THE MID-LEVEL PRACTITIONER: A REVIEW OF THE LITERATURE ON NURSE PRACTITIONER AND PHYSICIAN ASSISTANT PROGRAMMES

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FOREWORD

The two literature reviews collected together here were commissioned separately by the Department of Health. However, they complement each other so closely that it seemed more appropriate that they should be published in one volume, giving a more general overview of the experience of the 'mid-level practitioner'. The first review, dealing with nurse practitioners was commissioned to look at accounts of UK experiences in the last 10-15 years. The second, dealing with physician assistants, focuses on the US experience with this type of health care provider. In practice, though, much of the literature reviewed does not distinguish clearly between physician assistants and nurse practitioners so that this report also gives some insight into the contributions of the latter to US health services.

The texts are reproduced here as they were submitted to the Department of Health except for the expansion of the conclusion of the Nurse Practitioner report to add a wider commentary on the historical role of nursing in the division of labour in health care and its implications for the emergence of a niche for a mid-level practitioner.

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ROLE EXTENSION/EXPANSION WITH PARTICULAR REFERENCE TO THE NURSE PRACTITIONER: A LITERATURE REVIEW

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1 INTRODUCTION

1.1 The starting point for this literature review has been MacGuire's (1980) discussion of the expanded role of the nurse, based on working papers for the Royal Commission on the NHS. She notes the terminological confusion between roles which are variously described as **extended** and/or **expanded** but follows earlier writers in suggesting that extended roles should describe those in which a nursing qualification is not a pre-requisite (where tasks are essentially medical) and expanded roles, in which it is.

"In practice the nurse who is working as a 'nursing practitioner' combines expanded and extended role elements involving both the expressive aspects of nursing care and the diagnostic judgement of medical care. The most commonly used descriptive term for the nurse in the expanded/extended role is 'nurse practitioner'."

1.2 MacGuire describes the two models which underlie both commentaries and evaluation research on role extension and expansion. The influence of these models is shown most clearly in the selection of process and outcome measures by commentators and researchers.

Model A - nursing and medicine are two distinct disciplines. Commentators are concerned about possibility of nursing functions being lost from the new role in favour of the assumption of medical tasks.

Model B - there are many tasks to be carried out to maintain the health of communities and to care for patients. Who does what is immaterial provided they are trained for the task, competent, acceptable to patients and achieve the same standards.

1.3 The research evidence summarised by MacGuire related to:-

- **acceptability**
  (by the general population, patients, doctors, nurse colleagues). There were generally favourable responses from all groups, patients being particularly

satisfied. Medical reaction where nurse practitioners were employed was positive although the degree of delegation varied in different settings and between individual physicians.

- **nurse practitioner characteristics**

  Recruitment was highly selective. There was some disillusionment with the limitations on this role in practice.

- **work pattern**

  There had been few studies to show how the work of the nurse practitioner differed from that of the nurse but there was more information on the differences between the work of nurse practitioners and physicians. The two basic elements of the role were said to be obtaining health histories from patients and assessment of health status. The content of the consultations was different from those with a physician. The nurse practitioner provided elements of care which would otherwise not be provided.

- **process and outcome**

  At least 24 measures had been used. Nurses could discriminate between patients as adequately as doctors and in some ways the process by which they gave care was more effective. Where time was measured, nurse practitioners spent more time with patients than did doctors. Follow up and continuity of care were improved, as was compliance with medical prescription (which may be a function of the greater time spent with patients). The provision of well-patient and routine care had released medical time for more difficult cases: some of that time had also been spent by the doctors on supervising the nurse practitioners.

- **cost considerations**

  One of the major reasons for advocating the introduction of nurse practitioners was that they were cheaper to train and employ than doctors. Raising the length, and status, of training courses could offset these gains.

- **settings and structures**

  The influence of settings and structures on the role of the nurse practitioner had not (at the time) been fully explored but it was stated that there were

fundamental differences between those in hospital outpatient departments, in the medical practice setting and in the independent nursing practice setting.

There have since been a number of studies relating to this issue.

1.4 MacGuire asks an important question about the use of the term: is the 'nurse practitioner' simply a name for tomorrow's nurse? She suggests that unless there is a rationale for restricting the role to particular settings or to particular types of patients it seems inevitable that this will be the trend. This prediction seems to have been borne out - for example in Hancock's letter to *The Guardian* (14 October 1994)

"Roy Lilley (October 5) describes early enthusiasts for the NHS reforms as visionary health heroes with the courage to "communicate the unpalatable". I fail to see anything heroic in chief executives who fail to take the elementary step of examining available data on the cost effectiveness of the largest section of their labour force, nurses.

There are already nurses stripping veins for patients undergoing cardiac surgery and the Royal College of Surgeons is planning courses for other health care technicians to take on this role. But the kind of expert, highly skilled ***nurse practitioners*** *Roy Lilley wants to reward cannot be run off a production line. Their expertise is acquired through clinical practice and giving direct care to patients.*

Health care workers who can soothe a patient's feelings of vulnerability and embarrassment about using a bedpan, assess that patient's condition by examining the content of the bedpan, explain operative procedures, put up intravenous drips, dress wounds and encourage rehabilitation, are extremely cost-effective indeed. They are called nurses."

Christine Hancock, Royal College of Nursing (Emphasis added).

At the time MacGuire's review was written the term 'nurse practitioner' seems to have been used infrequently in the British literature - more than 80 per cent of the citations in the large bibliography (273 references from 1955 to 1977) originate in

North America and only two of the UK entries use this description. MacGuire herself was unsure whether it was worth introducing and that we:

"Should not be misled into thinking that in adopting 'nurse practitioners' we would be introducing anything new. Let us rather cultivate and expand what we already have."

If this was intended to be either a warning or a piece of advice it went unheeded and the term has been used in the UK with increasing frequency ever since.

1.5 Early UK advocates of the term (e.g. Bowling 1980, Stilwell 1982) focused on work within general practice. Since 1980, however, nurse practitioners have been reported as working in various clinical specialties and there has been increasing interest in their employment in accident and emergency departments. These changes reflect the progress of the movement in the US where the later studies reviewed by MacGuire come from in-patient settings.

1.6 Our brief, however, was to concentrate on UK publications since MacGuire's review. British nursing is located in a different kind of health care system with a different division of labour and different educational provisions. The emergence of nurse practitioners has taken place in the context of specific political, professional and legislative changes affecting all three of these environments. As a result even formally qualified nurse practitioners (a recent introduction in the UK) seem to work rather differently from their US counterparts. Thus, Smith (1992), reporting on a visit by some newly qualified nurse practitioners to the USA, points out that, although they found many similarities in their work:

"American nurse practitioners routinely undertake a more comprehensive clinical examination of their patients."

1.7 Our concentration on the UK literature has underlined its limitations. A significant proportion of what has been written comes from advocates or pioneers of the role. The ratio of publications to actual data is relatively high and much has been made of the work of a small number of individual practitioners. Relatively few studies have any empirical basis. As is frequently the case with innovations, the literature tends to

be descriptive, journalistic and promotional. These problems echo those identified by Weston ('Whither the 'nurse' in Nurse Practitioner?', *Nursing Outlook* 23 March 1975: 148-152) reviewing US literature in 1975 and quoted by MacGuire. She noted that studies of nurse practitioners were 'principally anecdotal' and concentrated solely on the legitimisation of the role rather than on an evaluation of its contribution.

