



igniting our potential

‘Developing the best research professionals’

Qualified graduate nurses: recommendations for preparing and supporting clinical academic nurses of the future

**Draft report of the UKCRC Sub Committee
for Nurses in Clinical Research (Workforce)**

December 2006

**in collaboration with
Modernising Nursing Careers**



Contents

	Page No.
Report	
Executive summary -----	3-5
Introduction -----	6
Background and context -----	7-11
Major barriers for nurses in clinical research -----	12-14
Recommendations -----	15-19

Appendices

1. Terms of reference and list of members -----	20-22
2. Key documents -----	23
3. References -----	24
4. Definition of terms -----	25
5. Abbreviations -----	26

Executive Summary

This report contributes towards one of the aims of the UK Clinical Research Collaboration, to develop a highly skilled workforce of trained clinical researchers and educators within the context of a rapidly changing UK healthcare environment. In particular, this report examines the current role of nurses as researchers and educators and investigates the barriers that are preventing them from reaching their full potential in these areas. It envisages a more flexible career structure that will develop the clinical academic role – combining clinical and academic work - as the norm for those nurses who successfully pursue a research career, rather than obliging them to pursue one role at the expense of the other. It recognises the broad range of research skills needed by nurses working in many different research environments and includes a spectrum of training opportunities. It supports and promotes the development of a clinical research environment that provides opportunities for nurses to pursue research careers at all levels and that will ultimately produce research leaders and academics of the future.

Building on this analysis, and taking account of the framework for modernising nursing careers (MNC) being led by the Chief Nursing Officers, the report makes recommendations for enabling nursing to respond to the exciting opportunities that are being created by emerging research and development policies in the health sector. It envisages a future in which a larger number of graduate nurses – though still a minority of the profession – would be active in high quality clinical and other health related research at various levels.

The recommendations take the ongoing changes in the UK research environment into account by increasing both research capacity and capability in the nursing profession. Increasing capacity will expand the total number of nurses involved in research and help to provide the engine room for the new emerging infrastructure. At the same time increasing capability should ensure that a greater proportion of this increased number of clinical academic nurses is capable of operating at the highest levels of research.

Our recommendations address three main areas:

- **Education and training**
- **Facilitating careers**
- **Better information on nursing researchers**

Education and training

Recommendation 1

We recommend the establishment of a coordinated range of research training opportunities endorsed by all four countries of the UK. These training opportunities should be organised at four sequential levels (Award Schemes 1 – 4), as set out below.

Recommendation 2

We welcome the opportunities for nurses presented by the UK Clinical Research Networks and clinical research facilities. We recommend that the rapidly developing training programmes emerging within this infrastructure should be seen as one of the preparatory steps towards the new training path, for those who have experience of working as research nurses and who wish to develop their skills further. It will be important that this rapidly increasing cadre of research professionals has access to clear advice and mentoring to ensure that those that wish to move on to an MRes and beyond, can do so.

Recommendation 3

MRes or MClInRes (Award Scheme 1)

We recommend that up to 100 career clinical academic training positions be funded annually for graduate nurses. These positions will be of two-year duration (or part time equivalence), and 50% clinical and 50% academic in composition. Such posts will have a clear academic postgraduate component resting within a well defined vocational training programme. A set of Core Modules should be developed nationally which would form part of the curriculum for all Award Scheme 1 holders.

Recommendation 4

PhD/Professional Doctorate (Award Scheme 2)

We recommend that up to 50 early career clinical academic appointments are funded annually for a period of five years. These positions will be of three-year duration (or part time equivalence) and allow students to undertake a PhD or Professional Doctorate programme of study.

Recommendation 5

Post-doctoral Career Fellowships (Award Scheme 3)

We recommend that up to 20 Post-doctoral Career Fellowships are funded annually. These positions will be of three-year duration (or part time equivalence) to allow appointees to undertake advanced research, clinical and education roles and develop their programme leadership potential.

Recommendation 6

Senior Clinical Academic Fellowships (Award Scheme 4)

We recommend that up to 10 Senior Clinical Academic Fellowships for nurses are funded annually. These positions will be of three to five year duration (or part time equivalence) and allow appointees to develop more advanced research, clinical work and education skills and develop their role as leaders.

Facilitating careers

Recommendation 7

We recommend that career flexibility, specifically the ease of combining research and clinical practice throughout a career, must be enabled through the introduction of sessionally based contracts of employment that allow nurses to work as clinicians while also undertaking other roles as researchers and/or educators.

Recommendation 8

We recommend that in discussion with key partners, a well articulated system of mentoring is developed for nurse researchers and educators, including emerging researchers.

Better information

Recommendation 9

We recommend that NHS Careers Advisors must be made aware of and promote the full range of career opportunities that are possible for qualified nurses. Careers advice must include opportunities for developing excellence in clinical research, education and leadership.

Recommendation 10

We recommend that a single data source be developed to provide information on labour market intelligence that relates to nurses engaged in training to be researchers and educators.

Implementation

Recommendation 11

We recommend that the implementation and delivery of these recommendations and their associated actions should commence without delay, with a view to achieving the recommendations outlined in this report within 5 years.

Introduction

The UK Clinical Research Collaboration (UKCRC) is a partnership of academic, charitable, commercial and government organisations which aims to establish the UK as a world leader in clinical research by harnessing the full potential of the NHS. To this end, trained researchers from all relevant disciplines and professional backgrounds are needed, and therefore 'Building up the Research Workforce' is one of the 5 key workstreams of the UKCRC. For example, integrated training schemes for doctors and dentists are already being established following the recommendations of the Walport Report [1].

The UKCRC commissioned this report to examine the current role of nurses as researchers and educators, to investigate the barriers that stand in the way of nurses undertaking research careers, and to make recommendations for a training and support structure for nurses to work as researchers and educators at different stages in their career [for Terms of Reference, see Appendix 1].

