Although we have received representations arguing for a research council for nursing, there is no equivalent of the NIH within the UK. A viable model (which we review later in Chapter 5) would be for a stakeholder arrangement of this kind to be managed by a research council, for example the Medical Research Council, as a panel or committee of its Health Services Research Board (Rafferty, Bond et al, 2000). A single body given this responsibility would enable integration of research and training functions, and promotion of integrated programmes of research, rather than the individual projects typical of NHS R&D schemes, or separation of research and training as in the current primary care initiative.
- 4.50 The vision is that at the end of a ten-year period, nursing, midwifery and AHPs would have an increased cadre of high calibre researchers and research leaders, capable of contributing in innovative and challenging ways to researching questions about health and the contributions of these professions to its improvement. The design of the Canadian scheme lends itself well to the 'payback' model where research involves a range of stakeholders. It also chimes with the DH's Priorities and Needs approach, where discussions about payback are built into the process of commissioning (Department of Health, 2001). Most compelling of all is that payback is not only multi-dimensional, but may have a multiplier effect upon other funders too.

## Chapter 5 Funding and funding models

### Introduction

- 5.1 We have seen from Chapter 3 that the two groups of academic professions (nursing, health visiting and midwifery on the one hand, AHPs on the other) receive very little research funding from HEFCE via the QR, and extremely little from either the research councils or charities. However, in 1999–2000 they earned quite significant sums from the NHS (an average of £96,000 per annum for the 50 departments surveyed).
- 5.2 Our benchmarking against other 'mature' disciplines has shown that in terms of research staff numbers, PhDs, and research income, the two groups of professions have a way to go before their research capacity is as well developed as their peers. The bald statistics alone have shown this – only 3.9% of their total academic staff being research staff, compared with up to 27% in related departments.
- 5.3 If HEFCE's overall objective is to build up the research capacity of the two groups of disciplines, more funding will be needed to achieve this. In this section we discuss how this funding might be provided, by whom, in what way, and at what levels.
- 5.4 As we have earlier emphasised, a distinction must be made between nursing, health visiting and midwifery on the one hand and the AHPs on the other. Whereas the former are well developed professionally and have some homogeneity, the latter are varied in their development, heterogeneous, and in some cases are not yet fully backed by the infrastructure of a professional body, or given any statutory protection. The same funding solution may not therefore be applicable to both groups.

### Non-HEFCE funders

- 5.5 We have found evidence that other funders are becoming aware of the need to increase their support for research in this area. In particular, we have identified PPP Healthcare Medical Trust and the MRC as agencies which are now interested in funding research.
- 5.6 The PPP Trust is a relatively new entrant into the field of healthcare research funding. They support research projects under broad thematic areas, as well as mid-career awards and studentships. Information about grants awarded during 2000 reveals some successful applications from nurses and AHPs.
- 5.7 Of a total research grants expenditure of £5,773,587 nurses/AHPs received £287,888. This represented 3 of the 48 projects. As regards mid-career awards, out of a total amount of £827,888 nurses/AHPs received 14 awards for £58,288.
- 5.8 The MRC provided us with a new policy statement about its activities with relation to nurses and AHPs. Although it is not currently funding any research grants where the principal investigator is a nurse, midwife, health visitor or allied health professional, a midwife is co-grant holder on one project. The MRC's statement says, however, that it is keen to encourage the development of research capacity within these professional groups. It is not clear how some of their present activities (for example, the funding of

research nurses as scientific assistants on MRC funded projects, or the General Practice Research Framework) actually contribute to overall research capacity within the professions by developing individuals' research careers in ways that are beneficial to their professions as a whole. Within the Council's Training and Development Fellowship scheme, two Clinical Research Training Fellowships are earmarked each year for nurses and AHPs, if they reach the standard required, though it is not known how many of such awards are made in total. Between 1996 and 2000, 18 training awards were made to nurses and AHPs, although again, what proportion this is of the total number of awards made during this period is not known.

- 5.9 In spite of the rather modest involvement of nurses and AHPs with these grants and awards, MRC express commitment to contributing to the development of research capacity among these groups. Their policy document states:

'We believe that the HEI sector needs to treat the areas concerned as strategically important, building the academic base as part of a multidisciplinary approach to addressing significant health questions. This would include investing in the establishment of senior academic positions, if necessary bringing in high-flying individuals from outside the UK from similar health care systems. It involves taking risks, but the potential payback in terms of HEI's contribution to meeting public needs could be appreciable ... We will continue to welcome research and career development proposals involving research in nursing, midwifery, etc. The Council will continue to work with other stakeholders in building research capacity in nursing, midwifery, etc; including joint investment through existing collaborative initiatives (e.g. joint fellowships and the Primary Care Research Initiative). We would also be happy to explore with others how best to promote the creation of centres of research excellence. Reference has been made by others to the MRC Health Service Collaboration as a suitable hub and spoke model that might be adopted for achieving this. We would be delighted to share our experience of this model and its potential with DH/NHS and HEFCE, not only as a means of stimulating high quality research but also as a suitable environment for research training and career development.'