Brown and Grimes (1993) have recently published a meta-analysis of studies of nurses in primary care roles (nurse practitioners and certified nurse-midwives).

Of the 900 manuscripts initially located 200 were examined further but studies suitable for analysis were selected using the following criteria

1. intervention provided by nurse practitioner
2. data derived from patient care provided in US or Canada
3. control group patient data derived from physician managed care
4. measure of outcome in terms of processes of care, clinical outcome or utilization/cost effectiveness
5. an experimental, quasi-experimental, or ex post facto research design
6. data that permitted calculation of effect sizes and/or determination of direction of effects. This process resulted in a sample of 38 nurse practitioner studies and 15 certified nurse midwife studies.

The findings of the analysis give

1. descriptive information relating to practice setting - mostly ambulatory care in urban location
2. nurse practitioner process of care outcomes (nurses provided more health promotion, higher quality of care, ordered more laboratory tests, prescribing rates equivalent)
3. nurse practitioner clinical outcomes (nurses achieved higher scores on resolution of pathological conditions and functional status, patients were more satisfied and more 'compliant'
4. nurse practitioner utilization/cost outcomes (nurses spent almost twice as long with their patients, numbers of visits were equivalent, hospitalization

rates were less for the nurse practitioner group, costs per visit to nurse practitioners were less, costs for laboratory tests were similar)

At this stage of development the relative lack of comparative data may be understandable. Even in a descriptive account we might, however, want to locate at least some of the points which could be considered critical - role definition, training, competence, work pattern, cost issues and managerial accountability. These are frequently absent.

1.8 It also seems likely that, in the absence of a widely-accepted formal definition of a nurse practitioner (or statutory regulation of the title), reports or studies of nurses performing similar functions or roles will be located in other bodies of literature. This could include the literature of general practice, of practice nursing, of mental health, of health services management, of occupational health, of health visiting or of any one of numerous clinical specialties. Not all of these could be searched for the particular purposes of this review.

It is apparent that, in the attempt to stress the 'nursing' rather than 'medical' aspects of the nurse practitioner role, writers assume, rather than question, current nursing orthodoxies. Allen and Hughes (1993) considered that this is a professional discourse that has been 'internalised'. Thus, in more ways than one, we may be persuaded that:

"To write of the nurse practitioner is to write of the nurse - for every nurse who practices his or her profession is a nurse practitioner."

(Robinson, A. 1973 'The nurse practitioner; expanding your limits' *RN Magazine*, 27 November: 34 quoted in Studner and Hirsh 1986).

1.9 Although there have been relatively few evaluative studies to date, this situation will change in the near future. A report on the SE Thames RHA project is due shortly (Lenehan and Watts 1994). The ten specially funded projects announced early in 1994 which include a nurse to serve a disadvantaged housing estate, a school nurse at a comprehensive school and a glaucoma service at an eye infirmary are also to be evaluated by management consultants (Anon 1994a, personal communication). A

recently established course for nurse practitioners in Swansea is also associated with a planned research project to evaluate the impact of the students on health care organisations (mainly in primary health care) and on aspects of Welsh priorities for health gain (*The Times Higher Education Supplement* 2nd September 1994).

1.10 There is a recently published review of the nurse practitioner literature (Jordan 1992/3) which has made much use of US material. This paper focused particularly on the issue of prescribing. We are as yet unclear how significant a feature this will prove to be. The range of positions occupied by nurse practitioners appears to be so broad that the proposed formulary may be of limited value. It seems likely that in secondary care settings activities will still be guided by locally developed protocols.

An account of the nurse prescribing demonstration project makes no specific mention of nurse practitioners and initially no prescription only medicines will be nurse prescribable (Anon 1994b). If this formulary is to be used by nurse practitioners, its real significance may be in the removal of any financial disincentive to nurse practitioner consultation particularly among patients exempt from paying prescription charges.

1.11 The UK literature will be examined in relation to the various settings where we have found references to nurse practitioners: in general practice, in alternative community settings, in hospitals (serving both out-patients and in-patients) and in relation to other fields of nursing, especially mental health and learning disability.

We have used

- computerised searches of Cinahl data base and NMI index to current literature (UK literature post 1978);
- manual search of appropriate journals/books;
- requests for information from Regional Health Authorities in an attempt to locate unpublished but relevant documents. (Some similar material was provided initially by Research and Development Division of the Department of Health).

Responses to the last will be collated separately although occasional examples will be included in this review.

Some 300 documents ranging from edited collections to editorials from the *Sun* have been examined: not all are included in the following review. We are also aware that, because the literature is dispersed so widely, we may be presenting examples of cases rather than examining all possible occurrences.

2. EXPANDED AND EXTENDED ROLES

2.1 The careful distinctions between expanded and extended roles made by MacGuire have not always been maintained by other writers. In many articles and policy documents the words are used interchangeably.

*"It is accepted that there are many reasons why the nurse might wish to **extend** her role; there is a need to identify which of these are valid in the interests of the patient, the service and the professions concerned, and in encouraging **expansion** where appropriate, to define the essential controls and related ethical and legal implications."*

(The extended clinical role of the nurse RCN 1979 Para B10 Emphasis added)

There are a number of examples in Bowling and Stilwell (1988) where the words appear to be used synonymously. Hunt and Wainwright (1994) have recently edited a collection on this topic where several chapter headings refer to expanded roles when their contents relate to extended roles.

The 'highly developed extended role of the nurse practitioner' is described by Stilwell (1988) within an ideological framework which clearly owes more to nursing than to medicine. Conversely the nurse has an 'expanded' role in extra-corporeal membrane oxygenation (Ferguson and Copnell 1993) although this appears to be the description of a particular technical task.

A range of other adjectives have also been used to describe role change including:-

- amended (Jones 1987);
- elaborated (Marks et al 1977) ('the development of nurse therapists is regarded as the *elaboration* of long standing roles shared with doctors, psychologists, social workers and counsellors');
- enhanced (Rickford 1993 and numerous others).

2.2 As Dimond (1994) notes, the concept of role extension has not been applied when nurses are carrying out work of other occupations such as physiotherapy,

occupational therapists, receptionists and cleaners. Neither do the expanded/extended terms appear in recent reports of patient-focused care at Kingston Hospital, Surrey. Central to this is the process of enabling staff to broaden their roles so that care can be delivered more quickly and simply:

"A nurse, for example, might undertake basic physiotherapy, operate X-Ray equipment and take blood tests" (Brindle 1993).

Alderman (1993) has reported this introduction of a US model of care into a UK hospital for a nursing audience. There has been some modification of the original model to include a protocol-driven method of care. It entails the cross training of staff and the devolution of responsibility and accountability. But roles are not 'expanded' nor is the term 'nurse practitioner' used.

2.3 The controversial appointment of a nurse who became (after extensive training) an Oxford cardiac surgeon's assistant was described in the nursing press under the heading **extended** role. The post was set up as a pilot project and it is this factor that is said to have affected the **expansion** of the role further. (Alderman 1992). The post holder is also involved in day to day management of patients including wound care, explaining procedures, and organising routine medical investigations, both for inpatients and at follow up.

The debate about this post mirrors some of the early arguments about the relative merits of nurse practitioners and physician assistants in the USA. (Reedy (1978) has produced an accessible account of these developments.) Sheperd (1993), for example, regarded the surgeon's assistant project in Oxford as **exploitation**:

"Practitioners must not extend their roles at the drop of a hat at the expense of patient care, which is the core component of nursing practice."

