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# Medical Practices Committee

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## **SKILL MIX IN PRIMARY CARE - IMPLICATIONS FOR THE FUTURE**

The following paper was produced by Medical Practices Committee Member, Dr Sarah Jarvis, and endorsed by the Committee in March 2001.

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# SKILL MIX IN PRIMARY CARE - IMPLICATIONS FOR THE FUTURE

## 1. Executive summary

1.1 The increased use of skill mix within primary care brings with it the theoretical possibilities of increasing the variety of health care professionals offering a service to a given population, and reducing the number of any one set of professionals within that team.

1.2 With the advent of NHS Workforce Development Confederations and a financial allocation formula for allocation of GPs, the need for robust evidence to support far-reaching decisions becomes ever more urgent.

1.3 Despite the large number of pilot projects incorporating various patterns of skill mix, there is as yet a dearth of evidence as to the feasibility and the implications (both in terms of financial and human resource allocation) of the increased use of skill mix.

1.4 For skill mix to be acceptable, there needs to be proof that it is:

- **cost effective**
- **safe**
- **satisfactory for both users and providers of health care**

1.5 It is not enough to consider any one of these criteria in isolation, since variation in one may have implications for others.

1.6 Studies have been done on cost effectiveness, safety and patient satisfaction in a variety of models of skill mix, but there has been no examination of the effect on the other two variables if one of the three is altered.

1.7 There is some evidence that increased use of skill mix in areas of           nursing has resulted in de-skilling and reduced morale among staff involved.

1.8 Researchers into patterns of skill mix have concluded that "There is no straightforward association between structural characteristics of the practices and either the pattern of activities or the process of delegation referral between members of the primary health care team." This conclusion suggests that simple financial allocations formulae may be difficult to translate into practical equity of workload.

1.9 Patients' enablement and satisfaction correlate closely with continuity of care.

1.10 The dilution of the GP's role as independent patient advocate has led in other countries to both public displeasure and professional disillusion.

1.11 The use of NHS Direct has had some impact on demand for GP out of hours services but not on use of Accident and Emergency departments or ambulances. The relative cost effectiveness of NHS Direct, GP cooperatives and other models of out of hours care has not been assessed.

1.12 In short, a study of the available evidence suggests that considerable research needs to be directed at answering questions which may have major implications for both financial and human resources under the new workforce arrangements.

## 2. Suggestions for future work

2.1 In order to inform the debate, there needs to be more information on the following:

- Can skill mix provide consistently safe care for the patient when other variables, such as consultation times, are altered?
- Is the use of less highly trained staff cost effective if they take longer to perform roles traditionally taken on by more highly trained professionals?
- Is the workload of highly trained professionals reduced in practice by the increased use of skill mix?
- To what degree will duplication of workload offset the potential savings offered by increased skill mix?
- Do patients find care provided under skill mix models as satisfactory as that provided by traditional models?
- Will deviation from the GP's traditional role as independent patient advocate affect public and professional perceptions?

- There is some evidence that increased use of skill mix in the nursing profession has had an adverse effect on morale. What are the underlying causes for this?
- What are the longer term implications of increasing regulation on the innovation offered by PMS pilots as they become more widespread?
- What are the direct financial implications of moving away from traditional models of 24 hour care towards cover by GP cooperatives and NHS Direct?
- Is inter-practice variation great enough to prevent any implications being drawn from models of skill mix in a different practice setting?
- Are the same conclusions applicable for large and small practices?
- What safeguards and organisational structure need to be in place to ensure that skill mix provides safe, cost effective and satisfactory care?
- Does the primary health care team still need a "leader", and if so, who is best placed to carry out this task?
- Is the use of skill mix to solve problems of short supply of GPs simply moving the problem of human resource supply further down the professional chain?
- What changes to the training of GPs and nurses will be necessary in the future to ensure that they make the most of the potential benefits of increased skill mix?

### 3. Introduction - What is skill mix?

3.1 In its simplest terms, skill mix is the use of a variety of professionals, with varying qualities and expertise, to carry out roles traditionally performed by one health care professional. Carried to its extreme, the theory is that all staff should be working to their maximum potential at all times, carrying out only those tasks which cannot be delegated to less highly trained professionals (who, by definition, are available to carry out those tasks). In principle, this could have two main benefits:

- maximising cost effectiveness, ensuring that all tasks are carried out by the "cheapest" person who can perform them;
- maximising human resources, by making the most of the relatively small number of highly trained professionals available to carry out highly skilled tasks. This in turn should ensure that all team members are always working to their maximum professional capacity, reducing under-usage of training resources and maximising efficiency of working patterns.