(Cox, 2001)

- 5.10 We assume that HEFCE will want to open discussions with the MRC on these offers of collaboration.
- 5.11 The Nursing Professions R&D Priority Setting Initiative identified a great potential for research funding from the medical charity sector, and worked in collaboration with the Chief Executive of the Association of Medical Research Charities (AMRC) to canvass its membership to identify which research charities were interested in nursing research. The results were published in December 2000 (Crofts and McMahon, 2000). (There are over one hundred medical research charities in the UK and the vast majority belong to the AMRC.) Eight charities responded favourably:
- The Parkinson's Disease Society
  - Diabetes UK
  - Motor Neurone Disease Association
  - Foundation of Nursing Studies
  - Cancer Research Campaign

- The Stroke Association
- Nuffield Charitable Trust
- Elizabeth Clarke Charitable Trust.

- 5.12 Representatives from some of these charities expressed willingness to work with nurses but were uncertain about how to proceed. Discussions with AMRC revealed that many charities were disease-specific and focussed on finding cures for the relevant diseases. As a result, available funding was often given to lab-based work with individuals and groups with whom the individual charities had built up relationships, although increasingly many were funding quality of life issues. Three models of research funding for nurses emerged: charities that only fund course fees for research modules or projects which are part of an academic award (e.g. the Florence Nightingale Foundation); charities that offer a research fellowship exclusively to nurses (e.g. Cancer Research Campaign, who advertise one fully-funded PhD fellowship per year); and charities providing for nurses in competition with all other groups (e.g. charities which may recognise the contribution of nurses to research, but have not funded nurses specifically).
- 5.13 The authors of the report of that investigation concluded that there were certain barriers to the involvement of nurses in this sector, e.g. the perception that nursing research was 'rarely disease-specific enough or user-focussed enough for the charitable sector'. Nevertheless, they recommend that nurses working within specific fields or with specific client groups should work to make alliances with the relevant charity and attempt to raise the profile of research activity in nursing within that specific field.
- 5.14 Within the NHS there are two relevant initiatives. In the first, the R&D Directorate has launched a series of funds helping to finance capacity building in primary care. There are three levels: career scientist awards, researcher awards and post-doctoral awards. Any person in a discipline associated with primary care can apply. Later in 2001, it is expected that a series of awards will be targeted particularly at nurses, but details are not yet available.
- 5.15 In the second initiative, parallel with our study, a NHS working group on building research capacity has been developing proposals for following through the recommendations of the Pearson Report. This has focussed more on preparing the ground in the NHS by incorporating research skills in initial training, promoting research awareness and enthusiasm for evidence-based practice.

### **HEFCE's possible funding models**

- 5.16 There are various ways in which HEFCE can promote a fledgling or 'underweight' discipline. These have to be seen in the context of two general funding principles: a reluctance to earmark any funding too specifically, and a recent preference for formulaic allocations rather than bidding mechanisms. In addition, the principle of expecting a degree of matched funding could be incorporated into most of the models.

5.17 Some of the possible models are:

- a) For a designated fund to be set aside by HEFCE and for formulaic allocations to be made from it pro rata, either to research-active staff or to full-time teaching staff. Institutions would be free to use this as they wished, but would be asked to produce a strategy paper describing their objectives and the approach to meeting them. An allocation on the basis of research-active staff would be giving to those that were already successful, whereas an allocation on the basis of all staff would give institutions with small research capacity the opportunity to build it up.
- b) For HEFCE to ask an intermediate agency to handle the allocation of funds for promoting research capacity in the two groups of disciplines. It would be for that agency to devise its own methods and funding models, as does the ESRC in its Teaching and Learning Programme (which we described in Chapter 4).
- c) For a joint fund to be set up by HEFCE, the Department of Health and any other interested agencies, to finance collaborative research projects submitted by university departments and trusts. It would be hard for this to operate except through competitive bidding, but the criteria should include the need to develop new capacity. The effect of this model might be to establish a limited number of recognised research centres or collaborative groupings like the MRC's 'hub and spoke' arrangements. In the case of AHPs there could be an argument for ensuring that at least one such centre is created for each profession.
- d) For HEFCE to include support for the professions within the scope of a general Capability Fund they develop as a result of the recommendations of the Fundamental Review of Research. This might not be able to meet the specific needs as flexibly as a 'bespoke' fund, since the funding protocols would need to apply to a range of disciplines.

5.18 Whichever approach is adopted, there will be a need to consider the special needs of the AHPs. Since they are invisible in almost all published statistics, any formulaic method of allocation would be unlikely to reach them. There is therefore an argument for funding them through some bidding mechanism in which they are invited to identify themselves and their needs. They could be encouraged to do this in partnership with other more experienced researchers in other disciplines. This method would also allow the funding decisions to be geared to helping the AHPs with the weakest research infrastructure, rather than the few that are reasonably well developed.

5.19 The four funding methods suggested should now be assessed against a set of criteria including the following:

- whether the method is proven and has worked before
- whether it can be guaranteed that funds will be spent in achieving the objective
- whether it will help both to build capacity and to fund projects
- whether it will have the effect of encouraging concentration of research capacity or wider dispersion
- how sustainable the method is, and whether there is an easy exit strategy

- whether it will help foster multi-disciplinary participation in research for nursing and AHPs researchers
- whether the model can provide separate solutions for the nursing professions as opposed to the AHPs
- how suitable it is for involving other funders in a collaborative scheme.