He added that nurses were putting themselves at risk by accepting responsibility for tasks that other health care professionals found inconvenient, time consuming or boring and refers to the 1970 statement by Mereness:

"A nurse who functions as a physician's assistant has neither expanded or extended their role, they have changed their role."

(Mereness D. 'Recent trends in the expanding role of the nurse' *Nursing Outlook* 18 (5): 30-3)

The Royal College of Surgeons' report on the scheme (described by Scott 1993) did indeed suggest that nurses could perform

"Repetitive tasks that need not consume the time of junior doctors."

The RCN response was that nurses could take on such positions provided that the role, responsibility and accountability involved were clearly defined.

There are also said to be many examples of nurses performing first assistant duties (Podmore 1993). The National Association of Theatre Nurses supports nurses who take on this job but asserts that the role should be undertaken as part of the overall care of the patient and not just to help the surgeon. This was represented as a movement from the restrictions of the extended role towards 'holistic care'.

2.4 Within the framework of the same debate, if on a somewhat lesser scale, English and Lindsay (1993) consider the precedent set by the appointment of task-oriented workers in health care (particularly the phlebotomist). They suggest that, while this may be cost effective, it will compromise patient care and threaten the role of the nurse. The nursing profession should take a more united stance against this threat to their role and should seek to expand by taking on the additional skills, thereby increasing the value of the nurse and promoting improved patient care.

2.5 Ward (1991) reviewed three relevant (extended role) policy documents (DHSS statement of 1977; the DH document of 1989; and the Welsh National Board discussion paper of 1990). He considered the legal implications, professional accountability and training issues.

"The central question that must be addressed .... is whether nurses can be considered to have the professional judgement and training to decided what

activities they are qualified to undertake, or whether this decision should be taken by others, in particular, by members of the medical profession."

(Ward does not consider whether general management might have a place in determining the role of the nurse.)

2.6 The Welsh National Board (1990) regarded the concept of the extended role as directly opposed to any claim that nursing was an independent profession and that nurses were responsible and accountable for their own practice. This position foreshadowed that adopted by the UKCC document, *The Scope of Professional Practice* (1992) which is patently the key policy document in this area.

"In order to bring into proper focus the professional responsibility and consequent accountability of individual practitioners, it is the Council's principles for practice rather than certificates for tasks which should form the basis for adjustments to the scope of practice." (para 14)

The publication of this document was accompanied by the withdrawal of previous DH guidelines:

"Recognising that the council's new guidance proves a sound framework for developments in professional practice to take place, the chief nursing officers of all the UK countries have withdrawn their 'extended role of the nurse' guidance." (Moores 1992)

The earlier system of certification for extended roles was said to have promoted a task-based approach to care delivery and militated against comprehensive team-based care.

2.7 Most commentators were enthusiastic about the resulting changes. Davis (1992), for example, had previously explored the concept of an '**enhanced and expanded role**' for nurses as nurse practitioners with particular reference to work in accident and emergency departments. In a footnote she explains that this article predated the publication of the UKCC statement:

"The document acknowledges that the term 'role extension' limits rather than expands practice preventing many NPs from 'fulfilling their potential for the benefit of patients'."

In fact, para 13 of the UKCC document does not use the word 'expansion' and refers only to 'practitioners' rather than nurse practitioners.

2.8 Despite the numerous confusions surrounding the use of the terms **expanded** and **extended**, people writing from a theoretical background usually attempt to maintain the original distinctions while others writing from a more practical stance usually cite them. Robinson (1993), for example, applies Vaughan's (1989) points to the nurse practitioner working in accident and emergency departments. She suggests that if the nurse practitioner role encompasses **expansion** as well as **extension**, the assumption that waiting times would be reduced may prove unfounded and that there is no benefit to patients in saving doctors' time at the expense of nurses' time.

Swan (1993) considers the theme of task based extension versus expansion mainly in regard to the work of the district nurse (asking if G Grade district nurses should become glorified phlebotomists).

Vaughan (1989) primarily considers the issues of autonomy and accountability but goes on to include the extension/expansion theme. She differentiates between **extended** tasks (usually highly valued technical skills) and **expansion**.

"which recognises the true value of nursing as a therapeutic activity in its own right which is of benefit to patients and clients."

However, she considers that the latter need not exclude the former. New skills of this type may readily be learned and 'often make the practice of nursing easier'.

(It is also clear that role extension is not inevitably linked to advances in medical technology as claimed by some writers. Ear syringing, venepuncture and male catheterisation are hardly innovative technological procedures although they make frequent appearances in the literature as examples of extended role 'tasks').

As Hunt and Wainwright (1994) point out

"The boundaries between that which constitutes role expansion and which is role extension are far from clearly defined. Much will depend upon the group's perception of its role and the factors shaping nursing practice in a specific clinical setting."

The case of Allan's study of intracranial monitoring in the UK is used as an example.

"The data presented suggests that both the researcher and the subjects considered this technical task as role expansion and therefore a legitimate and integral part of their work."

They consider that the expanding role of the nurse is an issue because of a

"unique historical conjuncture of professional developments, radical reforms in health care delivery as a whole, technological advances and the growth of nursing research and knowledge, and cultural, educational and legal changes."

They conclude (with others) that role expansion is not about extending the list of techniques - but neither is it in conflict with such extension:

"It is about enhancing care of the needy person in social context, and accepting new responsibilities if they represent a means to that end."

2.9 A number of studies have been carried out into nurses' attitudes towards role extension/expansion. In a survey of nurses working in Intensive Care Units, for example, Last and Self (1994) found that most nurses wished to extend their role and were prepared to reconceive many 'extended' procedures as standard. They believed this would give them increased job satisfaction and that it would be better for patients. They also believed that certification was necessary and that some kind of national standardisation would be helpful. They considered that extension increased the risk of litigation.

Some recent research in South East Thames RHA has shown that 'rank and file' staff are ambivalent about issues to do with role change/expansion. Allen and Hughes (1993) report a survey covering nurses, health care assistants and junior doctors in wards in five hospitals. Only 25 per cent of nurses believed that autonomy would increase and 69 per cent anticipated a heavier workload if delegated tasks were to be accepted. Nurses were also concerned that role expansion might expose them to legal action.

These concerns have been largely dismissed by advocates of the nurse practitioner role who are also reported as saying that the survey revealed a lack of awareness of what this was.

"Mark Jones, community health adviser to the RCN dismissed fears about potential legal problems, saying the issue was about competency - the UKCC's ***Scope of Professional Practice*** *says nurses can undertake new aspects of care if they are competent, so they should not have any qualms about their legal standing."* (Downey 1993).

2.10 Tingle (1990) earlier argued that it was necessary to give the extended role a legal context for two reasons: firstly, to raise the awareness of nurses, managers and doctors of possible legal implications inherent in the context and, secondly, to encourage the adoption of safe working practices. The law of negligence is said to be the principal law likely to affect the extended role.

Greenfield (1992), in her consideration of nurse practitioners working in primary care, concludes with comments about the two main areas of legal responsibility.

"It appears that if a nurse is carrying out an activity which is a nursing responsibility for which she has formal training then she will be liable under her own professional ethics. If on the other hand she is performing a task which falls outside these routine nursing duties she is only liable if it can be proved that she has been adequately trained. The nurse's legal position when performing delegated tasks is therefore far from clear cut."