The report of the UKCRC Sub Committee for Nurses in Clinical Research has had valuable input from international and national experts and other key stakeholders [Appendix 1]. It builds on previous studies and reports [Appendix 2] and takes account of the changing working environment for nurses, including recent recommendations for modernisation of the nursing career structure [2], the research strategies of the four devolved Health Departments [3-6], and the continuing development of clinical research infrastructure such as the UK Clinical Research Networks [7].

By recommending how research and related training can be integrated into nursing careers, this report is designed to be of value to health sector employers, higher education institutions, the nursing profession, clinical research facilities and networks. It has the potential to affect all nurses and midwives working in the UK, whether they are newly qualified or experienced clinical nurses, researchers or educators. It also seeks to establish a clearly identified and properly resourced career track for a proportion of nurses who wish to pursue a clinical academic career and who are likely to lead future programmes of clinical and health related research.

The report proposes that an Implementation Group should now be established, under the remit of the UKCRC, to ensure implementation and delivery of the recommendations outlined in the report, within 5 years.

Before the report and its recommendations are finalised it will go out to public consultation. Copies of the report and the consultation response form can be downloaded from the UKCRC web site (www.ukcrc.org). We welcome the opportunity to engage with a wider group of stakeholders' views on the report and its recommendations. A summary report of consultation responses will be considered by the UKCRC Sub Committee for Nurses in Clinical Research before the report is finalised and published.

Background and Context

Nearly 700,000 nurses, midwives and specialist community public health nurses are registered to work in the UK [8]. Nurses play a pivotal role within the NHS, providing front line services and support to patients, and they can make a unique contribution to health research. In particular, they can bring distinctive patient-focused insights to the kind of research which offers greatest benefits to patient care, and to the practical methodological issues which need to be addressed for research to produce relevant outcomes.

Historically, when nurse education was carried out within the NHS, there was little scope for nurses to be trained in or to carry out research. Some nurses became full time nurse educators and no longer carried out clinical work. Notwithstanding the development of a number of educator/clinical joint appointments in Schools of Nursing, the overall pattern remains. There is a sharp divide between researchers and educators on the one hand, and clinical nurses on the other, as well as a continuing lack of nurses skilled in research. Whilst there are many nurses employed as research nurses undertaking a key role in the delivery of research, many of these posts are temporary and opportunities for career development are limited or unclear.

This history gives rise to two linked problems. First, there is a lack of nurses who are sufficiently well qualified and experienced to lead research projects and few training opportunities exist outside a limited number of organisations. Second, the employment conventions are not conducive to nurturing clinical academic nurses since there is no clear pathway for nurses to pursue a career which combines clinical and academic work, or to include research as part of a broader based nursing career portfolio. This is exacerbated by the lack of a single salary scale or pension scheme, as would be the case for medicine.

Nurses are currently involved in research in a number of settings, including:

- **University Departments of Nursing:** these have a strong academic basis, with established research interests and methodological expertise, but often with less opportunity for clinical practice and patient-focused research
- **Clinical Research Areas** (Wards, Clinics & Departments): these offer access to well funded research projects, with some training but little academic supervision and poor career prospects
- **Research Networks:** these networks offer considerable opportunities for nurses to work within multidisciplinary research teams within specified clinical networks, eg: dementias and neurodegenerative diseases, diabetes, medicines for children, primary care
- **Clinical Research Facilities for Experimental Medicine:** these are units with an emphasis on high quality bio-medical science and established methodological expertise. They offer opportunities for nurses to work within multidisciplinary research teams but with, as yet, little nurse-led research
- **Primary Care:** nurses may work on ad-hoc research projects in primary care, supported by research grants, practice funds or pharmaceutical industry sponsorship. But such projects offer little opportunity for training or career progression
- **Contract Research Facilities:** nurses are involved in the day-to-day running of many clinical trials of new medicines or new indications for older products. However, such research is protocol driven, offers limited education and training in research methodology, and is likely to be carried out under short term contract, making integration into a clinical career difficult.

Existing Funding Opportunities

There are a range of funding opportunities and initiatives aimed at nurses and midwives. These vary from generic funding and training schemes open to nurses and midwives to specific capacity building initiatives. A number of the latter were implemented relatively recently or are still under development.

1. Higher Education Funding

The Higher Education Funding Council for England (HEFCE) supports academic nursing departments (rated 3a or 3b in the 2001 Research Assessment Exercise) through its Research Capability Fund. This fund will continue until 2008/9.

In 2003, a major initiative building on a platform of a strategic research development grant through the Scottish Funding Council was launched. This provided £8 million to support the development of research capability and capacity in the Nursing, Midwifery and Allied Health Professions (NMAHPs), and was contingent on additional funds being made available from higher education institutions.

2. England

There are a number of established programmes funded through NHS research and development where nurses, midwives and allied health professionals are able to access funding to support emerging and advancing research careers [9].

Nurses are integral to the English R&D strategy, *Best Research for Best Health* [3] which sets out how the National Institute of Health Research (NIHR) will be established to develop the NHS as a world class environment for collaborative research in the public interest. The NIHR offers significant opportunities to harness and develop nursing expertise in research. Elements of the new strategy include:

- NIHR Faculty - Senior Investigators, Investigators and Trainees: nurses are integral to the NHS research community and are expected to be represented in the NIHR Faculty at all levels.
- The Research Capacity Development Programme – supports nurses through its Nursing and Allied Health Professions Scheme and Personal Award Scheme to undertake doctoral and post doctoral and senior investigator research. Since 2002 a substantial cohort of nurses undertaking research has been established with spending increasing to £937k/annum in 2006.
- Research Projects and Programmes – these are open to researchers of any disciplinary or professional background to apply for funding. For example, the Health Technology Assessment Programme and the Service Delivery and Organisation Programme include substantial research on nursing, and nurse-led projects.