5.20 In Table 5.1 below we show our assessment of how the four score against the eight criteria. It is clear that no one method is sure to meet all the criteria successfully. However, a mix of the funding approaches could well be adopted.

**Table 5.1**  
**Review of Funding Models**

	Model A	Model B	Model C	Model D
Has the method worked before?	Yes	Yes	Not yet with DH, but with other partners	No
Can we guarantee that funds will be spent achieving the objective?	No	No / Not known	Yes	No
Will it both build research capacity and fund projects?	Possibly	Possibly	No	Possibly
Will it encourage concentration of research capacity?	Depends on how funds are allocated	Possibly	Depends on criteria adopted	No
Is it sustainable, after funding stops?	Yes, via QR	Yes, via QR	Yes, via QR	Yes, via QR
Will it foster multi-disciplinary research?	Possibly, depends on HEI	Possibly, depends on project design	Very likely	Possibly
Can other funders collaborate in the scheme?	Yes	Yes	Yes	No
Can it be flexible for the different needs of nursing and AHPs researchers?	Yes	Yes	Yes	Possibly

### Levels of funding

5.21 We have been asked to advise on the level of HEFCE funding that might be needed to build up capacity in the sector. There are several related factors to be borne in mind:

- the likelihood that other funders will also now be providing more resources for nursing/AHPs research, as we described above, although we have no guarantees or firm financial promises
- the capacity of the sector to absorb large numbers of extra young researchers/fellows without adjustment to the training contracts with the Workforce Confederations
- the skills deficiencies among some young researchers in terms of bidding for and then managing research (but this is not unique to these disciplines). This argues either for a phased approach or one based on partnerships with experienced researchers in other disciplines

- the need to ensure that all NHS regions are committed to the idea of working with universities in joint research ventures that meet NHS needs, so that all those universities that wish to expand their research activities have willing local partners.

- 5.22 The closest precedent for funding being made available to boost a discipline has been the ESRC's programme in educational research. In this case we understand that the sum of £10m was initially allocated, but on no particularly scientific basis. There have since been further allocations, bringing the total so far to £23m. A HEFCE initiative to promote the research capacity in the veterinary sciences has not yet reached the stage of funding.
- 5.23 Our search for rational bases for calculating the quantum of funds to be spent on promoting capacity in the sector can focus on three possible avenues, all of which look at the gap between nursing and other more mature disciplines.
- 5.24 The research staffing gap can be found by comparing the numbers of academic staff classified as researchers. The relevant figures are shown in Table 4.1 of the Technical Annexe. If, for example, using 1998–99 HESA figures, the academic nursing profession was to aim at having the same proportion of research staff as the health and community studies subject group, it would mean an increase of 779 research staff. Achieving the same number as education on the other hand would mean an increase of only 229. The question now is how this number is fed into the system without creating too distorted an age profile. A recent HEFCE study of the age profiles of research-active staff showed that only 18% of researchers in the social sciences were in the 25–34 age group.<sup>1</sup> A figure of 100 new entrants a year to the new full-time researcher cadre would therefore seem a reasonable figure to use. HEFCE would not be the sole financier of these posts and if it took 75%, the annual cost of this programme would be about £2.25m per annum (£30,000 per post to match the relevant professional salaries). If the researchers were each funded for five years, over a five-year period this would amount to a cumulative cost of £33.75m, possibly suggesting that this cost should be shared with another funder.
- 5.25 The next avenue to explore is that of funding profile. HESA statistics can give us the research income of academic departments, showing the amount they receive from sources other than QR. We can compare this with the average income we found from our survey of 50 departments to identify an income gap. In Chapter 3 we reported an average income of £96,000 per department from non-QR sources. This equates to about £1,400 per academic staff member (using the figure of an average department size of 69 staff found in our survey). One objective could be to build this up to levels found elsewhere in comparable disciplines. Again, HEFCE would not be the sole source of such extra funding, but if we assumed that over a five-year period the average departmental income should increase to £3,000 per head (and departments were to stay at the same size), the revised annual research income for the total number of staff in the nursing subject group would be 6,174 times £3,000, or £18.5m – an increase of about £9.8m per annum from the present figure. If HEFCE were to bear half this cost, it would require a project fund of £23m over a five-year period.

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<sup>1</sup> See [www.hefce.ac.uk](http://www.hefce.ac.uk) under HEFCE Research for a report 'Characteristics of research-active staff' (2000) by the HEFCE Analytical Services Group.

- 5.26 The funds allocated to education under the ESRC programme have amounted to £52 per capita for teachers over a period of eight years. In the USA, the NINR allocates a sum of \$36 per member of the profession for nursing research annually – for which the UK equivalent would be about £12m.
- 5.27 A third way of looking at research funding, which is useful for identifying the degree of concentration or dispersal, is to compile a profile of research income. Thus, we saw that 22 out of 36 nursing departments in the 1996 RAE were rated 1 and 2. This is very different from the spread of ratings in subjects such as the following, two of which we benchmarked:

	Total numbers of submissions	% 1/2	% 3/4	% 5/5*
Education	104	36%	52%	12%
Social work	32	22%	62%	16%
Business/Management	100	43%	47%	10%
Nursing	36	61%	36%	3%

If nursing had achieved the same proportions as social work for example, 59% of its departments would have generated some income from QR sources, as opposed to the actual number: 19%. One objective of HEFCE/DH intervention might therefore be to achieve a similar QR distribution as, say, social work. This is a discipline that was established in the 1960s and quite quickly developed a group of good research centres in the then new universities such as East Anglia and York.