The legal concerns expressed by nurses relate largely to liability. A second legal issue is raised by Rivett (1991) who points out that legislation can define responsibilities:

"It exists in the USA and ultimately may be important to define the powers and responsibilities of the nurse practitioner in statute in the UK." [1]

Rivett also challenges the use of the concept of autonomy in conjunction with descriptions of the nurse practitioner role. He considers this to be a word frequently used by groups trying to determine their own identity:

"...it is an illusory concept. The word is more frequently used than defined. Groups as important as health professionals should not claim the right to govern themselves without statutory powers... Patient care is a team game, not to be undertaken in glorious isolation".

2.11 The major legal concerns arising since 1992 and the publication of the UKCC's *Scope of Practice Document* have been outlined by Dimond (1994). These are considered to be

- **legal restrictions**

  Statute law does not prescribe who is to perform certain health tasks but leaves it to the statutory bodies who are responsible for registration, education, training and professional conduct to determine their own rules. Unless there is specific statutory legislation which requires a specific professional to carry out specific activities there is freedom to develop skills which cross traditional lines of demarcation.

  The most important legal restrictions are those relating to medicines (prescribing, administration, procurement and storage). Recently the power of some nurses to prescribe specific products has been recognised. The statutory instruments will set out the training requirements for a nurse to be eligible to prescribe and list permitted drugs/dressings.

- **determination of competence by the courts**

  The courts are not primarily concerned with whether a task is carried out by a nurse or a doctor unless there is a statutory requirement to that effect. They will be concerned to learn from experts in the field what standards of care the patient should expect to receive and whether there are any acceptable reasons why they were not present in the particular case. Issues relating to the determination of competence are also discussed.

- **determination of liability**

  If a practitioner has failed to follow the approved standard of care which would reasonably be expected of a professional and harm has been foreseeably caused as a result then there would be liability.

- **maintaining standards**

The article concludes by referring to the flexibility permitted by the present law. It is suggested that if this is abused it may be that new statutory rules will be required to specify who can do what. It is also considered that any 'experimentation' in the role of nurse practitioner (earlier reference had been made to a clinical nurse practitioner) should be accompanied by clear guidelines on procedures and training.

Notes

1. Position in the USA (1986)

   The practice of nursing is established and regulated in the individual states by their respective Nurse Practice Acts and the common law. The various acts establish educational and examination requirements, provide for licensing, define functions of the professional nurse in general and specific terms and also set up public boards of nursing practice to administer the Practice Acts. There is a great diversity in these laws.

   Some statutes are so restrictive that they specifically prohibit independent nurse practitioners from practising autonomously.

   Three alternative legislative amendments have been proposed to clarify the legal status of nurse practitioners.

The most popular of these is the additional amendments approach:- professional nurses may perform acts under 'special medical protocol' which would otherwise be outside the scope of nursing practice.

Some states have revised their Nursing Practice Acts to include new definitions of professional nursing. There are at least 30 states which have formulated new parameters for nursing care. Three states created a new nursing entity 'the nurse practitioner'. Some states have a 'Certified Nurse practitioner'.

(from Studner and Hirsh 1986)

3. NURSE PRACTITIONERS - TITLES, DEFINITIONS AND CHARACTERISTICS

"Practitioner - one engaged in the practice of any art, profession or occupation, especially in medicine, surgery or law".

Shorter Oxford English Dictionary 1973

3.1 Ralph (1991) has pointed to the semantic difficulties associated with the terminology in the British context, pointing to the scope for confusion between a **practising nurse** - a nurse whose name appears on the professional register held by the UKCC, a **practice nurse**, and a **nurse practitioner** which is

"Used to denote a level of clinical activity and responsibility which goes beyond the 'conventional' role of nursing practitioners."

3.2 This confusion has been emphasised by our computerised literature search. A paper entitled 'Analysis of training needs of qualified nurse practitioners' (Sheperd 1992) gave no indication that it referred to any group other than practising nurses, as did another article 'Rights to healthcare and the role of the nurse practitioner' (Dimond 1992).

In other articles the term is used to distinguish between some of the various professional tracks in nursing. For example, Le Roux (1988) describes the

"conflict of interest between the nurse researcher and the nurse practitioner."

Castledine (1992a), who identifies himself with those opposing the term, writes of

"innovative nursing practitioners specialising in purely nursing innovations..."

Although here he has used the term 'nursing practitioner' rather than nurse practitioner (as did MacGuire).

3.3 Castledine (1992b) has elaborated on the UKCC view that the nomenclature is both ambiguous and misleading. The article quotes the UKCC view:

"the term is ambiguous because all nurses 'practise' and this term can be restrictive when used to describe one discrete area of practice by an individual, which is not specified by this term ... it is also misleading because it is taken by some to imply that it is only those nurses who are designated 'nurse practitioners' who possess the characteristics commonly associated with nurses who describe themselves in this way. These characteristics often include a personal case-load, delegated 'prescribing' arrangements and a higher order of decision-making in the case of discrete groups".

A UKCC professional officer has subsequently claimed that the council was not trying to 'stultify innovation' but was attempting to 'create a framework for developing nursing innovation that has order and consistency throughout the UK' (Laurent 1993).

In this endorsement of the UKCC views it seems that Castledine may support the concept but not the terminology, suggesting that elements of the role should be embraced into the proposed UKCC model for specialist and advanced practice.

In contrast, Cable (1994) claims support for the 'title rather than the original concept' citing as evidence the desire of health service managers to bid for the DH offer of £300,000 for nurse practitioner development projects.

There are also other commentators who may, or may not, hold firm views about the title but approve of the concept as long as the latter is defined by nurses operating within current nursing conventions. (The confusion of title with concept makes it difficult in a number of articles to distinguish clearly between the two models outlined by MacGuire.)

3.4 There is also evidence that the word practitioner is used to denote or imply some progression to a degree of independence, or level of practice, which does not necessarily mean that the nurses involved are nurse practitioners. Thus, Stilwell (1987) states that

"Practice nurses have a duty to themselves and to their patients to research and demonstrate their value as practitioners."

The term may also be used to imply an elevation in status: Butterworth (1988) lists the various divisions in community nurses, foresees the arrival of the nurse practitioner role/title and inquires who will get this '*accolade*'.

The possible misunderstanding associated with the word as a noun has not prevented its adoption as a verb. Nurse practitioners and nurses (the point of Hammond's article) now **practition** instead of, or as well as, nurse (Hammond 1993, Laurent 1993).

3.5 **Practitioner**, presumably in a generic sense is commonly used in job advertisements, usually in the field of social care. There is an 'MSc Practitioner Research' course at Manchester Metropolitan University designed to enable practitioners from a wide range of public and voluntary organisations (social work, health services, education) to carry out research into their practice (Course information details). This would be open to all nurses and not just nurse practitioners. An increasing general use of the term leads to endless scope for a misunderstanding of nursing developments **outside** the occupation as well as within it.

3.6 Cable (1994), writing within the primary care (and RCN) framework, has recently reviewed some of the issues relating to title and practice and attempts to distinguish between those who have applied the term to denote status and those who have attempted to identify key characteristics. His definition (or description) is of

"an advanced nursing clinician. Her role may involve interventions and practices traditionally within the medical domain. Her practice should be innovative and focused on those areas where her efficacy is equal to, or better than, her medical colleagues."

