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**Skill Mix in Acute Care in the NHS:
A Recipe for a Better Blend of Health Care or a Cost Cutting Exercise**

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Abstract

This paper discusses the reasons why skill mix is important in health care systems. It highlights the evidence on skill mix that is available to inform health system managers, health professionals, health policy-makers and other stakeholders. The study shows that the results from even the most rigorous of studies cannot necessarily be applied to every acute hospital setting. This finding suggests that no formula can be produced which can be applied to different acute hospitals. This supports the basis that skill mix should be examined by identifying the care needs of a specific patient population and using these to determine the required skills of staff.

With these limitations in mind, the paper examines two main areas in which investigating current evidence can make a significant contribution to a better understanding of skill mix. For the mix of nursing staff, the evidence suggests that increased use of less qualified staff will not be effective in all situations, although in some cases increased use of care assistants has led to greater organizational effectiveness.

Introduction

The World Health Report 2000 noted that determining and achieving the “right” mix of health personnel is a major challenge for most health care organizations (World Health Report, 2000). Health care is labour-intensive and managers of health care provider units strive to identify the most effective mix of staff that can be achieved with the available resources, taking into consideration local priorities (Foster, 2002). The term “skill mix” is usually used to describe the mix of posts, grades or occupations in an organization (McKenna, 1995). It may also refer to the combinations of activities or skills needed for each job within the organization such as a theatre team, hospital ward or critical care unit (Buchan and Dal Poz, 2002). This article looks at a gives a brief overview of the determining factors that should be taken into consideration when assessing and adjusting skill mix (NPRCD, 1999). It then summarizes the main findings from a literature review, highlighting the evidence on skill mix that is available to inform health system managers, health professionals, health policymakers and other stakeholders (Richards, Carley, Jenkins and Richards, 2000). Resource availability, cost, skills shortages, professional barriers and interrelationships and culture, custom and practice will all have played a role in determining the typical or normal mix of staff in a particular hospital (Foster, 2002). To the extent that these factors vary, so will the typical mix. The factors that generate pressure for change in the skill mix are not mutually exclusive, and changing the skill mix is not the only option for responding to them (Buchan and Dal Poz, 2002). Employing organizations should also review other possibilities, such as improving the use of hospital beds, capital equipment and other resources; improving staffing patterns in relation to day-to-day fluctuations in workload and patient dependency; and adjusting the distribution of resources (Buchan and Dal Poz, 2002).

Providing a Better Balance

The concept of 'skill mix' is central to the Agenda for Change proposals. Agenda for Change is intended to "sweep away old-fashioned demarcations" and develop "new roles" (Foster, 2002). In theory, skill mix can be about enhancing services to patients and providing new opportunities for staff. The National Primary Care Research and Development Centre states explicitly that "skill mix...is largely focused on the transfer of tasks from highly qualified professionals to less highly qualified professionals" (NPCRD,1999). The stated intention is "to reduce costs and to improve service efficiency". Cost, rather than quality of patient care, is the driving force (Spilsbury and Meyer, 2001).

The evidence that is available from recent research on skill mix shows rather mixed outcomes. There is evidence that nurses can successfully take on roles traditionally carried out by doctors (Buchan and Dal Poz, 2002). Support for the dilution of the nursing role is much less clear-cut. The increased use of healthcare assistants in hospitals - even when they are supervised by registered nurses - is associated with increased patient mortality and increased adverse events (Spilsbury and Meyer, 2001; McKenna,1995). McIntosh, Moriarty, Lugton and Carney (2000) highlight the clinical risks involved in skill mix (again in relation to District Nursing). They argue that nursing auxiliaries and support workers can successfully learn complex clinical skills, but - without the theoretical background of registered nurses - will lack the skills of assessment, judgement, decision-making and evaluation (Keys, 1997).

It has been argued that policy makers and managers in the health sector should consider skill mix only when they are clear about: purpose, evidence base, acceptable risks, accountability, and quality assurance (Banham and Connelly,2002). Jarvis (2001) stresses that there needs to be proof that skill mix is cost effective, safe, and satisfactory for both users and providers. The current headlong drive towards skill mix is at odds with the existing evidence base (Buchan and Dal Poz,2002).

The implications of skill mix for our own professions are just starting to emerge. The Department of Health as part of its 'Changing Workforce' project wants to create a new post of 'practitioner for older people' to care for older people, including those who have had strokes (RCSLT Bulletin, September 2002). The post will combine the roles of district nurse, junior doctor, social worker, physiotherapist, occupational therapist, and speech and language therapist (Richards, Carley, Jenkins and Richards, 2000). The report is explicit that the new post will replace all of these professional roles, rather than being additional to them (Keys, 1997).

In pilot projects that have already begun, the practitioners are nurses who have had just 6 months of additional training to take on all of these extra skills (Richards, Carley, Jenkins and Richards, 2000). The bulk of clinical care will not even be provided by the practitioner for older people, but by assistant practitioners who are not qualified nurses, and who will have had only 3 months training. This is about cost, not quality health care. These proposals clearly represent the dilution of professional expertise. This is not in the interests of our clients or patients, and is not in the interests of health workers (Keys, 1997).