3. Scotland

In 2002, the Scottish Executive Health Department (SEHD) developed a new research strategy, *Choices and Challenges* [4] providing strategic direction and creating research aware, research literate and research active nursing and midwifery professionals.

The Chief Scientist Office funds a number of nurses through its generic Research Training Fellowship scheme, which is similar to the Researcher Development Awards given by the Department of Health. These nurses have been supported and mentored effectively, allowing them to develop new roles within clinical practice and research.

Recently, a research training scheme was developed in partnership with NHS Education for Scotland, the Scottish Executive Health Department and The Health Foundation. This is funding predoctoral and postdoctoral opportunities for Nursing, Midwifery and Allied Health Professions (NMAHPs) and is delivered through a consortium including the NMAHPs Research Unit and a range of higher education institutions in Scotland.

Clinical academic career pathways were identified as a key issue in *Choices and Challenges*. At present the Scottish Executive is undertaking a major scoping exercise for nursing and midwifery to examine current capacity, to comment on the early impact of these initiatives and to help direct future investment and models for academic careers in Scotland.

4. Wales

All nurse pre-registration education in Wales has been integrated into the higher education sector at graduate level and research knowledge is a component of the programme. Nurses in clinical research are supported by a Masters programme, MSc Clinical Research. The Welsh Assembly Government is developing a strategic agenda to enable Wales to become a country which develops its health and social care policies on the basis of evidence.

The Wales Office for Research and Development in Health and Social Care (WORD) is one of the agencies charged with delivering this agenda on behalf of the Welsh Assembly Government. WORD is currently supporting a new studentship and fellowship programme for nursing and allied health professions to gain masters and doctoral qualifications (in partnership with The Health Foundation)

5. Northern Ireland

The Research and Development (R&D) Office provides a strong foundation for development of nursing and midwifery research through significant investment in education and training schemes ranging from support for MRes/MClinRes courses to postdoctoral awards. The R&D Office also works in partnership with the Research Capacity Development Programme to offer nurses and midwives further research opportunities.

In order to inform the strategy, policy and practice for developing nursing and midwifery research, the Department of Health, Social Services and Public Safety for Northern Ireland commissioned a position paper, *Using and Doing Research* [13]. Maintaining and monitoring progress on the research agenda has recently been strengthened through the Northern Ireland Practice and Education Council for Nursing and Midwifery in partnership with the R&D Office through *Using and Doing Research: Guiding the Future* [14].

The R&D Office is working with other key stakeholders to implement the findings of *Using and Doing: Guiding the Future* in conjunction with its established programmes to increase nursing and midwifery's contribution to health and social care research.

The Changing Research Environment in the UK

The funding environment for health research is evolving rapidly at present with two specific features which are important for the proposals in this report. First, funding for research is becoming ever more selective and focused on the highest quality research. From a university perspective, successive Research Assessment Exercises (RAE) have increasingly focused funding on the very best research by national and international standards. In respect of NHS R&D, one of the aims of the *Best Research for Best Health* reforms is to protect and enhance the highest quality research. Second, there is increasing emphasis on research which ultimately benefits patients, both in the changes in NHS R&D, and in the RAE 2008 increasing emphasis on applied research. The Cooksey Report [12], reviewing ways in which NHS R&D can be brought together with Medical Research Council funding, was commissioned specifically against this background of the need to protect basic research whilst shifting a greater emphasis onto applications.

These twin features – greater selectivity and greater emphasis on applied research – have influenced our thinking, in that we need to ensure that clinical academic nurses are well prepared to play an appropriate role within this emerging health research environment. The greater emphasis on the clinical applications of research requires more multi-professional research teams to develop the bench-to-bedside approach, of which nursing will be an essential component in many cases. This makes it imperative to increase the number of nurses who are skilled and experienced in conducting high quality research, both to play a key role in and to lead these multi-professional research teams. The emphasis on selectivity means that more nurses need to be brought to a standard of research expertise where they can compete with the best for research funding, either as Principal Investigators or as key members of research teams.

The Health Departments in England, Northern Ireland, Scotland and Wales have all published Research and Development strategies that are relevant to nurses and are at different stages of implementation. These strategies all impact on the environment where clinical and health related research takes place and where many research nurses will be employed and educated. Implementation across the UK varies with each administration but all the strategies are aimed at creating a world-class infrastructure to underpin excellence in research. Common themes across the strategies include the desire to build up a workforce of highly skilled research staff and also to invest in a range of research facilities that can act as a platform to deliver clinical trials and other well-designed studies.

Other key features of the emerging environment that need to be taken into account in a future academic careers structure include:

- **Research Networks** – The UKCRN is made up of a series of interconnected networks linked together by a number of coordinating centres. The exact structure and organisation of the networks varies across the UK. As well as supporting major research, networks provide substantial research training opportunities intended to fill gaps in existing provision. This includes training on running clinical trials on topics such as preparation for audit, informed consent, communications and good clinical practice. It also includes training tailored to support research careers on issues such as how to get research grants and sponsorship in learning, linked to developing careers in nursing. As further research networks come on stream, they will have the potential to make a major contribution to the development of research careers in nursing.

- **Clinical Research Facilities for Experimental Medicine** – As part of a coordinated initiative to boost experimental medicine in the UK, major funding has been targeted to build up the infrastructure that supports it. With this increase in the UK's capability and capacity to conduct experimental medicine research comes a need for skilled and trained research nurses, working in a number of different roles, including in their operational management.
- **Research Units and Centres** – such as clinical trials units, academic units and biomedical research centres. These are often supported by partnerships between the NHS and universities and can support a wide range of research that involves nurses and develops research capacity in nursing.

The recommendations in this report take these changes into account by increasing both capacity and capability in research carried out by nurses. Increasing capacity will expand the total number of nurses involved in research and help to provide the engine room for the new infrastructure. At the same time increasing capability should ensure that a greater proportion of this increased number of clinical academic nurses is capable of operating at the highest levels of research.