(There may be some contradiction here. If efficacy has already been proven the practice cannot be entirely innovative).

He also notes the confusion of terminology which is said to result from the failure of the UKCC to offer clarification.

Although his paper is said to describe the testing and evaluation of the nurse practitioner role in a number of settings, there is little evidence of this in the text.

3.7 In the introduction to a collection of papers and responses (Salvage 1991) on nurse practitioners in primary health care, it is stated that

"Rigid definition of the role is neither feasible nor desirable, but a set of underlying principles could be useful, embracing the role within the wider community as well as in relation to individual clients."

However,

"the role ... represents too a philosophy of autonomous nursing practice, together with accountability for that practice."

Individuals discussing their work as nurse practitioners do frequently provide a definition - it therefore seems possible to define the term when the context of practice has been specified.

3.8 A definition (or set of defining characteristics) of the nurse practitioner has been provided by Mallet (1993).

"A nurse practitioner was commonly thought to be an independent, autonomous and expert clinician, who was educated to an advanced level (at least first degree and/or with a further qualification in a particular area of care). In addition it was suggested the practitioner should be able to make decisions in relation to the assessment and treatment of patients, carry their own caseload as well as make and receive direct referrals from other health care professionals. In some instances it was felt that the practitioner should have agreed, limited prescribing power. The nurse practitioner was also

viewed as having a role as a teacher, advisor, researcher, advocate and leader."

3.9 It has been claimed that whatever the model or setting seven characteristics appear to be important (Fawcett-Henesy 1991).

- direct/primary access;
- choice for patients;
- diagnostic and prescribing powers for practitioners;
- authority for referral;
- more personal attention during the consultation;
- time;
- counselling and health education.

In the same volume Schofield (1991) lists eight commonly cited attributes of the nurse practitioner but questions whether they are exclusive to this worker. A large and reasonably functioning health care team including midwives, health visitors, community and practice nurses is used as an example. Each is said to have areas of skill, training and knowledge. Each is directly accessible to patients and all are frequently the prime carer and decision maker for individual patients.

"The only key attribute that is commonly missing is the training required to perform simple clinical examinations..."

3.10 Gavin (1994) - considering primary care - follows a similar pattern listing the following role outlines

- offers direct access to primary health care;
- assesses the health of clients with undifferentiated and undiagnosed conditions, utilising verbal and physical examination techniques;
- is able to differentiate between abnormal and normal findings with reference to disease and illness states;
- initiates treatments and care falling within his/her range of knowledge and skills;

- evaluates care and treatment and discharges clients from the primary health care system as appropriate;
- makes autonomous decisions and exercises professional accountability;
- provides instruction and counselling to clients, particularly in relation to health promotion and maintenance;
- refers clients to physicians and other agencies when necessary.

3.11 It is doubtful how useful these lists are as a means of classification. They refer to organisational and structural factors, to the activities and processes of work in addition to occupational ideologies and boundaries.

Given the imprecision of such 'definitions', it is perhaps not surprising that nurse practitioners are frequently labelled in terms of what they are not. Thus

- nurse practitioners are not mini-doctors (Cumberlege 1986, Haynes et al 1992, Robinson 1993 and numerous others);
- they are not substitute doctors (Clark quoted in Warden 1988);
- nor are they doctors *manqué*, physician's assistant nor nurse specialist although they may share some of the same characteristics (Rivett 1991);
- and Cable (1994) claims that nurse practitioners.

"are not surrogate doctors, not technicians, certainly not power crazed elitists but rather nurses with vision, self-respect and confidence in our profession and in ourselves."

3.12 It seems that some nurses do **not** wish to use the title although the work they are described as performing may correspond with that of nurse practitioners. For example, in a description of a nurse run hypertension clinic:

"we are neither doctors, Girl Fridays nor nurse practitioners. To run a hypertension clinic the nurse has to be someone who has initiative but is sympathetic towards doctors. I feel strongly that this is not a nurse versus doctor venture but a nurse with the doctor exercise." (Barnes 1984).

Andrews (1988) depicts the work of a district nurse at length, appearing to believe this fulfils the nurse practitioner criteria. However, the nurse involved

"does not find it necessary to call herself a nurse practitioner. She is happy to be known as a district nurse."

(Andrews describes herself as a district nurse practitioner).

3.13 These are individual examples of self-conscious refusal to use the term but the same may be true of whole groups - for example, occupational health nurses. It is not known if this has been a deliberate decision or just never been an issue.

Occupational health nurses provide an important point of entry to the health care system and their roles have expanded to include

"often quite sophisticated areas of management, education, consultation, health assessment, health promotion, counselling, rehabilitation and research." (Radford 1990).

This author cites a 1982 study which shows that 39 per cent of occupational health nurses worked alone without professional support from colleagues or from a doctor. 13 per cent did not have access to a doctor at all. This group are also treated separately under the Medicines Act 1968. The Medicines (Prescriptions Only) Amendment (No. 2) Order 1978 allows nurses working within an occupational health scheme to prescribe and supply certain medicines.

Clinical Nurse Specialists

3.14 Rivett (1991) drew attention to the similarities between nurse practitioners and clinical nurse specialists. The index in Hunt and Wainwright (1994) gives a cross reference to specialist nursing and one of their contributors considers that it may be more sensible to call these practitioners **specialist nurse practitioners**. This confusion - or problem - has been made very obvious to us since many of our requests to RHAs for information about nurse practitioner posts have produced

detailed information about clinical nurse specialists. (The possible implication being that the nurse practitioner description relates to a level of practice or position which is outside the usual organisational structures.)

Castledine (1982) (asking such nurses) identified the key factors in the clinical nurse specialist role

- involved in direct care;
- held directly responsible and accountable for nursing actions;
- involved in clinical research;
- educated in clinical nursing at a higher level than state registration;
- involved in education programmes: health care workers and patients;
- able to co-ordinate care with other professional health workers;
- be an expert in the nursing process approach to care;
- act as a consultant to others;
- have freedom and flexibility in the role;
- concerned with writing up and publishing;
- act in a liaison capacity between hospital and community.

This framework has been used by other writers subsequently but, as McGee (1992) points out in her consideration of the '**advanced practitioner**', there was (and presumably still is) a serious lack of agreement as to the exact functions of a clinical nurse specialist. (**Advanced** is also making increasing appearances in association with the nurse practitioner title, presumably to accommodate some aspects of the UKCC deliberations on this issue).

3.15 Smith (1990) uses four categories of activity for the clinical nurse specialist derived from other writers:

- skilled practitioner;
- competent researcher;
- knowledgeable change agent;
- accomplished educator.

She also stresses that the emphasis placed on the different elements of the role varies **according to the stance from which they are viewed**. Mangan (1994) confirms some of these points:

"The notion of specialist nurse is not new but, as with many developments within the profession, it is one that has been dogged by a multiplicity of interpretations ... Although the job title of nurse specialist is fairly widespread, there is almost as wide a spread in the range of abilities and responsibilities attached to it."

3.16 We have not judged it feasible to examine the literature of every clinical specialty and these instances are simply provided as examples although they may in some cases give significant clues about the differences and similarities between specialist nurses and nurse practitioners.