- 5.28 These methods do not greatly help us in deciding how to support the emerging disciplines in AHPs, as we lack almost all the data needed for decision making. Even within the AHPs there are differences. It is clear for example that at least two of the professions (speech and language therapy and dietetics) are better resourced than the others, so that there is an argument for being more selective in the design of any funding mechanism. This would suggest that there should be a separate fund, serviced by a committee containing the relevant disciplines, against which AHPs might bid, justifying their needs. The brief of this fund should be biased to developing research capacity. On the basis that there are about 68 groups or departments at present teaching in the allied health professions, the fund should be at least £2m per annum, providing an average opportunity of about £30,000 per department. This sum might increase over time as the professions continue to expand their research awareness and capacity.

## Conclusion

- 5.29 Although the lack of research capacity and research funding is now becoming recognised by funders and there are indications that they are planning how to respond, HEFCE is well placed to take the lead. It has the benchmark of the RAE as an indicator of the problem and a mere four years before the results will emerge again. In that time it can establish the two groups of disciplines on the growth path to greater research confidence and in a way that meets the needs of the service.
- 5.30 In this chapter we have shown that several possible funding models will meet most of the criteria which policy would suggest are relevant. They are either a per capita

allocation by HEFCE, a designated fund managed by an agency, or a joint HEFCE/DH fund. It is clear however that the AHPs may need a different funding solution to the nursing, midwifery and health visiting professions.

- 5.31 There is no easy formula to follow for establishing the sums required, but we have shown that if there are two separate strands of funding – for capacity building (in which the DH and the MRC at least may wish to collaborate) and for projects – then the annual sums required could amount to £4m to £6m for projects, and between £2m and £11m for capacity building.

## **Chapter 6 Summary of the business case**

- 6.1 In this chapter we summarise the arguments which support the case for more investment in research in nursing and the AHPs. We believe that this report and its Technical Annex presents enough evidence (even though the data has been disappointingly patchy in some areas) to justify an investment of funds.
- 6.2 There are essentially five kinds of argument:
- i. Justifications based on the importance of the NHS to the nation.
  - ii. Evidence that some demands for research are not being met.
  - iii. A cost-benefit argument, if it can be shown that investment will pay off financially (or in other terms).
  - iv. Comparisons with other disciplines and countries.
  - v. Evidence that the quality and scale of the supply of research is not as high as it should or could be.

We discuss each of these in turn.

### **The importance of the NHS**

- 6.3 It has been estimated that the UK invests almost £3.5 billion in medical research from public and private sources (NHS Executive, The Wellcome Trust, 2001). Nurses, midwives and AHPs represent two thirds of the staff responsible for direct patient care. The cost of nursing and midwifery salaries is the largest single item of NHS expenditure, and 3p in every pound of public expenditure goes on nursing. Yet, as is demonstrated by this report, little is known of the clinical or cost effectiveness of this largest sector of care. The Wellcome Trust report showed that only 1.8% of NHS research outputs between 1990 and 1997 related to nursing (Table 3.3, p 29).
- 6.4 Thus, the public are poorly served by the current capacity for research within these areas. Quality improvement measures within the NHS will never achieve their potential if the largest group responsible for delivery are not empowered with the evidence to inform and support improvement. All the most recent public policy pronouncements are based on the premise that the new NHS will have practitioners who use evidence to improve their performance and learn from research and other findings of good practice. A massive infrastructure of research commissioning bodies and dissemination mechanisms has been set up to help this to happen. Yet for the nurses, the largest number of practitioners, there have been only 1,482 research publications over eight years (Wellcome Trust, p 59) – and this is at a time when the NHS itself supports a total of over 13,500 research publications each year. How are the nurses and AHPs to learn from evidence if they are not engaged in its generation?

### **Demands are not being met**

- 6.5 In this report we have sought evidence that there is a demand for research which is not being met. Chapter 2 has trawled a large range of sources to display our findings. Several intrinsic problems make this a very hard area to tie down. One factor is the relative lack of research awareness in the workforce: not enough people are asking

questions about research, or are curious to find answers to questions, or to commission studies. The NHS has recognised this as a problem for some time and the Workforce Capacity Development Group is embarking on a series of programmes to improve the situation. Another factor is the scale of devolution in the NHS which makes it harder for new messages to be universally adopted in all regions and trusts. We identified this in our mapping study when we found that some regions were simply not commissioning any research from HEIs.