Modernising Nursing Careers

The modernising nursing careers (MNC) initiative was established by the chief nursing officers of the 4 home nations in 2005 as part of a wider programme of workforce reform that is addressing the future career structures of a range of health professions.

The development of a clinical academic training pathway for nurses is therefore particularly timely as it corresponds with the broader aims of MNC [2]. It is also consistent with the four key priority areas that MNC has identified for action:

- Developing a competent and flexible nursing workforce
- Updating career pathways and career choices
- Preparing nurses to lead in a changed health care system
- Modernise the image of nursing and nursing careers

The potential benefits of a future nursing workforce that is both better trained and more active in research are numerous. For example, nurses would have more opportunities to shape the evidence base that informs their clinical practice. They would be able to influence the broader agenda of health research, so that it contributes clearly to high quality health services and patient care. The existence of larger number of nurses who are trained and experienced in research could make a critical contribution to nurse education in the future, as they undertake clinical work, research and education in different combinations over the course of their careers.

Major barriers for nurses in clinical research

This section briefly summarises the major issues that have emerged from previous reports [Appendix 2] and that were confirmed and extended through consultation and discussions held with the Expert Reference Group and other key stakeholders [Appendix 1].

Education and training

In the 1990s, education of nurses in the UK moved from the NHS into universities, where both Diploma and Degree programmes are available. But variations between these courses in curricula and content mean that students can have very different educational experiences, with relatively little knowledge of research by the time they register. High achieving students are not purposefully nurtured to become the researchers and teachers of tomorrow.

Many nurses involved in research are employed as research nurses working on specific clinical trials funded by commercial and non-commercial organisations. These nurses play a key role in the delivery of research and it would be difficult to imagine a vibrant clinical and health related research portfolio without them. However many of these posts are temporary and opportunities for career development appear at best unclear at worst, limited.

Some academic departments of nursing have built up their research activity profiles but they are small in number and few of them are yet designated as world class research centres.

A growing number of nurses are educated to doctoral level, but most have to self fund part-time PhD courses without career guidance or support, while at the same time maintaining full-time posts elsewhere. Personal awards and scholarships have enabled some nurses to receive financial support but these are few in number.

A few nurses are fortunate to receive post-doctoral awards/fellowships but again these are limited in number and do not protect the long term sustainability of research and teaching careers. Post-doctoral support, including mentoring and career planning, and appropriate opportunities for placements within research rich environments, has been neglected. Similar problems are seen for those with doctoral qualifications within academic teaching departments.

Around 4,500 new graduate nurses are registering in the UK each year [13].

During 2005, 900 nurses were registered on PhD programmes within nursing/midwifery. Over 60% were aged 40 or over. Only 8% were aged 29 or under [14].

Fewer than 1 in 10 nurses and midwives working in research in UK University Hospitals have a research degree [15].

Employment structures

The present arrangements for career progression in nursing are serendipitous and unclear. Many nurses want to engage in research and/or teaching alongside their clinical work. But current employment contracts for nurses do not encourage academic and clinical elements, and there are too few joint appointments between higher education institutions and NHS Trusts. A lack of protected time for research, compounded by high clinical workloads, and 'anti-academic' sentiments in some parts of the nursing profession, obstruct the development of planned, integrated and flexible career pathways.

There are consistent accounts of nurses who wish to undertake research and teaching having to leave the clinical setting to pursue career development as researchers or educators. Nurses working as researchers report large variations in job descriptions, titles and roles and unclear career prospects.

Some nurses in academic posts have expressed a wish to rekindle their clinical skills. But the current pay systems, infrastructure and differing cultures of the NHS and academia create barriers. Moving between university and health service employment is a significant challenge.

In other clinical settings, nurses undertaking research report problems with lone working, poor appraisal systems and very limited education and training opportunities. They are unlikely to be supported by, or connected to, academic departments of nursing if the work is under the supervision of other health professionals.

Lack of capacity in the workforce and need for financial support

Universities that try to develop a workforce of researcher-educator nurses are constrained by a lack of capacity. The academic nurse workforce is aging and there are reported difficulties in filling senior university appointments. This situation works against nurses who wish to develop or advance their research and teaching careers because of the lack of capacity to support and mentor the next generation in sufficiently large numbers. It can also sometimes propel nurses doing research into senior roles before they have appropriately developed their research skills.

Workforce Commissioners have expressed concerns about the declining number of nurse educators, and the National Workforce Review Team suggested that 'workforce planning for educators needs attention' in its recommendations for 2005/6 [16].

Considerable improvements in nursing research activity were seen for 2001 compared to 1996, measured by the Research Assessment Exercise, conducted jointly by the Higher Education Funding Council for England, the Scottish Funding Council, the Higher Education Funding Council for Wales and the Department for Employment and Learning, Northern Ireland [13]. But nursing research activity still compared unfavourably in terms of outputs against other relatable subject areas [17]. Research income within academic departments of nursing remains heavily reliant on UK government bodies, hospitals and health authorities. Some charities are also willing to provide funding because of the patient focus of much research carried out by nurses.

Despite valuable and targeted capability funding to universities from the Higher Education Funding Councils following the 2001 Research Assessment Exercise, nurses in research are still not making progress in sufficient numbers. On grant applications to major funding

agencies, nurses seldom feature as principal investigators, and they are often unsuccessful in winning key grants.

However there is some evidence that targeted funding can make a difference. HEFCE undertook a survey of academic nursing departments in receipt of research capability funding [13]. The findings revealed that a number of academic departments were creating new clinical academic posts for early career researchers which provided grounding in research techniques whilst retaining clinical contact. The funding has also strengthened research strategies and allowed key appointments of senior researchers.

Professors make up only 2.6% of the academic nursing workforce, compared to 12% across the higher education sector as a whole [18].

1 in 3 academic institutions which offer pre/post registration nursing courses have no professorial posts in nursing [18].