- As Siddons (1992) notes, during the 1980s there was a marked rise in clinical specialisation in all areas of nursing, particularly in diabetes. About 96 per cent of health districts in the UK employ at least one diabetes specialist nurse. (This paper reports on a working group of European Diabetes Nurses - there is a general agreement that educational developments in this field should encompass the whole of Europe. We have found little similar in the writings on nurse practitioners although chapters in Salvage 1991 and Hunt and Wainwright 1994 consider the European dimension. However the concentration on a particular disease would tend to simplify some of the issues.);
- Clinical nurse specialists are now said to form the backbone of many rheumatology units, and play a vital role in dealing with patient anxieties about issues such as drug management (Cohen 1994). (Articles relating to rheumatology nurse practitioners will be summarised in 7.2);
- The role of the respiratory nurse specialist is relatively new and still emerging in nursing but it does have historical roots in the tuberculosis family visitor (Heslop 1993). It is said that respiratory nurses have still to clarify their role in relation to medicine and to define which aspects of nursing may enhance and benefit the care of respiratory patients. There are now some 140 respiratory nurses who are based primarily in hospitals but may make community visits. Expertise has been

largely acquired through experience and self tuition (as reported by some nurse practitioners). The role has often been initiated by a respiratory physician. (The latter may be a significant distinction.);

- Markham (1988) describes how clinical nurse specialist (CNS) posts have developed within the management structure of the Royal Marsden Hospital where 'there is no longer a division between those who manage and those who care'. Quality assurance and consumer satisfaction surveys have been used to evaluate nursing, consumer demand has provided additional indicators and 'CNSs with patient caseloads can quantify demand'. (Nurse practitioners also are said to carry caseloads.)

3.17 Clinical nurse specialists may also be associated with particular techniques rather than specialties. Hamilton (1993) describes how the clinical nurse specialist role in total parenteral nutrition is extended (or expanded - both terms are used) to included insertion of tunnelled lines for the purpose of parenteral nutrition, chemotherapy and long-term antibiotics. Costs were cut, doctors' time freed and patient care said to be improved. (These are the frequently quoted justifications for nurse practitioner schemes.)

3.18 In an article examining the consequences of the UKCC *Scope of Professional Practice* document 'which places decisions about the boundaries of practice in the hands of the individual practitioner', Carlisle (1992) reports on developments at North Manchester General Hospital which preceded publication. The changes entailed dispensing with (extended) certification procedures and the introduction of a new system overseen by clinical nurse specialists. Teaching and assessment of competence are now the responsibility of the clinical nurse specialists (H grade) who have been appointed in every directorate. (An accident and emergency clinical nurse specialist in this hospital would appear to have a different set of functions from an emergency nurse practitioner. Examples are given in 7.6 to 7.16).

3.19 Policy documents may also confuse the nurse practitioner and clinical nurse specialist or at least use the same group of nurses as an example of each. The SETRHA *A Quantum Leap* (1992) paper uses the community psychiatric nurse

(CPN) as an example of a clinical nurse specialist although in the next breath it notes that

"...some nurses already practice in ways similar to the nurse practitioner. Nurses in the mental illness and mental handicap sectors traditionally carry their own caseloads, managing care and treatment independently, and referring clients to fellow professionals."

This description would presumably include most CPNs as well.

3.20 Details of the Nurse Practitioner Diploma at the Mid and West Wales College of Nursing and Midwifery refer to nurses developing in-depth knowledge in their field of practice

*"with many becoming **clinical nurse specialists**. The diploma is designed for community nurses and specialist nurses in primary health care or working in any area of hospital specialist practice"* (Course information details 1994. Emphasis added.)

An MSc in Clinical Nursing at the University of Liverpool has been designed for nurses working or intending to work at the 'practitioner' level and to prepare nurses to undertake physical examinations of patients, interpret signs and determine appropriate management plans within agreed protocols. This course is said to differ from the traditional 'nurse practitioner' courses in that it seeks to prepare a 'bi-cultural nurse' who is able to work in primary and secondary care. The outcome will be the '**Nurse Clinician**' who

"will function independently, or within a clinical team of doctors or alongside a single medical practitioner within agreed protocols, and will demonstrate competence in a wide range of skills complementary to the doctors' role in the delivery of health care in primary, community and secondary care areas" (Course information and personal communication 1994.)

3.21 The lack of clear differentiation between clinical nurse specialist and nurse practitioner roles within some settings is not a peculiarly British phenomenon. Kitzman (1989) examines the respective roles of nurse practitioners and clinical nurse specialists in the USA and suggests that the two roles are now blurring and that developments in health care provision could lead to a merger. This appears to be reflected in some educational programmes as the following title would imply: 'Breaking with tradition: blending master's programs for clinical nurse specialists and nurse practitioners' (Anon 1993).

Much earlier, Tomich (1978) examined the confusion surrounding the expanded nurse role and the multiplicity of titles and training programmes associated with these developments.

4. THE BACKGROUND TO THE DEVELOPMENT OF THE NURSE PRACTITIONER

4.1 Within the UK the nurse practitioner movement is said to have arisen for three main reasons (Fawcett-Henesy 1991):

- a lack of appropriately qualified and experienced medical practitioners (for example in Accident and Emergency Departments);
- patients' dissatisfaction with the quality of care;
- difficulties in access to primary health care.

The papers that are cited in evidence for the first two reasons - the Oldchurch Hospital introduction of nurse practitioners (Ramsden 1986, Head 1988) and Stilwell et al (1987) - do not appear to sustain the inferences that have been drawn.

The evidence for the third relates to work with the homeless (Burke-Masters 1986). Turton (1985) used this to illustrate the deficiencies of a primary health care system based on GP registration and considered whether a nurse practitioner cadre (appropriately trained district nurses and health visitors) might provide a more responsive service.

4.2 In one of her earlier papers Stilwell (1985a) sees the place of the nurse practitioner (within primary care) as providing access to nursing care for all and in emphasising the importance of preventive medicine within General Practice. The nurse (or nurse practitioner) was said to focus on achieving higher levels of health and on coping with illness. This was contrasted with the work of other community staff who had specified 'target' groups. It was clearly stated that - in this context - there was no need of physician replacements.

4.3 As Butterworth (1991) states, the pioneering work of Stilwell and Burke-Masters has made a significant contribution to the development of the role of the nurse practitioner in the UK but he also recognises these endeavours as 'individualistic efforts'. This paper, a description of the development of the UK nurse practitioner for a US audience, uses material from two RCN documents (*Boundaries of Nursing* 1988 and *Specialities in Nursing* 1988) as evidence for his statement that

"the profession has laid a claim that determines two steps to provision of an NP grade: expert knowledge or clinical skill and permission to break the boundaries of previously defined roles".

4.4 Recent health service changes underlining the importance of primary/community care have provided other justifications for the emergence of nurse practitioners. In an article entitled 'The Rise of the Nurse Practitioner', Smith (1992) outlines the recent initiative by the SE Thames RHA to investigate the effectiveness of nurse practitioners in primary care. The project was said to have arisen for two reasons:

- the general shift towards developing primary care services;
- looking at enhanced roles for nurses which are outcome-focused.

(Although the second point seems to underline the importance of nurses or nurse practitioners as an end in themselves rather than as a means to meet particular health needs).

The evaluation of this scheme is said to be looking at three things in particular - practitioner performance, patient satisfaction and resource effectiveness.

