Evaluating the funding and capacity of research in Scotland

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This paper will discuss the results of a scoping exercise carried out as part of a strategy to inform subsequent models of infrastructure funding. The exercise showed that Scotland has less research capacity in nursing and midwifery than the UK as a whole. Following the publication of a nursing and midwifery research strategy for Scotland, initiatives are being put in place to fund an increase in research capacity and capability in the nursing and midwifery professions.

This paper will discuss strategies put in place in Scotland to address the need for an increase in research capacity and capability within the nursing and midwifery professions. Nurses and midwives form the largest group of staff in the health service and, as the strategy for nursing and midwifery in Scotland states, are: ‘the most visible and recognisable symbols of NHSScotland’ (Scottish Executive Health Department, 2001). However, as professionals in relatively new academic disciplines, the influence of nurses and midwives on the wider health and health care research agenda has not matched the significance of their clinical influence.

While there is growing recognition of the contribution that nurses and midwives make to research there remain concerns about the relative lack of practitioners who have the knowledge and experience to undertake rigorous research (Higher Education Funding Council for England, 2001). Overall, academic nursing and midwifery departments in a research assessment exercise carried out in the UK in 2001 showed a significant increase in the number of staff undertaking research and in research funding (Rafferty et al, 2002). However, in a comparison of research undertaken by different disciplines nursing and midwifery scored 10, making it the lowest ranking discipline in the league table (Rafferty et al, 2002).

In Scotland the outcome of the 2001 research assessment exercise highlighted the problem of undercapacity within academic nursing and midwifery departments. Scotland did not contribute to the overall improvement within UK nursing departments in terms of the number of submissions or of their quality (Fyffe and Hanley, 2002). Over the past 10 years nursing and midwifery research and development in Scotland has been ad hoc, opportunistic and dependent on the leadership of a small group of key leaders.

Policy context

The publication of Devolution in Scotland (Scottish Office, 1998) has led to a number of policy initiatives that are tailored to the needs of the Scottish health service (NHSScotland). The demand for research to support patient care is increasingly driven by the policy, service delivery and redesign challenges within NHSScotland.

The Health Plan for NHSScotland, Our National Health: A plan for action, a plan for change (Scottish Executive Health Department, 2000), highlighted the importance of evidence-based practice and research in the development of quality of services, stating: ‘One of the keys to improving health is to find good evidence about what works. Research and evaluation are vital elements of a responsive, effective, learning health service.’

Recognition of the need for research and development can be aligned with the Scottish Higher Education Funding Council’s (SHEFC) strategic aim to fund research that supports national strategies intended to meet economic, social, and health care needs. When considering the need for evidence to support public and societal change that will encourage a real focus on patient-centred services it is clear that nurses and midwives make a significant impact. They can influence not only the outcomes of care and treatment but also patients’ and carers’ perceptions of the care experience. The roles and responsibilities of nurses and midwives are changing in response to policy and societal need, therefore it is essential that practice for these professions is based on a robust knowledge and evidence base.

In 2002 the Scottish Executive Health Department published Choices and Challenges: The research and development strategy for nursing and midwifery in Scotland (SEHD, 2002). When developing this strategy a review of nursing research capacity in Scotland was undertaken. A scoping exercise covering both NHS trusts and higher education nursing and midwifery departments demonstrated the largely untapped potential of nursing and midwifery research to improve services for patients and carers (Fyffe and Hanley, 2002).

The subsequent strategy acknowledged the disproportionately low allocation of research funding received by nursing and midwifery compared with other health professions, and called for the SHEFC, NHS Education for Scotland, Chief Scientist Office and the Scottish Executive Health Department to work together to identify funding streams that could be utilised to resource capacity.
building strategies. This action required agreement on what type of model of investment would be likely to provide the necessary results in terms of increased capacity and capability. As negotiations got underway it became clear that weaknesses in the capacity and capability of the allied health professions was of significant concern to these bodies and there was a clear enthusiasm for tackling the problems experienced within these professions as part of an inclusive strategy.

To inform future models of infrastructure funding for research in nursing, midwifery and the allied health professions, two further scoping exercises were carried out in 2003. While it was a useful starting point, the scoping exercise used to inform the research strategy could not provide adequate data regarding the specific capacity and capability of researchers in nursing and midwifery departments at that time. This paper reports the results of the exercise carried out within the nursing and midwifery professions and addresses key issues (Box 1).

Method

In February 2003 all 12 of the academic nursing and midwifery departments in Scotland were asked by the Scottish Executive Health Department to provide data that would allow an up-to-date evaluation of current research capacity across Scotland.

By April 2003, 10 departments had returned the majority of the data requested, which is reported here. This data was then compared with statistics taken from the research and evaluation returns of all nursing and midwifery departments in Scotland. There is limited data on the level of researcher activity within these departments, or their research qualifications. However, there is a difference in student profiles compared with Scottish nursing departments, and departments rated five), to highlight any other issues that could be addressed within future capacity-building initiatives.

Results

A total of 725 staff were reported to be working within the 10 departments in Scotland, a mean of 72.5 per department (range four to 145). Of these, 153 (21 per cent) were identified as being research active in some way. However, 462 (76 per cent) were employed on NHS contracts for education, which do not fund research activity, so it may be considered unreasonable to expect more than 24 per cent of staff to have some form of research remit (as current funding stands).

Information on the posts held by staff was provided for 597. The majority (63 per cent) were reported to be working at lecturer grade, with 15 per cent at senior lecturer level and three per cent at professorial level. With regard to research degrees, 74 (10 per cent) were reported to have a PhD, five (0.7 per cent) a PhD in education and 22 (three per cent) an MSc in research. Overall, 14 per cent of academic staff working in nursing and midwifery departments were reported to have some form of formal research training.