- 6.6 Despite these difficulties we believe that the material we have collected shows that there is genuine demand (as opposed to need, which we take for granted in view of the previous point). Our review of the evidence found the following:
- i. That the National Service Frameworks (NSFs) which are being set up to define service models for care groups will be facing large gaps in their research evidence when they develop frameworks involving the nursing and AHPs professions.
  - ii. A Strategic Review Group looking at research in primary care, including rehabilitation, found a major gap in the evidence.
  - iii. Some of the professions (nursing, physiotherapy and occupational therapy) have carried out surveys of the priority topics where research is badly needed in their professional fields. Sadly, even though these findings were made available to funders, there has been little discernible result in projects.
  - iv. A similar series of assessments of research needs by commissioning panels of the HTA has been analysed and 10% of the topics were related to nursing, midwifery and AHPs.
  - v. NICE, the National Institute for Clinical Excellence, has also been consulting on research topics that it should study and has a shortlist of topics covering the relevant professions.
  - vi. Studies done for us in two regions showed that in their recent round of bidding there was an excess of research projects submitted over the funds available, both for projects and for training awards.
  - vii. Research in acute care in three hospitals has identified clinical areas where the nurses had questions to which there were no ready answers – and which could have been resolved by research.

### **Cost-effectiveness of research**

- 6.7 At first sight it appears surprising that there is not a solid body of evidence showing that research in health care can produce financial returns. A recent report by the Wellcome Trust reviewed the same question and could only cite a major US study, which, 'based on a number of potentially heroic assumptions', quoted a return on investment 20 times greater than the spend. Most health economists however prefer a less quantitative approach and rely on categories of payback other than the financial ones. Over the years, the large literature that has developed has toyed with evaluating the benefits of improved health with concepts such as quality adjusted life years (QALYs) and costs per QALY gained, but this has not been applied to health research.
- 6.8 We commissioned one of the authors of the key work in this area (and of that part of the Wellcome study) to review the relevance of his findings for us. He has suggested

that research in nursing has a number of benefits: knowledge generation; occasional cost savings (such as, for example, in alleviating back pain, where there have been several studies of the financial returns); contribution to a more healthy workforce; better decision making because of the improved information base; and, finally, the development of research skills of individuals. There is also the possibility of a reduction in the cost of delivering the service through improved working methods. In the AHPs there have been several studies of the benefits of their interventions, particularly in occupational therapy and physiotherapy.

- 6.9 The conclusions from this part of our study are that if one interprets payback in the broadest sense, and uses a wide range of criteria for assessing benefit, then there is a good case for arguing for further investment in nursing and AHPs research. Taking financial criteria alone into account is not realistic.

### **Comparisons with other disciplines and countries**

- 6.10 There is no strictly logical reason why nursing, midwifery and AHPs research should have as much money spent on them per capita as, say, clinical research or even social work research. However, it is instructive to make comparisons. If these comparisons indicate that nursing and AHPs research is consistently underweight, then there is a case to examine. This, we believe, is what the comparisons show.
- 6.11 We looked at education and social work as two professionally based disciplines with some similar features to nursing and the AHPs. We also studied how nursing research is funded in the USA and Canada.
- 6.12 There are various bases for looking at comparative disciplines: the number of staff doing research as a proportion of the total staff; their research profile as revealed by the RAE; the proportion of postgraduates to undergraduates; and the proportion of doctorates in their academic staff. Not all these statistics are readily available, but some are:
- in nursing and AHPs, 3.9% of academic staff are classified by HESA as research-only staff, while the comparable figures for social studies and education are 13.3% and 7.6% respectively (HESA, 1998/99)
  - if we apply the numbers of research-active staff (category A and A\*) in 2001 to the total staff numbers in 1998–99, we find that 27% of nursing/AHPs staff were research active, compared with 47% in education. (Figures for social work cannot be deduced because of differing classifications.)
  - the RAE profiles of the three disciplines are very different. In 1996, 61% of nursing submissions were rated as 1 or 2, compared with only 36% and 22% in the other two disciplines.
- 6.13 We have noted the special funding of £23m that has gone, via the ESRC, into upgrading and strengthening the research capacity in education, despite the fact that by some measures it is a stronger discipline than nursing/AHPs. This funding amounted to approximately £50 for every teacher in the state funded sector.
- 6.14 In looking at the USA and Canada the main messages to be drawn are that they are investing heavily in upgrading their nursing research capacity, and we have identified

the funding mechanisms and forms of award as possible models. Although the scale of the investment looks significant in both cases, we cannot draw financial comparisons as we do not have the whole funding picture for both countries.

### **Quality and quantity of research**

- 6.15 HEFCE has an obligation to ensure that all parts of its academic community achieve the highest possible standards in their teaching and research. In the case of research this means ensuring that each discipline has adequate capacity and enough institutions undertaking research at international standards. Although HEFCE relies on institutions to agree their own missions and priorities, there may be occasions when strategic intervention is needed to correct imbalances or encourage developments. We believe that the relative weakness of nursing/AHPs research is one such case.
- 6.16 The supply side of the argument cannot be ignored. Would it be acceptable if the NHS, having defined its research requirements through mechanisms such as the HTAs, the NSFs and the work of NICE, found that the academic community was then incapable of responding adequately to these demands? HEFCE must therefore be sure that the research capacity is available in sufficient depth and quality to work with its NHS partners.
- 6.17 The Technical Annexe has provided substantial evidence on the research outputs and supply of funding for nursing/AHPs research, and has shown how, although it has been growing well in recent years, it still lags behind other professions and disciplines.