Two thirds of higher education institutions find it very difficult to recruit professors and readers [19].

Lack of authoritative data on nurse researchers

Building a workforce of nurse researchers and educators with the right mix of academic, clinical and teaching skills requires accurate information on current numbers of nurses involved in research, the nature of their research activity and employment contract, their qualifications and their level of seniority.

As nurses engaged in clinical and health related research are employed in many areas across academic and clinical settings, gathering and pooling of data on research activities is difficult and time consuming. At present, such information is collected piecemeal with no national reporting system, and the picture of nursing research that emerges is fragmented and inadequate.

Labour market intelligence on the numbers and disposition of educators is also very poor and gathering information can be frustrating.

This lack of data about nurse researchers and educators represents an over-riding barrier to effective integration of research into nursing career pathways, with all the implications for education and training, employment structure and workforce capacity that such an obstruction brings.

An estimated 600 plus nurses work as clinical research nurses in NHS Trusts. This includes those working in research units such as clinical research facilities, and those with honorary contracts linked to academic medical teams. Of these, only 70% have a first degree and 15% hold a postgraduate degree. Many report large variations in job descriptions, titles and roles and unclear career prospects [13].

Recommendations

Our recommendations are based on a vision for a flexible career pathway for nurses in which continuing clinical work forms the central core, with opportunities for research at all stages of professional life for those who successfully pursue the research route. We anticipate that our recommendations would expand the total numbers of graduate nurses involved in high quality clinical and health related research at an appropriate level, though they would still be a small minority of the profession. Underpinning this approach must be appropriate training opportunities that provide the knowledge, skills and competences required for research, and facilitate the building of a clinical academic career for those who wish to pursue a more specialised role in research in the NHS or in universities.

We would expect the balance between the roles of clinical nurse, researcher and educator to vary at different points in an individual's career. But, by encouraging the development of a 'pool' of clinical academic nurses, undertaking research at the highest level, we hope to nurture nurses as future leaders in research. These, in turn, will further extend and develop the involvement of nurses in clinical research, particularly in those areas where they can contribute most to patient care and wellbeing. The broad outline of this career path is illustrated in Figure 1.

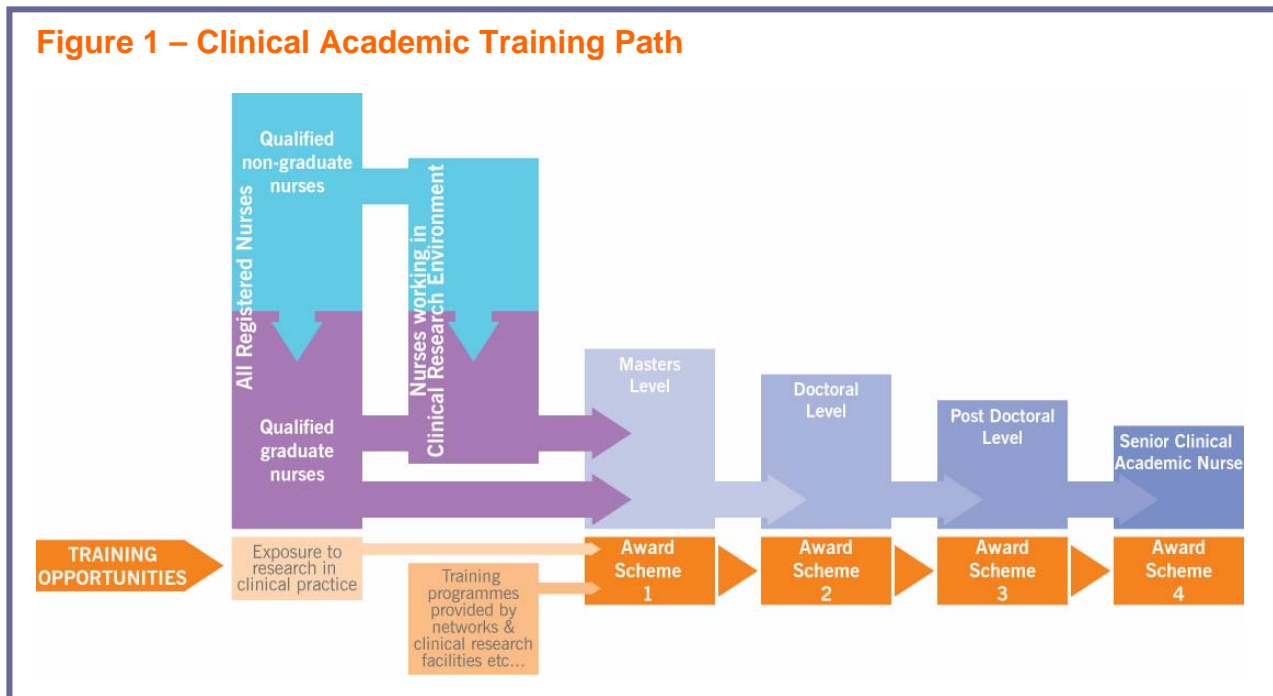
Our report does give indicative numbers of nurses who would be funded at each stage of the programme, if our recommendations are accepted. We recognise that there will be debate about the appropriate scale of these new initiatives, both on grounds of desirability and affordability. In developing the indicative numbers in the report, we have sought to balance a pragmatic assessment of what could be affordable with the need to signal that there needs to be a substantial increase in capacity in order to address the issues identified in our report.

The principal focus of our report is on the development of the research dimension of a clinical academic career, but we believe that our recommendations could also underpin the further development of the nurse-educator workforce and senior clinical roles such as nurse consultants. The broader benefits of our recommendations, beyond their primary purpose of capacity and capability building for nurses, will be delivered through the contributions of those clinical academic nurses who successfully complete the earlier stages of the new training, but do not necessarily continue to the later stages, as we explain below.