4.5 Gavin (1994) in her investigation of the nurse practitioner within the UK ('Nurse practitioners: Here to stay?') considers the role appropriate to many primary health care settings in Britain and that

"The implementation of this role constitutes a real opportunity to provide comprehensive and cost effective, quality primary health care services, both improving client choice and satisfaction."

However it is also suggested that more research is needed with reference to the outcomes of care. Nevertheless she considers that the role will go some way to reducing

*"the inequalities that continue to exist in health care today and will add to the armoury working towards the **Health of the Nation** targets."*

4.6 As Allen and Hughes (1993) point out, much of the recent interest in expanded nursing roles in hospitals (whether termed nurse practitioner or otherwise) has resulted from the requirement to reduce junior doctors' hours. Pickersgill (1993) presents the 'New Deal' as a tremendous opportunity for nurses, describing the 'most successful' of these initiatives as the night-nurse practitioner initiative at Guy's Hospital (Morley 1992). The greatest immediate potential is said to be in acute hospital work, although there are likely to be consequences for the community.

Pickersgill states that the 'new work' acquired could be defined as nursing rather than medicine although such views are challenged by Moyse (1993), who emphasises the theme of commonality and collaboration with the sharing of various skills between doctors and nurses.

4.7 Predictably there have been numerous criticisms of these initiatives within nursing. Many writers (for example Wright 1991) believe that there will be an offloading of 'routine' tasks or those performed at inconvenient times based on the assumption that nurses' time is not already fully utilised. Carlisle (1994) reports (then) unpublished research which showed this was the case and that nurses (and midwives) **were** bearing the brunt of reductions in junior doctors' hours without extra training or resources. However, the changes have

"enhanced the role of the nurse and pushed forward development of the practitioner role".

4.8 The developments have largely been described in terms which are both rational/managerial and altruistic. But as Shuttleworth (1991) points out, they are also a chance to accommodate 'the high fliers' - this is a way of developing the profession's career potential with a band added to the top of the grading system. (High-fliers are also referred to in some of the medical publications on the topic, for example 7.2.) She suggests that the profession should work towards the creation of a range of nurse practitioners.

This article clearly distinguishes between the nurse practitioners and the remainder of the nursing workforce. Robinson (1992) has criticised such distinctions within the occupation in the context of primary nursing. She proposes that the evaluation of such innovations should include a consideration of the predicted impact on the workforce as a whole. This is not something that has been given much priority in the nurse practitioner evaluations examined to date.

As Carlisle (1994) hints, nurse practitioner developments may also be associated with the status of the occupation as a whole, rather than with the status of individuals within it and Potter (1990) claims that

"nurse practitioners will undoubtedly give added credence to our claim for professional status, so it is imperative that the foundations are well laid and the planning is thorough."

5. NURSE PRACTITIONERS IN GENERAL PRACTICE

5.1 The development of the nurse practitioner role in Britain owes much to the efforts of Stilwell working in two Birmingham practices during the early 1980s. One of her early descriptions of this role was that of a doctor and a health visitor combination (Hall 1982). Stilwell's work has been reported in numerous interviews, descriptive accounts, research papers and subsequent collections. (For example, Stilwell 1982, Stilwell 1984, Stilwell, Greenfield, Drury and Hull 1987, Stilwell 1985a, Stilwell 1985b, Stilwell 1988, Drury, Greenfield, Stilwell and Hull, 1988).

5.2 In the context of the practices within which she worked the title nurse practitioner was used

> *"to denote an autonomous nursing role in which a nurse, who had been trained to identify abnormal physical signs and symptoms and to manage some minor and chronic illnesses, would see any patient who chose to see her (or was referred to her by another health worker). Patients were always given the choice of seeing the doctor or the nurse practitioner, so it was left to them, the consumers, to define the role of the nurse practitioner."* (Stilwell 1985b).

The role is referred to as 'highly extended' but also as expanded. The words 'delegation' and 'supervision' appear although Stilwell clearly believes that the nursing role in general practice is quite distinct from that of the physician.

5.3 These publications cover the issues of

- training (Stilwell 1988) - self devised, apprenticeship model, supplementation by a US course;
- the use of protocols (guidelines agreed with the supervising physician and based on the Internal Medicine Standing Orders for Family Nurse Practitioners of the Department of Family Medicine at the University of North Carolina. Example in Stilwell 1982);
- of prescribing;

- of legal liability (Stilwell 1982, Stilwell 1988) The Medical Defence Union agreed to extend their coverage through one of the practice doctors to include the nurse practitioner although this did not cover the on-call rota. Subsequently the RCN have covered nurses with similar roles after accepting the case that the scope of practice was 'a legitimate extension of the nursing role';
- funding for the major project - West Midlands RHA via the University of Birmingham (Stilwell, 1988);
- information to patients - a notice advertising presence of nurse practitioner as a nurse who is also qualified as a health visitor and has had further training so that she can advise about common health problems;
- use of conventional medical records (Stilwell 1988);
- indication that the receptionist might have influenced patient choice of which health care professional to see (Stilwell 1988);
- length of time spent with nurse practitioner.

5.4 There are two evaluative papers associated with this work. Stilwell, Greenfield, Drury and Hull (1987) examined the working style and pattern of consultations over a 6 month period.

Most patients were said to have chosen a consultation with the nurse practitioner '*appropriately*'.

In more than one-third of all consultations the nurse managed the presenting problem without further referral for investigation, prescription or other medical advice. Of the referrals that were made (19.5 per cent of sample), most were to the general practitioner (62 per cent): 15 per cent were made directly to a consultant and 15 per cent to the social services.

The authors concluded that:

"nurses have a much larger and more autonomous part to play in the care of patients than hitherto."

5.5 The second study (Drury, Greenfield, Stilwell and Hull 1988) investigated the acceptability of a nurse practitioner to a random sample of 126 patients.

Women were nearly three times more likely than men to consult a nurse practitioner but 54 per cent of patients had difficulty in differentiating between the role of the nurse practitioner and the doctor. Of those who thought there was a difference in the roles the most frequently mentioned factors were qualifications, ability to prescribe, and type or severity of problem dealt with. 53 per cent of the 61 patients who had seen the nurse practitioner were prepared to see her again.

Throughout this paper the comparisons are with American nurse practitioner and with British nurse (not nurse practitioner) studies.

The paper concludes with the suggestions that the nurse practitioner role may help to improve anticipatory care in general practice, may provide emotional support for some patients and is acceptable to most people.

5.6 A description of a nurse practitioner role developing from previous work as an community nurse attached to a general practice in a rural area of North East Scotland is provided by Stilwell and Restall (1988).

The change in role resulted from participation in a research study relating to depression in the elderly. Of the 1778 people interviewed 17 per cent were reported to have some unmet need. Restall considered that the 'care gap' could be occupied by a nurse practitioner who

"could manage uncomplicated problems, institute preventive measures, and provide emotional support and guidance."

Training in aspects of physical examination was given in the practice and in the local general hospital. There was further training from another hospital, (ECGs, cervical smears, pathological results). Following completion the nurse practitioner was to provide an alternative consultative pattern for patients with 'trivial' and minor illnesses. The role was said to include assessment, problem solving, teaching,

counselling and health education. (Most of the work is reported to be related to the latter factors).

Unlike the Birmingham practices cited above this nurse practitioner worked with a practice where practice nurses were employed. The latter carried out 'routine' nursing tasks such as dressings and injections. Listed as part of the nurse practitioner's job description are immunisations, ear syringing and running a hypertension clinic.