### 4. Background

4.1 Following the inception of the NHS in 1949, the role of the GP within the primary health care team remained largely unchanged for several decades. The traditional model was a strictly hierarchical one, with the GP at the head of a small team of receptionists and practice nurses whose roles were largely reactive and determined by the GPs.

4.2 In the early 1960's, a widescale disillusionment among doctors with life in general practice led to acute shortages of GPs. The government's response was to draft in large numbers of overseas trained doctors, who took up positions in general practice, often in small inner city practices.

4.3 As many of these doctors now approach retirement, it has been suggested that there is a real prospect of further problems with GP recruitment. Anecdotal evidence of recruitment problems led the Medical Practices Committee (MPC) to pilot its recruitment survey in 1994. This has been followed by an annual recruitment survey from 1995-1999<sup>10</sup>. The main findings of the surveys can be summarised as follows:

- the overall average number of applications per vacancy has been fairly constant at about 8 since 1996, down from 10.7 in 1995;
- the proportion of practices filling a vacancy within 12 months has been relatively stable at 86-90% since 1997, up from 80% in 1996 but down from 97% in 1995;
- the male-female split on applications for full time vacancies has remained fairly constant, although the 1999 survey shows an increase in the number of men applying for part-time posts, particularly as job-sharers;
- the overall balance of male/female recruitment has shown no significant trends over the five years the survey has been carried out;
- in 1999, about 20% of practices reported that it was easier to recruit than the last time they recruited, about 40% reported that it was harder and about 40% reported no difference. The proportion reporting that it was easier to recruit has risen from a low point of about 5% in 1997, and those reporting it as harder has fallen from a peak of about 85% in 1997.

4.4 At the same time, traditional models of primary care provision have undergone gradual evolution, the rate of which has increased exponentially since the inception of the New GP contract in 1990<sup>(2)</sup>. Factors influencing this evolution include:

#### 4.4.1 Financial factors

- financial incentives of 1990 GP contract were followed by rapid increase in the number of partnerships and the development of practice premises;
- further financial incentives from the same contract provided significant incentive for increased employment of other professional staff by GPs;
- introduction of target and health promotion payments encouraged GPs to participate in primary prevention, whose activities were relatively easily delegated to practice nurses;
- change in pension regulations in 1995 removed disincentive for staff moving from secondary care to primary care employment.

#### 4.4.2 Organisational factors

- increasingly clearly defined roles for GPs;
- increased accountability for GPs, bringing with it the need for measurable outcomes;
- increased use of audit to determine quality of care;
- increased emphasis on proactive and preventative measures;
- a move away from traditional hierarchical models of provision of primary care towards collaborative team working;
- an increasing trend towards partnership working, with the opportunity for provision of more diverse practice teams;
- increased bureaucracy to police outcome measures, with the widespread introduction of computer records.

#### 4.4.3 Consumer factors

- increasing consumer expectations;
- increasing awareness among patients of their rights;
- changing attitudes towards the traditional doctor-patient relationship, with the patient expecting an increased participation in determining their management;
- increased convenience of opening hours of other "consumer services" (supermarkets, banking, internet).

#### 4.4.4 GP Workforce factors

- changing GP expectations towards 24 hour responsibility (largely related to the advent of GP co-operatives);
- increasing feminisation of the GP workforce, with an attendant trend towards part-time working and increasing focus on the conflict between home and work issues;
- increasing trend towards part time working by both sexes;
- workforce implications of the large cohort of overseas trained doctors drafted into the UK (largely into inner cities) in the 1960s, who will almost all become eligible for retirement in the same ten year period

#### 4.4.5 Changing role of other health care providers

- restructuring of the role of district nurses following the NHS Value For Money Unit's report;
- trends towards specialist training of practice nurses;
- development of nurse practitioner models;
- role of paramedics;
- development of role of pharmacists, encouraged by change in status of some drugs from prescription only medicines (POMs) to pharmacy available (P) and the development of prescribing formularies;
- increased popularity of complementary practitioners;
- increased consumer demand for "healthy living" products.