Our recommendations address three main areas:

- Education and training
- Facilitating careers
- Better information on nursing research

Figure 1 – Clinical Academic Training Path



Education and Training

All nurses must have the opportunity to become knowledgeable about research in their Diploma or Degree registration programmes and thereafter as competent evidence based practitioners. Unless this is widely achieved, an evidence base in clinical work will not be delivered.

There are considerable numbers of nurses who would require relatively limited investment to make them clinical academics. This group might include nurse consultants and research nurses working in clinical trials and clinical research units. There will be improved research opportunities for nurses who conduct and manage research led by others because of the developing clinical research networks and facilities. We regard these nurses as part of the potential pool for future research leadership roles.

Recommendation 1

We recommend the establishment of a coordinated range of research training opportunities endorsed by all four countries of the UK. These training opportunities should be organised at four sequential levels (Award Schemes 1 – 4), as set out below.

We have provided indicative numbers of places at these four levels, but we recognise that these may not be achieved initially in the implementation. Our recommendations are crafted so that fewer people are supported at each stage than at the previous one. This is deliberate, and reflects our desire to support the development of the most senior leadership in nursing research, as well as to expand the absolute numbers.

However, giving research training to larger numbers at the early stages does not mean that this training has been wasted for those who do not proceed to the later stages. The health service and the HEI sector will benefit greatly from these programmes because staff who have been successful at one level of training, but who do not proceed to the next, will be available to undertake highly skilled roles. For example, those who complete the proposed Masters programmes, but do not proceed beyond that, will be well equipped to work on clinical research projects in the NHS and with academic partners. Similarly, those who

successfully complete doctoral level training, but do not proceed further in this training programme, will be sufficiently skilled to support clinical research projects in a highly professional way; they will also be prime candidates for academic appointments in nurse education where they will be able to educate the next generation of nurses in a research-informed way.

Recommendation 2

We welcome the opportunities for nurses presented by the UK Clinical Research Networks and clinical research facilities. We recommend that the rapidly developing training programmes emerging within this infrastructure should be seen as one of the preparatory steps towards the new training path, for those who have experience of working as research nurses and who wish to develop their skills further. It will be important that this rapidly increasing cadre of research professionals has access to clear advice and mentoring to ensure that those that wish to move on to an MRes and beyond, can do so.

Our model in Figure 1 shows that we recognise that some nurses who join the new programme will have had some prior preparation in research through working as research nurses. We support the training available to these research nurses as a positive, preparatory step towards our four-stage training programme, which some will want to enter. However other nurses who enter the programme will do so without any experience of working as a research nurse.

Recommendation 3

MRes or MRes (Award Scheme 1)

We recommend that up to 100 career clinical academic training positions be funded annually for graduate nurses. These positions will be of two-year duration (or part time equivalence), and 50% clinical and 50% academic in composition. Such posts will have a clear academic postgraduate component resting within a well defined vocational training programme. A set of Core Modules should be developed nationally which would form part of the curriculum for all Award Scheme 1 holders.

These Masters degrees will be delivered by appropriately qualified higher education institutes (HEI) in partnership with the NHS, within the institutional setting or through distance learning. By offering a set of Core Modules consistency will be achieved in these programmes, wherever they are delivered.

These Masters level programmes should be designed principally to be taken as the first stage of research/academic training for nurses wishing to pursue a career either in research or as an academic nurse with a research/educator profile. However, they should also be available for experienced nurses who could undertake them as an integrated part of clinical practice.

Recommendation 4

PhD/Professional Doctorate (Award Scheme 2)

We recommend that up to 50 early career clinical academic appointments are funded annually for a period of five years. These positions will be of three-year duration (or part time equivalence) and allow students to undertake a PhD or Professional Doctorate programme of study.

Applicants will be expected to retain some clinical practice, through an honorary clinical contract. As with the Master's level awards, training will be provided by an appropriate HEI, working in partnership with the NHS.

It would be expected that training at doctoral, and at subsequent stages, would take place in environments where a substantial amount of high quality research is taking place, and which can provide appropriate supervision and research experience. These criteria could be met by different types of research environment, including multidisciplinary research teams as well as those focussed specifically on nursing. Indeed, given the small number of academic nurses currently qualified and experienced to direct research at the highest level, our proposals would not work if they relied solely on this existing group to train and mentor increased numbers of nurses skilled in research. The use of multidisciplinary teams to support the higher academic levels of training will enable the increase to be more rapid, and to involve more locations than would be possible otherwise.

Recommendation 5

Post-doctoral Career Fellowships (Award Scheme 3)

We recommend that up to 20 Post-doctoral Career Fellowships are funded annually. These positions will be of three-year duration (or part time equivalence) to allow appointees to undertake advanced research, clinical and education roles and develop their programme leadership potential.

Recommendation 6

Senior Clinical Academic Fellowships (Award Scheme 4)

We recommend that up to 10 Senior Clinical Academic Fellowships for nurses are funded annually. These positions will be of three to five year duration (or part time equivalence) and allow appointees to develop more advanced research, clinical work and education skills and develop their role as leaders.

Facilitating careers

Career opportunities for nurses must be sufficiently flexible to allow pathways that sustain clinical engagement but develop expertise in research and the delivery of education. They must also allow for both horizontal and vertical routes of progression. A new understanding is needed between NHS employers and universities so that both can make best use of the knowledge and abilities of nurses who want to integrate research or teaching within clinical practice. An essential component is for universities and health sector employers to consider within a flexible contract of employment, issues such as liability, intellectual property, research conduct and appraisal. There also a need to tackle together the ways in which access to pensions can impede the desired career flexibility for clinical academic nurses.

Nurses who wish to develop a more varied career require a contract of employment which encourages career development and many would like the opportunity to regain some of their previous skills gained in the clinical environment.

Those nurses who wish to develop a career in education need better opportunities to gain academic status through research related to education, and from career development which supports more senior posts with an educational specification.