### **Conclusion**

- 6.18 These five arguments suggest, therefore, that there is a need for the development of special funding mechanisms to bolster nursing, midwifery and AHPs research (as in the USA and Canada). We have outlined some possible funding models in Chapter 5, and have stressed that different solutions may be needed for nursing, health visiting and midwifery on the one hand and the AHPs on the other, because of their separate stages of development. We have also suggested that the funding models should tackle the two strands of the problem: the shortage of researchers as well as the shortage of funding for research itself.
- 6.19 The overall objective of this investment is to upgrade research capacity to an internationally acceptable level of quality that can meet the needs of the service. What has been refreshing in our study is the universal acknowledgement of the problem and the unified welcome from the sector to the prospect of solution. The professional bodies, the HEIs and many of the funders are at one with the NHS in their response. Thus, any HEFCE/DH efforts have a sound base of support, but their recommendations will need to be seen as part of a co-ordinated solution.

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## Appendix I

### Some key statistics on the allied health professions

	Arts Therapies	Podiatrists	Dietitians	Occupational Therapists	Physio-Therapists	Prosthetists & Orthotists	Radio-graphers	Speech & Language Therapists
Numbers of state registered professionals as at 1.6.00. (CPSM)	1,516	8,447	4,999	21,006	30,602	734	19,696	7,283
Numbers studying for a postgraduate qualification	358	Unknown - 3 masters degrees	Note 5	Note 4	Unknown	-	-	Unknown
Numbers of members with a PhD	21	Circa 12	50–100	60–80	130	2	8	74
Numbers of members teaching the qualification	66	Circa 80	Circa 33	237	480	16	206	Circa 100
UK Institutions which deliver validated courses	17 Postgraduate course	13	11	27	29	-	24	15
Number of institutions which submitted in 1996 RAE	-	5?	4	14	Unknown	-	-	10
UK Institutions with RAE grades at 3A and above	-	Unknown	4	1	1	-	-	7
Value of research funded by the professional body	0	£5,000	£2,000	£25,000	£200,000	-	-	£20,000 every three years.
Numbers of professional/CPD awards	-	Surgical Fellows	-	£45,000 awarded	-	-	-	£22,000 Note 6

#### Notes:

- 1 Detailed information is not available for some professions, for example Paramedics and Clinical Scientists. The number of state registered Orthoptists is 1,287 and there are 21,006 Medical Laboratory Scientific Officers.
- 2 'Making the Change: a strategy for professions in health care science' (DH, February 2001) provides the R&D framework for clinical scientists.
- 3 There are differences in the membership numbers between the professional and statutory bodies. The 2000 figures from the CPSM are used for consistency.
- 4 Numbers are unknown, but 400 theses have been donated to the COT Library and 176 names were on the 1999 Register of Therapy Researchers.
- 5 The BDA Diploma in Advanced Dietetic Practice has been awarded to 281 people, but it is not yet validated by any university.
- 6 3% of the RCSLT subscription income is given to grants and awards for postgraduates.

## **Appendix II**

### **Exemplars of the benefits and impact of selected research studies in nursing, midwifery, health visiting and the allied health professions**

This Appendix provides a sample of the research findings produced by the nursing and allied health professions, which is intended to reflect the diversity of topics and research methods. There are examples of single and multi-professional studies conducted in health and social care. There is also a range of primary and secondary research. The topics relate to outcome measures, the clinical and cost-effectiveness of specific interventions, implementation of research findings in clinical guidelines and the evaluation of innovative services.

These studies illustrate some of the themes and tensions that have emerged during the project. For example, most of the studies emanate from dedicated research centres rather than from staff associated with entry-level training programmes, as the Non Medical Education Training Levy restricts funding to preparing a competent workforce and does not fund research. There are multi-centre externally funded clinical trials being conducted by research leaders as well as small studies undertaken by new researchers for a PhD. They illustrate quality outcomes, with studies published in books, high impact journals, international resources and newsletters produced by the professional bodies that ensure dissemination to the target audience, and application in clinical guidelines (Buxton & Hanney, 1996).

#### **Secondary research: into common interventions**

Nicol MM, Robertson L and Connaughton JA, 'Life skills programmes for chronic mental illness', Cochrane Review, in The Cochrane Library, 2 (2001), Oxford, Update Software.

This is one of the first systematic reviews with an occupational therapist as the first author. It is an example of secondary research conducted by a multidisciplinary team. The review revealed a dearth of studies into a common intervention (life skills programmes) with people with chronic mental illness, one of the NHS priority areas.

#### **Examples of reviews and publications in Arts Therapy: Music Therapy**

Wigram T (2000) 'Meeting health care needs of children and adults with learning disability, motor disorders and Pervasive Developmental Disorders including autism, Asperger Syndrome and Rett Syndrome by treatment with music therapy: efficacy within the criteria of evidence-based practice'. (Paper prepared in response to the Department of Public Health, Consultant Paediatricians, Purchasers and Providers of Healthcare Services in a Hertfordshire NHS trust.) A comprehensive review which draws upon a range of evidence (experimental research, case studies, systematic reviews, qualitative studies and expert opinion) and uses European and American sources.

Odell-Miller H (1995) 'Approaches to music therapy in psychiatry with specific emphasis upon the evaluation of work within a completed research project with elderly mentally ill people', in Wigram T, Saperston B and West R (eds) 'The Art and Science of Music Therapy: A Handbook', pp 83–110, London, Harwood Academic Publications.