#### 4.4.6 Trends in complaints

- increase in the number of complaints brought against GPs, which acted as an impetus for a restructuring of GP complaints procedures;
- increase in the number of claims for medical negligence;
- a resultant perceived need for more guidelines and protocols to inform, standardise and justify clinical decisions;

## 5. Structural changes within the NHS

5.1 The New GP contract was the first of many fundamental changes affecting primary care in the last decade. The introduction of the "internal market" within the NHS relied on the concept of money following the patient, and paved the way for the introduction of fundholding. This latter brought with it the prospect of increased autonomy for GPs to use savings in one area to increase provision of facilities in others. Efficiency in human and financial resources became much more important to a profession which until now had placed financial considerations way down its list of priorities. GPs became increasingly closely involved in the planning and implementation of services for their patients, both in the primary/community and the secondary care sectors.

5.2 For practices unwilling or unable to commit to fundholding, multifunds and locality commissioning provided the opportunity for limited involvement in planning and pooling of resources. By 1999, these were all superseded by Primary Care Groups (PCGs) in England and Health Care Groups in Wales. While the underlying concepts of direct involvement of health care providers in the planning of services remains, the make-up of the PCG board aims to ensure much wider involvement of stakeholders in primary care, including nurses, social workers and lay representatives.

5.3 At the same time as many PCGs prepare for Primary Care Trust status, with increased direct influence over provision of services and budgets, a variety of other initiatives have been introduced. These include:

- widespread provision of out-of-hours co-operatives, the development of which has been encouraged by changes in patterns of GP remuneration designed to encourage collaboration between larger groups of GPs in provision of out-of-hours services;
- Personal medical services (PMS) pilots, which encourage the development of alternatives to traditional models of primary care provision;
- salaried options, aimed at increasing retention of doctors for whom traditional models of GP partnership are unattractive or not feasible;
- NHS Direct, a centralised service for provision of round the clock telephone advice by trained nurses;
- Walk-In Centres.

5.4 In July 2000, the Secretary of State for Health announced the abolition of the Medical Practices Committee (MPC). This abolition will be brought into effect through the Health and Social Care Bill 2001. In April 2001, 24 NHS Workforce Development Confederations will be established, with a wide remit which includes "review and aggregation of the workforce development plans of the full range of local employers in that health economy."

5.5 Allocation of GPs and other primary care professionals will be based on a financial allocations formula, devolved to Health Authorities and PCTs.

## 6. The evidence

6.1 For skill mix to be a realistic way forward for the NHS (and for primary care in particular), the net advantages for patients, Health Authorities, PCGs/PCTs and primary health care teams need to outweigh the disadvantages. This means that there needs to be proof that skill mix is cost effective, safe and satisfactory for both users and providers.

6.2 The increased investment in primary care, reflected in the growth of staff directly employed by GPs since the 1990 GP Contract, has been measured largely in terms of activity rather than in terms of health outcomes or best value. In part, this has been due to studies which suggest that increasing levels of certain activities (such as primary prevention measures) show a positive correlation with long term health measures. Perhaps more important is the relative difficulty in finding measurable short term outcomes from primary care.

6.2 It has proved similarly difficult to measure either the cost effectiveness or the relative quality of primary care when provided by the traditional hierarchical model or by the increased utilisation of skill mix. The most debated models centre on reallocation of specific tasks from GPs to practice nurses or nurse practitioners, and from district nurses and health visitors to health care assistants.

6.3 When attempts have been made to reduce any element of primary care to a series of mechanised tasks that could be counted and reallocated, as in the NHS Value For Money Unit's report Skill Mix in District Nursing<sup>(3)</sup>, the results have been viewed as dangerously simplistic. In this model, skilled district nursing professionals were expected to delegate the core of their work to relatively unskilled workers, leaving themselves with a supervisory or managerial role. While the general concept has now been embraced by large elements of the district nursing profession - and with some success from the point of view of financial savings - there is significant concern that the narrowing of experience of the more senior professionals runs the risk of "de-skilling" them and reducing their clinical ability as well as the risk of lowering morale<sup>(4)</sup>.