Methodology

The study examined the relationship between professional groups in acute hospital Trusts. In these hospitals teams of professional healthcare workers carry out a range of daily tasks functioning in their own specialist groups employed on different terms and conditions, working different hours and patterns and earning vastly different rates of pay. The aim of this study was to identify how effective these healthcare professionals are as a team as perceived by a senior manager of the Trust working at director level. Further, the strategies adopted within the Trust to encourage inter-professional working and breakdown barriers, perceived or otherwise, were to be identified through the study methodology.

This study was carried out at a time of some concern amongst acute hospital Trusts who were involved in the consultation and implementation of the new national consultants contracts and the new pay banding arrangements for junior doctors. It was decided therefore to approach this subject through the human resources directors of the Trusts selected rather than the medical or nursing directors. The human resources directors were also considered to be in a better position to offer a balanced view of inter-professional boundaries and the progress made in breaking down barriers between the professions. A postal questionnaire was devised asking the four questions set out below, the top five reasons for poor team performance and the measures taken in the Trust to tackle poor performance. A request for a semi-structured telephone interview was included with the questionnaire and return envelope. Following on from the return of the postal survey interviews took place with fifteen directors of HR to investigate issues arising from analysis of the survey results. A Likert style survey questionnaire giving the respondent a choice of 5 categories was used as the simplest and easiest way for respondents to give their opinion and for the data to be presented to readers. Additional space was left on the questionnaires for comments and some 10 per cent of the questionnaires were returned uncompleted apart from comments suggesting that the respondent did not wish to reply during the consultant's national contract implementation.

Research Population and Results

The postal questionnaire was sent to the Director of Human Resources of 123 acute hospital Trusts in England. From this survey 38 questionnaires were returned 31 per cent of those sent out. The questions were set out to discover whether the directors of HR perceived that inter-professional working was established, what barriers might still exist to inter-professional working and to get some idea what Trusts were doing to implement or improve the working relationship between the professions. Semi-structure interviews were held by telephone with 15 of these directors of human resources and contact made with others during the course of routine human resource network meetings. Further discussions with training and development staff at hospital level and members of the modernisation agency took place during the course of this study, as did a review of current literature from the modernisation agency.

Results and Findings

(1). Do you believe that skill mix reviews are driven by cost reduction rather than the desire for better services ? (%)

Often	On Occasion	Sometimes	Seldom	Never
14	21	37	28	0

The response to the question illustrates the view given by the majority of those interviewed that, skill mix reviews are mostly cost driven, in most of the hospitals involved in this study. Clearly, from the interviews and survey response cost cutting is a prime reason for skill mix reviews and not the development of services aimed at providing the best levels and numbers healthcare professionals. This response also suggests that both flexible rosters and working practices are also not the most important factors in determining the skill mix best suited to patient care.

This outcome points to the fact that there might be resistance in some hospitals to the breaking down of the barriers between the professions and the associated increase in costs as part of providing the most effective and highly skilled mix.

This view is reinforced by the second question that asked whether skill mix reviews do break down barriers ? With some reservations, the majority of human resource directors thought that skill mix review, more often than not, did break down barriers. Of concern must be the one-third of directors who consider reviews to have little effect in breaking down barriers, which suggests that the barriers that do exist prevent skill mix review from having a positive effect on the treatment of patients or reduce costs.

(2). Do you believe that skill mix reviews do break down professional barriers in the interest of better healthcare for patients ? (%)

Often	On Occasion	Sometimes	Seldom	Never
10	31	30	29	0

This point is explored in the third question where respondents are asked about the benefits of the right skill mix to good patient care and how it can be achieved by transferring duties to healthcare assistants. The idea of de-skilling through skill mix review are shown by the results to be perceived to reduce the standard of patient care, although perhaps a review resulting in de-skilling is less frequently the cause of issues around patient care than the failure to remove inter-personal barriers, which were often quoted by those interviewed as having a greater negative effect.

(3). Do you believe that the transfer of nursing responsibilities to healthcare assistants as part of the 'improved' skill mix is to the detriment of patient care ? (%)

Often	On Occasion	Sometimes	Seldom	Never
10	10	32	42	6

The response to this question was also useful in identifying that there are clear barriers which can prevent a skill mix review and de-skilling from ensuring a high standard of patient care. Reassuringly, the Trust human resource directors approached as part of this study are able to say that they have taken steps to ensure that skill mix reviews are seen as opportunities to upgrade patient care. Also, despite skill mix reviews being used to reduce costs, the introduction of nurse practitioners

and nurse consultants can produce, if sufficient reasons are provided, a higher level of patient care.

(4). Has your Trust introduced nurse practitioners and nurse consultants taking responsibility from doctors as part of a skill mix review ? (%)

Often	On Occasion	Sometimes	Seldom	Never
10	14	30	40	0

The results shown above indicate that skill mix review might have positive outcomes through the transfer of skills from highly paid medical staff through new nursing roles to healthcare assistants. This 'dumbing down' of professional skills, moving skills down the professional ladder can reduce costs and increase perceived patient care.