## Screening and outcome measures

Law J, Boyle J, Harris F, Harkness A, Nye C (1998) 'Screening for speech and language delay: a systematic review of the literature', *Health Technology Assessment*, 2 (9).

The NHS R&D Health Technology Assessment Programme funded a systematic review of research on screening for speech and language delay that provides an unbiased summary of the current knowledge about screening for speech and language delay. It has a wide audience, being used by speech and language therapists, purchasers and providers of health care, and by funders of research.

Eakin P, Baird H (1995) 'The Community Dependency Index: a standardised assessment of needs and measures of outcome of community occupational therapy', *British Journal of Occupational Therapy*, 8 (1), pp 17–22.

An UK outcome measure which has been used in the evaluation of several community-based rehabilitation and follow-up studies of elderly people from acute care. For example, McCloughry H, Murphy A (1998) 'Disabled and older people in the community: issues of dependency – an occupational therapy project', Nottingham, Nottingham Social Services.

Ward G, Macaulay F, Jagger C, Harper W (1998) 'Standardised assessment: a comparison of the Community Dependency Index and the Barthel Index with an elderly hip fracture population', *British Journal of Occupational Therapy*, 61 (3), pp 121–126.

Dr Moira Taylor and Kevin Whelan, University of Nottingham, Kings College London and St George's Hospital, Tooting: 'Diarrhoea in Enterally Fed Patients'.

This study, undertaken by dietitians, is a collaboration between academic and clinical institutions. A screening tool to identify and classify diarrhoea in patients receiving enteral feeding has been designed and its reliability and validity confirmed. The tool is now being used to determine outcome in two ongoing clinical trials in enterally fed healthy volunteers and hospital patients randomised to receive treatment with pre- and postbiotics. *Proceedings of the Nutrition Society*, abstract in press.

## Large and small scale primary research into profession-specific interventions

Walker M F, Gladman JRF, Lincoln NB, Siemonsma, Whiteley T (1999) 'Occupational therapy for stroke patients not admitted to hospital: a randomised controlled trial', *The Lancet*, 354 (9175), pp 278–80.

Between 22–60% of people with a stroke are not admitted to hospital and do not receive co-ordinated rehabilitation. The study, a single blind RCT, aimed to assess the efficacy of occupational therapy interventions in encouraging independence in personal and instrumental activities of daily living. Occupational therapy significantly reduced disability and handicap. This study is important because it focuses upon primary care, a developing area of service. It is part of a programme of rehabilitation research from a centre of excellence, and the findings are included in the national guidelines for people with a stroke.

Clinical Effectiveness and Evaluation Unit (2000) 'National Clinical Guidelines for Stroke, Prepared by the Intercollegiate Working Party for Stroke', London, Royal College of Physicians.

Vernon W (2000) 'The functional analysis of shoe wear patterns: theory and application', Sheffield Hallam University, Unpublished PhD thesis.

Shoe wear patterns have long been considered to have value in clinical podiatry, with authors relating foot pathologies and suggesting that the value of wear patterns is to confirm a foot pathology diagnosis. Such use of shoe wear patterns however does not fit with the reality of clinical practice.

This study produced a model to show the factors of greatest importance in shoe wear pattern formation, which introduces the concepts of Primary Walking Intention and Holistic Foot Function. As shoe wear patterns are produced by the functioning foot, and podiatrists are primarily concerned with the functioning foot, this model has the potential to form the basis of podiatric understanding, suggesting potential areas for inter-professional working and clinical outcome evaluation.

### **Back Pain: a programme of primary research into the clinical and cost-effectiveness of rehabilitation**

The cost of back pain to the NHS has previously been estimated to be around £400m per annum (Klaber Moffett et al, 1995). More recently, published figures show even higher figures of over £1000m per annum (Maniadakis & Grey, 2000). The costs of back pain to the individual and to society are even more difficult to measure but are very much greater. The costs of NHS physiotherapy for back pain have been cited in this recent paper as being around £150m per annum. Literature is accumulating which suggests that patients need to be encouraged to return to normal physical activities and get back to work as soon as possible. Patients are not always given appropriate advice, and many are fearful of re-injury and need to have appropriate rehabilitation and advice. It is not currently clear what is the best way this can be delivered and there is a great need for further research in this area to make sure that the approaches used are both clinically effective and cost-effective. Examples of such research are:

Klaber Moffett JA, Richardson G, Sheldon TA, Maynard AK (1995) 'Back pain management and its cost to society', Centre for Health Economics.

Maniadakis N, Gray A (2000) 'The economic burden of back pain in the UK', *Pain*, vol 84, pp 95–103.

### **York Back Pain trial – research in primary care**

This is a randomised trial of primary care back patients. GPs referred 187 patients to the study. The patients were randomised either to an exercise programme called the Back to Fitness programme, or to continue with GP management as usual. This trial showed that the Back to Fitness programme can help patients to cope better with pain and improve function disability levels at one year follow up. The results also showed that the costs of patients attending the programme were much reduced compared with the control group. It was based on previous research which showed significant functional improvements in the exercise group, even at two year follow up (Frost et al, 1995, 1998). (Funded by the Arthritis and Rheumatism Council, National Back Pain Association and Northern and Yorkshire Region: £200,000.)