Recommendation 7

We recommend that career flexibility, specifically the ease of combining research and clinical practice throughout a career, must be enabled through the introduction of sessionally based contracts of employment that allow nurses to work as clinicians while also undertaking other roles as researchers and/or educators.

Models for clinical supervision in nursing are well developed, but mentoring schemes are not widely available to academic and other nurses involved in research. This is in contrast to doctors with leadership potential in research who are currently offered mentoring through a highly regarded scheme run by the Academy of Medical Sciences. Mentoring should be made available to nurses at all stages of their career, beginning at graduation and continuing at key times when they are considering choices in their career pathway.

Recommendation 8

We recommend that, in discussion with key partners, a well articulated system of mentoring is developed for nurse researchers and educators, to include emerging researchers.

Better information

Recommendation 9

We recommend that NHS Careers Advisors must be made aware of and promote the full range of career opportunities that are possible for qualified nurses. Careers advice must include opportunities for developing excellence in clinical research, education and leadership.

Without authoritative data on the number of nurses involved in research and education, their qualifications and roles, progress will not be made in furthering the aims of this report.

Recommendation 10

We recommend that a single data source be developed to provide information on labour market intelligence that relates to nurses engaged in training to be researchers and educators.

This should include prospective career tracking of all nurses that are supported by these new initiatives.

Implementation

An Implementation Group needs to be established by the UKCRC, with appropriate stakeholder representation, to work on the implementation of these recommendations.

Recommendation 11

We recommend that the implementation and delivery of these recommendations and their associated actions should commence without delay, with a view to achieving the recommendations outlined in this report within 5 years

Appendix 1

Terms of Reference:

The overarching aim of the Sub Committee is to improve training and careers for nurses in clinical research.

The Steering Group will:

- consider ways of improving access to, training for, and sustaining, clinical research careers in nursing including collaborating, managing and leading
- consult widely with stakeholders to harness as broad a range of ideas as possible;
- focus exclusively on the careers of clinical-research roles of nurses
- build on the work undertaken by the Task Group 3 Report, the Strategic Learning and Research Advisory Group for Health and Social Care
- report with recommended actions (prioritised) to UK Clinical Research Collaboration.

Members of the UKCRC Sub Committee for Nurses in Clinical Research:

Chair: Prof. Janet Finch (Vice Chancellor, Keele University)

Dr. Nicola Armstrong (Programme Manager for Nursing, R&D Office, Northern Ireland Health & Social Services Central Services Agency)

Prof. Christine Beasley (Chief Nursing Officer for England, Department of Health)

Prof. Tony Butterworth (Director, Centre for Clinical and Academic Workforce Innovation, University of Lincoln)

Dr. Lisa Cotterill (Director, National Co-ordinating Centre for Research Capacity Development (NCCRC), Department of Health)

Prof. Janet Darbyshire (Director, MRC Clinical Trials Unit & Co-Director UK Clinical Research Network)

Katherine Fenton (Director of Nursing & Quality, Barts and the London NHS Trust)

Theresa Fyffe (Nursing Officer, Scottish Executive Health Department)

Nic Greenfield (Deputy Director of Workforce (Education, Regulation & Pay), Department of Health)

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Prof. Joyce Kenkre (Professor of Primary Care & Senior Research officer – Welsh Assembly Gov., University of Glamorgan)

Dame Prof. Jill Macleod Clark (Chair, Council of Deans and Heads of UK University Faculties for Nurses and Health Professions)

Dr. Beverley Malone (General Secretary, Royal College of Nursing)

Ann McMahon (School of Nursing, Midwifery & Social Work, RCN Research Advisor, University of Manchester)

Prof. Jackie Oldham (Operational Director, Wellcome Trust Clinical Research Facility, Manchester)

Dr. Liam O'Toole (Chief Executive, UK Clinical Research Collaboration)

Dr. Frances Rawle (Head of Research Careers Awards, Medical Research Council)

Hilary Scholefield (Director of Nursing, University Hospitals Coventry & Warwickshire NHS Trust)

Stephen Thornton (Chief Executive, The Health Foundation)

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Theresa Valiga (National League for Nursing, New York)

Nancy Dickenson Hazard (Chief Executive Officer, Sigma Theta Tau International, Indianapolis)

Prof. Pauline Nugent (Head of School of Nursing, Deakin University, Melbourne, Australia)

Prof. David R Thompson (Director, The Nethersole School of Nursing, The Chinese University of Hong Kong)

Expert views were additionally canvassed from:

- Academy of Medical Sciences
- Council of Deans and Heads of UK University Faculties for Nursing
- Royal College of Nursing
- Royal College of Nursing PhD Student Network
- Physiotherapist's Senior Researchers Forum
- Association of UK University Hospitals

This report has been informed by expert advice from England, Scotland, Wales and Northern Ireland. Each nation has made progress through different timescales and in slightly different ways and has generously shared their experiences to date.

It is appreciated therefore that each nation will offer a slightly different response to the recommendations of this report and some may have already invested in schemes similar to those shown in our recommendations. Nonetheless, this report allows progress through a common template of opportunities, most, if not all of which will have a usefulness across the United Kingdom.