6.4 Other studies have concentrated on one element of skill mix, omitting other elements that allow direct comparison of effectiveness. Lattimer et al in 1998 and 1999 published the results of two randomised controlled trials of a nurse telephone consultation service in primary care out of hours<sup>(5,6)</sup>. Both showed that the service significantly reduced GPs' workload and the first that the service was at least as safe as the existing out of hours service. While the second touched briefly on cost effectiveness, neither compared the costs of the combined GP/telephone advice line service with the GP service alone, or looked at relative levels of patient satisfaction. Another series of trials comparing GPs and nurse practitioners dealing with requests for same day consultations<sup>(7,8,9)</sup> showed patients to be just as satisfied with consultations with the nurse practitioner as with a GP. The same series revealed that nurses were able to deal just as safely as GPs with these consultations - but no comparisons were made for safety or patient satisfaction with consultations of the same length. Interestingly, evaluation of a GP-staffed direct access telephone line in an inner London practice showed it to be valued by users, but the impact on surgery consultations was considered too small for it to be advocated as an alternative to emergency consultations<sup>(10)</sup>.

6.5 Likewise, the added costs of devising and updating protocols, as well as the duplication of workload resulting from internal referral from nurses to GPs, have not been addressed.

6.6 In its first year of operation, NHS Direct received about 68,500 calls from a population of 1.3 million. This resulted in a relative reduction of 2.9% in use of GP cooperatives in areas covered by NHS Direct compared with areas not covered. It did not have any significant trend on either the use of accident and emergency departments or ambulances. The cost of producing this reduction was not calculated<sup>(11)</sup>.

6.7 Once NHS Direct has been extended nationwide, of course, the relative impact on GPs' workload should be fairly consistent across the country, and should affect primary care workforce planning in one locality no more than in another. Far more relevant for workforce planning and skill mix implications are local factors such as relative numbers of practice nurses and nurse practitioners.

6.8 The PMS pilot scheme was designed to allow experimental schemes to test alternative models for delivery of primary and community care<sup>(12)</sup>. As it enters its third wave, however, clinicians are finding that the contract is becoming increasingly regulated, and the scope for innovation is declining<sup>(13)</sup>. There is an urgent need for robust assessment of existing pilots - almost nonexistent to date - if lessons are to be learnt about which forms of innovative working models work.

6.9 If a direct comparison between the "value" of GPs and nurses/nurse practitioners is to be made, there are a variety of factors which must be considered:

- 6.9.1 **Measuring workload and financial considerations.** It has been traditionally perceived that on an hour for hour basis it is cheaper to have 24 hour cover from GPs, who have included out of hours provision within their existing contracts, than from nurse working strict shifts. As GPs shed their 24 hour responsibility or organise it in different ways (notably through co-operatives) new costs - both start-up and ongoing - are introduced.
- 6.9.2 Within the practice setting, most of the comparison trials have been with trained nurses dealing with specific clinical problems at 20 minute intervals<sup>(14,15)</sup> - which, at over twice the length of the average GP consultation, makes them a more expensive option than GPs doing the same task. When dealing with minor illnesses, the clinical care and health service costs of nurse practitioners were similar<sup>(9)</sup>. It is oversimplistic to state that "If nurse practitioners were able to maintain the benefits while reducing their return consultation rate or shortening consultation times, they could be more cost effective than general practitioners."<sup>(9)</sup>
- 6.9.3 Likewise, while studies suggest that there are methods which should provide an accurate, reliable and valid picture of GP activity<sup>(16,17)</sup> the financial implications of increasing the range of work carried out by Primary Health Care Team (PHCT) members has not been fully assessed. This would need to include research on the number of hours worked by GPs, the length of GP and nurse consultations and the range of services offered by comparable PHCTs with and without a wide range of skill mix.