The HR directors interviewed all suggested that there will be continuing increases in frontline NHS staff where these are required to meet patients' needs.

They stated that staff will be supported in working differently, making the best use of their skills and enabled to fulfil their potential with the Skills Escalator and Knowledge and Skills Framework, the latter introduced by Agenda for Change, which will help them develop throughout their careers with pay linked to performance and skills development, which, the directors think will create stronger incentives to deliver high standards of care. The directors believe that by such means and through an increase in NHS capacity there will be better delivery, they see an expansion in the numbers of staff working in and with the NHS and social care system, combined with mechanisms for using those staff more effectively, as the response to skill shortages now. The directors described a range of measures including: increasing the supply of healthcare workers; working to retain existing staff; more flexible retirement and extending the productive life of staff; planned and ethical international recruitment as means to improve the pool of skills in such reviews. They see no professional barriers suggesting that all disciplines including nurses, doctors, dentists, pharmacists, radiographers, healthcare assistants, allied health professionals and other staff groups; should be included in full workforce skill mix reviews. Such reviews should include strategic beyond hospital barriers considerations for service delivery, including considering developing and working with other providers, including new public/private partnerships, independent sector treatment centres, volunteers, the charitable sector and expert patients.

Improving Roles in a More Flexible Workforce

The directors say that the rigid demarcations between staff, which have meant that patients seeing a number of different health professionals in the course of treatment must end, in so far as skills transfers allow. These unnecessary barriers between professionals lead to frustration for patients, waiting, the inappropriate use of staff and a failure to fulfil the potential of clinicians and support staff. The directors believe that attitudes to workforce flexibility must also change and acknowledge the work of the Royal Colleges, hospitals, Workforce Confederations and professional bodies now actively leading 'patient centred workforce' initiatives. Nurses make up the biggest single group in the NHS and have been at the forefront of developments in job roles advancing their skills. The number of nurses and midwives in advanced roles will increase and the directors suggest that hospitals will build on the current number of nurse and midwife consultants, going beyond the target for 2004 of 1,000.

The directors see the number of nurses who are able to prescribe and the range of medicines they can prescribe as increasing from now on both in hospitals and in the community. In addition to their extended clinical roles, nurses will be given a lead role in improving the experience of patients in both the hospital and the community. This will build on the success of the modern matron.

The directors identify the 'Changing Workforce' programme as being extended to cover all professional groups with Trusts implementing accelerated development programmes. The majority of directors commented on redesigned roles in radiology and radiotherapy services to reduce waiting as examples of this, with Advanced Radiographer Practitioners, trained to interpret the results of diagnostic tests, assisted by Assistant Practitioners being trained to undertake diagnostic procedures, replacing nursing, doctor and even consultant roles. Similarly, the directors point to practitioner trials in surgery, anaesthesia, critical care, renal services, medical assessment units and primary care, which already show great promise for staff taking on work previously covered by doctors. NHS initiatives, such as the hospital-at-night scheme have given the directors opportunities to improve the deployment of medical skills and create opportunities for staff from non-medical professions to take on a wider range of healthcare responsibilities.

The directors see a future not far away when the hospital workforce will be much more flexible and adaptable, supported by educational incentives and regulatory systems based on the Agenda for Change notion of the new NHS career scheme, where staff will be able to transfer skills gained in one job to other jobs or in one healthcare organisation to another.

The majority of directors are working on what they terms as 'Rapid Roll Out programmes', which they believe will ensure all teams are trained to use new roles, especially Assistant and Advanced Practitioners for clinical services. Changing skill-mix will, they believe, improve the way the NHS uses the skills of all its staff will deliver care more efficiently and increase capacity.

Conclusion

The directors interviewed and replying to the short survey argue that this is an 'all or nothing' change for the NHS. The new approach and systems, which support this change process are based on the need to identify the care needs of a specific patient population and match these to the skills of staff available.

The directors are all aware that it is not possible to prescribe in detail a universally applicable mix of health personnel. Skill mix is both a determinant of, and determined by, organizational and system context. Reviewing, and perhaps adjusting skill mix therefore requires the capacity to analyse the context, identify appropriate solutions, and manage sustained change within the system. Despite the limitations of the new approach and systems the directors feel that they can make a significant contribution to a better understanding of skill mix among nursing staff and in the doctor/nurse balance.

The evidence suggests that in some places the increased use of less qualified nursing assistant/healthcare assistant staff will not be effective in all situations without greater use of advanced nurses working alongside. Elsewhere, it has been shown that the greater use of care assistants has improved organizational efficiency. Evidence on the doctor/nurse overlap indicates that there is unrealized scope for extending the use of nursing staff and for further development of care delivery led by nurses/midwives, for example, in maternity units.

The effectiveness of different skill mixes across other groups of health workers and the associated question of the development of new roles remain comparatively under-explored. It is evident that determining the skill mix and defining roles in the health care workforce will continue to present a major challenge to health professionals, managers and policy-makers.

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