Appendix 2

Key documents:

The following documents provided the Sub Committee with valuable insights on which to base its recommendations:

Achieving potential through research and development: a Welsh perspective Kenkre J., Nursing Management 2005; 12: 18-19

A Northern Ireland Perspective. Rice F., Nursing Management 2005: 12: 16-17

Best Research for Best Health: A new national health research strategy. Department of Health (2006)

Changing Nursing Practice. Wright S., (1989)

Choices and Challenges – the strategy for research and development in nursing and midwifery in Scotland. Scottish Executive (2002)

Designed for Life: Creating world class Health and Social Care for Wales in 21st century. Welsh Assembly Government (2005)

Higher Education Funding Council for England (HEFCE), the Scottish Funding Council (SFC), the Higher Education Funding Council for Wales (HEFCW) and the Department for Employment and Learning, Northern Ireland (DEL). Research Assessment Exercise (RAE) output (2001)

Hospital restructuring in North America and Europe: patient outcomes and workforce implications. Aiken LH, Sochalski JP (eds). Medical Care 1997; 35 (supplement 152)

HR Plan Phase 2 Strategic Report. Strategic Learning and Research Advisory Group Project Team (2004)

HR Plan Project. Strategic Learning and Research Advisory Group (StLaR) (2004)

Medically- and dentally-qualified academic staff: Recommendations for training the researchers and educators of the future. Report of the Academic Careers Sub-Committee of Modernising Medical Careers and the UK Clinical Research Collaboration (March 2005)

Modernising Nursing Careers - setting the direction. Department of Health – CNO's Directorate (2006)

Nursing and midwifery research in Scotland. Fyffe T, Waterton J., Nursing Management 2005; 12: 17-18

Promoting Research in Nursing and the Allied Professions (Research Report 01/64). Higher Education Funding Council England (2001)

Research Capability Survey. Higher Education Funding Council (England) (2005)

Research for health and wellbeing - A strategy for research and development to lead Northern Ireland into the 21st century. Research and Development Office for the Health and Personal Social Services (HPSS) in Northern Ireland (1999)

Standards for the preparation of teachers of nurses, midwives and specialist community public health nurses. Nursing and Midwifery Council (2004)

The Future of Nursing Research. McMahon A, Lacey, A. in *The Research Process in Nursing*, K. Gerrish & A. Lacey, eds., Blackwells (2006)

Appendix 3

References:

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2. *Modernising nursing careers - setting the direction.* Department of Health – CNO's Directorate (2006)
3. *Best Research for Best Health: A new national health research strategy.* Department of Health (2006)
4. *Choices and Challenges – the strategy for research and development in nursing and midwifery in Scotland.* Scottish Executive (2002)
5. *Designed for Life: Creating world class Health and Social Care for Wales in 21st century.* Welsh Assembly Government (2005)
6. *Research for health and wellbeing - A strategy for research and development to lead Northern Ireland into the 21st century.* Research and Development Office for the Health and Personal Social Services (HPSS) in Northern Ireland (1999)
7. *Progress Report 2004-2006.* UK Clinical Research Collaboration.
8. *Statistical analysis of the register.* Nursing and Midwifery Council (August 2005)
9. *The Department of Health: Championing investment and capacity building in nursing research.* Moore R, Wilkinson J, Masterson A., *Nursing Management* 2005; 12: 15-16
10. *Using and doing research.* McKenna H et al., Department of Health, Social Services and Public Safety (1998)
11. *Using and Doing Research: Guiding the Future.* McCance T. & Fitzsimons D., Northern Ireland Practice & Education Council (2005)
12. *A review of UK health research funding.* Cooksey D. http://www.hm-treasury.gov.uk/media/56F/62/pbr06_cooksey_final_report_636.pdf accessed 06/12/06
13. *A background report prepared for the UKCRC Workforce Careers (Nursing) Group – unpublished.* UKCRC Workforce and Careers (Nurses in Clinical Research) (2005)
14. Higher Education Statistics Agency (2005)
15. *Survey of Nursing and Midwifery Research Capability in NHS Teaching Trusts.* Association of UK University Hospital (2005)
16. *2004 Workforce planning priorities for Allied Health Professionals, Nurses, Midwives and Healthcare Scientists.* NHS Workforce Review Team
17. *Benchmarking research development in nursing: Curran's competitive advantage as a framework for excellence.* V James & J Macleod Clark, *Journal of Research in Nursing* (in press)
18. *Research and development leadership in nursing across the UK: a biennial review.* D O'Carroll & A McMahon, from Royal College of Nursing 2006 annual international research conference (2006)
19. *Higher Education Institutes Staffing Survey – unpublished.* Council of Deans and Heads of UK University Faculties for Nursing (Council of Deans), 2005.

Appendix 4

Definitions of Terms:

Nurse

Any practitioner registered with the Nursing & Midwifery Council.

Clinical Academic Nurse

A nurse who is engaged in both clinical and academic duties. The academic duties may include research, teaching or both. The substantive contract of employment may be held by an NHS Trust or a Higher Education Institution. Honorary contracts are held with the non-substantive host.

Clinical Academic Career

A clinical academic career for nurses brings together clinical excellence, research and teaching in a systemic relationship. It should offer flexible career opportunities that sustain and develop clinical skills and offer opportunities to become proficient researchers and educators.

Clinical Research Nurse

A nurse who is employed principally to undertake research within the clinical environment.

As used at present, this term can cover a range of circumstances with the common feature that research is the sole or principal part of the employment role. This can include nurses who are:

- Employed on a short term project basis under the direction of medical researchers
- Employed on a permanent basis to support research in major facilities, eg: Wellcome Trust Clinical Research Facilities
- Autonomous practitioners, directing their own projects

Nurse Researcher

A nurse who is primarily engaged in research but who does not directly undertake clinical duties. The research may or may not have a clinical component. Nurse researchers may be employed by HEIs or Trusts (many will have temporary contracts).

Lecturer Practitioner

Senior appointees who lead, teach and consult research in clinical environment.

Appendix 5

Abbreviations:

HEFCE – Higher Education Funding Council for England

HEI – Higher Education Institution

MPhil - Master of Philosophy

MClinRes – Master of Clinical Research

MRes - Master of Research

NIHR – National Institute of Health Research

NMAHPs – Nursing, Midwifery and Allied Health Professions

PhD – Doctor of Philosophy

RAE - Research Assessment Exercise

R&D – Research and Development

SEHD – Scottish Executive Health Department

UKCRC – UK Clinical Research Collaboration

UKCRN – UK Clinical Research Network

WORD – Wales Office for Research and Development in Health and Social Care