- 6.9.4 **Interpractice variation and its consequences.** It is well recognised that practices vary enormously in the services they provide, and Jenkins-Clarke et al conclude that "There is no straightforward association between structural characteristics of the practices and either the pattern of activities or the process of delegation referral between members of the PHCT". They also conclude that "...Whilst a broad-brush or macro-examination might, for example, show that 20% of a doctor's time could be substituted by a mix of other fractions of the manager and the practice nurse (and perhaps other members of the PHCT), the practicalities of weaving together such a collection of part-time workers into a coherent team may be insurmountable."<sup>(17)</sup>
- 6.9.5 Depending on the workload generated per patient by standard models of skill mix, it is not known whether it will be financially feasible for smaller practices to employ the same models of delegation and skill mix as larger ones.
- 6.9.6 **Quality of care and safety.** Several trials confirm that nurses have no higher incidence than GPs of misdiagnosis and adverse outcomes<sup>(5,8,14)</sup> - but again, there are no trials comparing the safety of nurses or nurse practitioners working at the same rate as GPs.
- 6.9.7 There is evidence, however, of significant unmet need, especially with respect to aspects of health promotion<sup>(18)</sup>, and there needs to be research to confirm that delegation of GP tasks to other PHCT members does not reduce the provision of "soft" areas of care such as health promotion still further.
- 6.9.8 **Patient satisfaction.** While there is, once again, evidence that patient satisfaction with nurse/nurse practitioner consultations is just as high as it is with GPs<sup>(5,7,9,14)</sup>, there have been suggestions that patient satisfaction is directly related to length of consultation, and no comparisons have been made of patient satisfaction in nurse consultations of different rates.
- 6.9.9 Similarly, there is a paucity of evidence about variation of patient satisfaction with length of GP consultation. In addition, the research that has looked at patient satisfaction has concentrated on individual encounters and not on long term satisfaction. The traditional model of continuing personal care by the GP, who has an intimate knowledge of the patient and their personal as well as medical history, is often cited as a main cornerstone of the primary care system.
- 6.9.10 While there is anecdotal evidence that patients' priorities have changed, and that for some, at least, having access to immediate care is as important as having continuity of care, large scale studies do not support this point of view. Most research suggests that a patients' enablement and satisfaction with a consultation is strongly associated with visiting the same doctor<sup>(19)</sup>. It seems certain that as the number of alternative models of primary care increase, patients will become more accustomed to seeking medical care from a variety of sources. This may affect their view of the relative importance of continuity of care. There needs to be more formal evaluation of long term patient satisfaction, comparing traditional models with those incorporating skill mix.
- 6.9.11 In countries such as the USA, which have no equivalent of the United Kingdom GP, care tends to focus on the acute rather than the chronic, and long term, co-ordinated health care for patients is lacking. There is a risk that the trend towards cash-limited, unified budgets controlled by PCGs or PCTs, in combination with reduced co-ordination as a result of increased skill-mix, could threaten the GPs role as independent patient advocate. In the USA, this has led to both public displeasure and professional disillusion<sup>(20)</sup>.
- 6.9.12 **Start-up costs (financial and human resource).** While the number of protocols (both national and local) is increasing, there is a suggestion that clinical staff are likely to be happier with, and more likely to adhere to, protocols into which they have had an input. Until the practice of delegating tasks to nurses and nurse practitioners becomes more widespread, there will continue to be a tendency for individual practices to "reinvent the wheel" (or at least the protocol).
- 6.9.13 **Duplication of workload.** Every time both a nurse and a GP see a patient for the same condition, there is duplication of workload which undermines potential savings. In 1994-6, the University of York carried out an extensive study of workload in general practice and the opportunities for spreading it more effectively among members of the PHCT<sup>(16,17)</sup>.
- 6.9.14 While they concluded that there is "some scope for safely and acceptably transferring some work away from (expensive) GPs towards (less expensive) nurses and other clinical workers", they found that in a high percentage of cases, only part of the GP consultation was delegatable. They also highlighted the fact that the triage function of GP has to be carried out by someone, and the difficulty of organising flexible pathways through care.

- 6.9.15 **Knock-on effects for recruitment.** Setting aside financial issues, an increase in the skill mix of the PHCT will require a supply of nurses, who appear to be an increasingly scarce commodity<sup>(9)</sup>. Studies suggest further potential for practice nurses to delegate some of their workload to less qualified, or even unqualified, staff<sup>(20)</sup>.
- 6.9.16 While at its best, careful consideration of skill mix has the potential to align local services much more closely to patient need, there are enormous dangers in setting up widescale models of skill mix without ensuring the prior provision of human resources at all levels.
- 6.9.17 Similar considerations apply when considering skill mix in other areas - for instance, the substitution of health care assistants for nurses, and the substitution of other health care professionals to carry out administrative and patient advocacy roles traditionally taken on by GPs. For these, the evidence seems even more scarce.

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