Of the 153 staff reported to be research active, 20 (three per cent of all 725 academic staff) operated at the level of principal investigator, 18 (2.5 per cent) at the level of collaborator on externally funded grants, 24 (three per cent) on externally funded research projects and 38 (five per cent) were registered as research students. The 74 individuals with a PhD were reported to be supervising 146 students registered for a PhD (a mean of two students per supervisor). However, the number of students per supervisor varied considerably (zero to 13), with a small number of individuals supervising a large number of students. The departments that provided data on the experience of PhD supervisors indicated that 19 (26 per cent) had successfully supervised a student to completion. There was data on completion dates for 57 individuals, of whom 24 (32 per cent) had been awarded their PhD since 1998 (four years previously or less).

A total of 152 students were registered for some form of research degree in the 10 departments, including PhD, clinical doctorate, and MSc in research. Of these, 28 (18 per cent) were studying full time. The majority of students were also self-funded (44 per cent) or funded by the institution (36 per cent). Only a minority were funded by external studentships (five per cent).

Comparisons with research and evaluation departments

Data taken from returns in the 2001 research and evaluation for nursing and midwifery departments rated five in the UK indicated that all rated over 40 per cent of their staff as research active (compared with 21 per cent in Scotland). There is limited data on the level of researcher activity within these departments, or their research qualifications. However, there is a difference in student profiles compared with Scottish nursing departments,
with 10 per cent of students funded by studentships (compared with five per cent in Scotland). 36 per cent funded by the institution, 22 per cent funded by UK health authorities/trusts and 19 per cent self-funding (compared with 44 per cent in Scotland). When the structure and environmental sections of the research and evaluation returns were examined, it was clear that all the five-rated departments considered had invested in senior research appointments at professorial, reader and senior lecturer level during the relevant period (1996 to 2001). In contrast, where there was limited investment in senior research staff in the Scottish nursing departments appointments were made as the result of internal promotion as opposed to attracting staff from elsewhere. One department had lost research active staff during the census period and these had not been fully replaced. A second key issue to arise from this comparison was how research activity was organised. All the top-rated departments had clearly identified research groupings, containing a critical mass of researchers with different levels of experience. In contrast, Scottish departments had less clearly defined groupings, with less critical mass.

Discussion
This scoping exercise has provided an important insight into current research capacity and capability within nursing and midwifery departments in Scotland. It has highlighted that only 21 per cent of staff in Scotland could be considered ‘research active’, and of these 14 per cent have some form of formal research qualification. There also appears to be a lack of senior research staff operating at the level of principal investigator (three per cent of academic staff are at professorial level, and only three per cent are reported to be working at principal investigator level). Research students in Scotland tend to be part-time and self-funded, rather than full-time and funded via studentships.

In comparison to departments that achieved a five rating in the 2001 research and evaluation, it would seem that departments in Scotland need to increase the proportion of their staff who are research active. They also need to attract or develop senior researchers who can operate at the level of principal investigator and enable the development of less senior research staff.

The traditional response to a lack of capacity is to provide more opportunities for postgraduate study. However, this scoping exercise highlighted that nursing departments have a considerable number of research students (mean 15 per department). What may be an issue is that these students are part-time and self-funded and may be more likely to experience problems including isolation and personal crises, which have been shown to affect PhD completion rates (Wright, 2003). Another issue may be the number of experienced research supervisors within departments in Scotland, together with the large number of students some individuals were supervising. A recent consultation document published by the Higher Education Funding Council for England (HEFCE, 2003) suggests that having experienced supervision, together with individual supervisors having responsibility for no more than six research students at one time, is considered to be good practice. The data therefore suggests that research activity, research participation, and research supervision appear to be the key elements that need to be considered in order to enhance capacity and capability within Scotland.

Implications and progress so far
This scoping exercise has provided valuable data on current research capacity and capability within nursing and midwifery departments in Scotland. It has also highlighted areas where funding might be effective, and will provide a useful baseline against which to analyse the success of future capacity investment. Following the publication of the research strategy for nursing, initiatives have been established to increase funding to develop research capacity and capability in nursing and midwifery. This is in parallel to current activity with allied health professionals.

In March 2003 the Nursing and Midwifery and Allied Health Professions Research Training Scheme, developed in partnership with The Health Foundation, NHS Education for Scotland and Scottish Executive Health Department, was launched. A consortium of higher education institutions in the north east of Scotland have been awarded this scheme, and will be offering the opportunity for high-quality research training to doctoral and postdoctoral students. As a parallel activity the Scottish Executive Health Department, the Chief Scientist’s Office, NHS Education for Scotland, and the Scottish Higher Education Council have agreed jointly to provide £5m to £8m funding in order to support the development of research capability and capacity in nursing, midwifery and the allied health professions. These funding partners wish to support a step-change in capability and leadership within these professions and it is anticipated that a decision with regard to each consortium’s bidding application will be reached this year.

Conclusion
As devolution continues to unfold we are presented with challenges and opportunities that enable decisions to be made at a level closer to the point at which they will have impact. This process will give Scotland the potential to devise solutions within the health care research and development agenda that embracing Scottish patterns of health care provision and geography. Of equal importance is the willingness of researchers in Scotland to work with colleagues from elsewhere, and a desire to ensure that research carried out in Scotland is of sufficiently high quality to have an impact on health and health care services in other parts of the world. It is hoped that the initiatives outlined here will increase the potential for researchers in nursing and midwifery to contribute to both a national and international research agenda in the future.