Klaber Moffett JA, Torgerson DJ, Bell-Syer SEM, Jackson D, Llewelyn Phillips H, Farrin A, Barber J (1999) 'A randomised trial of exercise for primary care back pain patients: Clinical outcomes, costs and preferences', *British Medical Journal*, vol 319, pp 279–283.

Frost H, Klaber Moffett JA, Moser JA, Fairbank JCT (1995) 'Evaluation of a fitness programme for patients with chronic low back pain', *British Medical Journal*, vol 310, pp 151–154.

Frost H, Lamb SE, Klaber Moffett JA, Fairbank JCT, Moser JS (1998) 'A fitness programme for patients with chronic low back pain: 2-year follow-up of a randomised controlled trial', *Pain*, vol 75, pp 273–279.

### **Sprinter trial: evaluating a profession-specific intervention**

This is a randomised trial of neck pain patients currently set up in the East Riding of Yorkshire where it has recruited 230 patients to date. The aim is to compare a brief physiotherapy intervention with physiotherapy as usual. The brief intervention is a one-off approach based on cognitive behavioural principles and problem solving. It encourages self-management and a patient centred approach. Participating physiotherapists are trained in this approach and use a manual that was written for the purpose.

The target is to include 300 patients and follow them up for one year. Analysis will include both clinical and cost effectiveness. If both interventions are as clinically effective and acceptable to patients, it is also likely that the brief intervention will cost less. Utilisation of health care costs will be closely monitored over one year to find out if it is indeed cost effective, as well as clinically effective.

Klaber Moffett JA et al, 'The effectiveness of a brief intervention for neck pain in the community setting', (funded by the Northern Yorkshire NHS Executive: £175,000).

### **UK Back pain, Exercise, and Manipulation (UK Beam) Trail – a multi-disciplinary study**

A randomised control trial of physical treatments for back pain in primary care was commissioned by the Medical Research Council. There are 12 centres with 1,350 patients who will be followed up for one year. The trial compares spinal manipulation (which is carried out by osteopaths, chiropractor and manipulating physiotherapists) with active GP management. Results are expected in 2002.

### **Rigorous research to improve practice**

All these trials are examples of rigorous research that can inform practice and improve the efficiency of the service. At the same time, the management of spinal problems would be improved, making the approach more patient centred. It could perhaps be possible to reduce costs of physiotherapy for spinal problems by 20% (which would equate to £30m per annum) and use the savings for the rehabilitation of other conditions such as stroke. For this to be achieved it is of course necessary that research findings are widely disseminated and implemented.

### **Evaluating uni- and multi-disciplinary innovation in service and education**

Chadda D (2001) 'Help for fragile bones', *Frontline*, 7 (1), pp 18–19.

This article describes a physiotherapy-led osteoporosis service in Glasgow. It is based upon a national, evidence-based guideline that has been endorsed by the National Osteoporosis Society. The integrated physiotherapy and exercise service was launched in July 2000. The service is being evaluated and the Chartered Society of Physiotherapy is collaborating with the project to develop a national audit tool.

Chartered Society of Physiotherapy (1999) 'Physiotherapy Guidelines for the management of Osteoporosis', CSP, London.

Lovegrove M, Taket A, Hay S, Hawkes C, Bentley B (1999) 'Evaluation of the implementation and management of skill mix in diagnostic imaging centres', CeRPAM, London.

A Department of Health funded study, which evaluated the implementation, and management of skill mix in eight diagnostic imaging centres. The methods included interviews, audits and data collection.

Janice Barratt, South Derbyshire Mental Health Trust: 'A Multidisciplinary Approach to Nutritional Care in Dementia'.

An ongoing research programme is being conducted by a dietitian working with a team of nurses, clinical psychologists and catering services, examining the benefits of appropriate feeding in the promotion of independence in elderly patients with dementia. The current hospital-based, observational study is part of a wider examination of the changes in nutritional care that have taken place in this patient group over the last six years, and a report of this work has just won the Clinical Practice Award for Nutritional Care, 2001. British Journal of Nursing, paper in press.

Sanderson D, Wright D (1999) 'Final evaluation of CARATS initiatives in Rotherham', York, York Health Economics Consortium with Rotherham Health and Social Services.

A rigorous evaluation of a Community Assessment, Rehabilitation and Treatment Scheme (CARATS) with four different elements run mainly by nursing staff, occupational therapists, physiotherapists and social workers. The results demonstrated the effectiveness for service users, reducing dependency while acknowledging that the establishment of cost benefit is complex.

Price R, High J, Miller L (1997) 'The developing role of the radiographer: issues affecting the future curriculum', CPSM/CSR, London.

A study conducted by the University of Hertfordshire for the statutory and professional bodies. Data was collected by interview and questionnaire surveys, action research and workshops. The purpose was to propose a framework for future education and training for radiographers that would meet new role requirements at pre and post registration levels.

### **Including a consumer perspective**

Melton J (1998) 'How do clients with learning disabilities evaluate their experience of cooking with the occupational therapist?', British Journal of Occupational Therapy, 61 (3), pp 106–110.

A small-scale study conducted as part of masters programme. A qualitative methodology was used to understand the views and meaning of cooking for people with mild learning disabilities.