In this practice the nurse sees any patient who wishes to consult her. Referral to other workers in the practice is mentioned but referrals outwith it are not.

This particular project does not appear to have been evaluated but it is thought that the quality of care to patients has been improved by adding a new dimension to the practice. The description presented is perhaps more readily understood as a redistribution of nursing work within general practice rather than any significant alteration in the division of labour between doctors and nurses.

5.7 Diamond (1986) gives an account of her work as a nurse practitioner which developed from two requirements from the general practice involved: to increase practice income and to improve the services to their patients.

She lists the reasons for the designation of the title of '**nurse practitioner**'

- to denote a high degree of autonomy from the doctors;
- to soothe the health district's nursing hierarchy;
- the presence of a team of health visitors, a community psychiatric nurse, a medical housekeeper and the district nurse further defined the new role;

Protocols were established by the GPs for use in the well woman clinic and in the family planning clinic the nurse practitioner was 'taught to extend my role by the doctors'.

From the account given it is difficult to distinguish anything in this role that is distinctly different from that of many practice nurses.

5.8 Most subsequent writers have cited the Stilwell studies without acknowledging their possible limitations. Salisbury and Tettersell (1988) are an exception, although their point that there is no description of the patients' reaction to the project seems to have been addressed in a subsequent paper (Drury et al., Nov.1988).

Salisbury and Tettersell compared the work of a nurse practitioner with that of a general practitioner. (The second author was the nurse practitioner although not the first postholder.) They used the term nurse practitioner to define an experienced nurse with extra training (HV, RSCN in this case) who worked with a large degree of autonomy in general practice. Like Stilwell et al (1987) they considered that the job description closely matched that envisaged in the Cumberlege Report (1986).

The nurse practitioner was appointed in order to provide patients with a different type of service, particularly counselling and education. It was also hoped that the nurse practitioner would share the burden of acute minor illness with the doctors and improve the care of patients needing regular review. She ran open access surgeries as well as a range of clinics.

The nurse practitioner undertook an introductory training programme and subsequently attended weekly tutorial sessions and relevant study courses. Practice publicity emphasised her role in dealing with minor illness, health advice and preventive medicine. The nurse practitioner could recommend treatment available without prescription or ask a doctor to sign a prescription from a limited range of items. (The issue of repeat prescriptions was not mentioned).

5.9 The study was conducted over a ten week period during which the nurse practitioner saw patients of a similar age and sex distribution to those seen by the doctor but saw different types of problems. More of the patients seen by the nurse practitioner were for follow up of chronic diseases, health advice and screening measures while fewer were acutely ill. The doctor dealt with four times as many patients. 78 per cent of the nurse's consultations were managed without referral to a doctor and 89 per cent

without resorting to prescribed drugs. There was a high level of patient satisfaction with her work. The authors emphasise the need for flexibility in defining the role which

"is partly defined by other local nursing and medical facilities."

Nurse practitioners are said to be a valuable extra resource for the developments of new areas of care rather than a cheap substitute for a general practitioner.

Further details of the particular arrangements pertaining at this practice are reported in Giles (1993) including details of salary (H Grade plus an additional sum) and participation in practice decision making.

5.10 The movement towards the use of nurse practitioners within general practice is also distinguishable in the GP literature of teamwork (much of which focuses on delegation) published since the mid 1960s. Bowling (1980) uses the term and sees this as an **expanded** role which would require 'an **extension** course' for preparation. The research study on which these ideas were based was part of an analysis of the history of general practice and an investigation into its contemporary problems: the practices and attitudes of 68 randomly selected general practitioners and 75 nurses working as either treatment room or district nurses were surveyed (Bowling 1981).

5.11 It is a fairly common feature of studies of this period that comparisons are made between health authority and doctor- employed nurses. For example, in a four year study of the work of the practice nurse in the treatment room of a South Yorkshire practice, 61,806 coded procedures were studied (Waters et al 1980). 30 per cent of these were not part of the usual nursing curricula and required initial supervision, assessment or training. Nearly 15 per cent of the sample were making a first visit and did not require referral to the doctor. A further 17 per cent were referred to a doctor. The authors claim that this would not have been possible with attached nurses requiring health authority authorisation as opposed to practice nurses, for whom procedures were authorised an a personal basis.

5.12 The work of practice nurses to whom patients were allowed 'open access' was analysed by Marriott (1981). The attendance rate for the population registered with the doctors was 964 per 1000 per year. In nearly half of the attendances the nurse was the person of primary contact for the health care team and she dealt with three quarters of these cases without referral to a doctor. The safeguards built into the system were that the nurses were 'experienced and competent'. It was emphasised that there was immediate access to medical advice and doctors must be sufficiently flexible in their working practices to give this help. Most patients decided which problems were suited for nurse management.

It was the opinion of the practice that the nurses' care was adequate but that open access presented them with such a wide range of problems that their activities had moved ahead of the legal restrictions placed on general practitioners concerning the delegation of work.

5.13 Miller and Backett (1980) reported a postal questionnaire study of 533 GPs about the appropriateness of nurses (after suitable training and under the supervision of the doctor) undertaking certain clinical tasks (history taking, examination, diagnosis and advice on treatment) in general practice.

Two thirds of the GPs were in favour of the 'extended' role and prepared to delegate clinical tasks. These authors use the title Family Practice Nurse. The introduction of a nurse with these capabilities is suggested as a response to expected increase in work load and the under-use of relevant skills. The authors cite precedents in nurses assuming clinical tasks in hospital. They also claim to be aware of developments which might erode the 'essence of nursing' but considered that the next and necessary step was for nurses themselves to ascertain the acceptability of the extended role.

5.14 Bowling (1988) reviewed the changing role of the practice nurse in terms of surveys of work, delegation of tasks (tabulated), tasks most commonly approved by nurse managers as being within the 'extended' role of nurses employed by the DHA, attitudes of GPs and attitudes of professional bodies.

In the same volume Cater and Hawthorn (1988) provide a further review indicating the evolution of the privately employed practice nurses' work pattern, particularly during the previous ten years. They conducted a study in Nottinghamshire comparing the work of various categories of nurse working in general practice (health authority employed vs. GP employed).

As part of this study nurses were asked if they thought they had extended their role towards that of a **nurse practitioner**. It was suggested that the range of nurses' duties and responsibilities could be conceived of as a continuum. At one extreme was a nurse with a role limited to carrying out only delegated tasks, and at the opposite end was a nurse practitioner who was encouraged to take on additional responsibilities, and was available for patients to consult for a range of treatments, assessments or advice without necessarily seeing a general practitioner. A visual analogue scale was presented.

The authors note that not everyone would agree with this conception and quote Fawcett-Henesy's remark that

"there is no way you can become a nurse practitioner without training." (in Jesop 1986).

More of the practice nurses (32 per cent) thought they had extended their role in this way than the district (21 per cent) and treatment room nurses (26 per cent). Overall, 39 per cent of the sample wished to extend their role towards that of a nurse practitioner.

The issue of training is also raised by Bolden and Bolden (1986) in an essay on the practice nurse. They write of the need for a clear definition of that role in order to design a training course to meet the requirements of the position which range

"from a spare pair of hands to a full nurse practitioner."

5.15 A study of the social and occupational characteristics of 300 practice nurses carried out by Greenfield et al (1987) in the West Midlands revealed that a number of

practice nurses felt that in many ways the manner in which they worked resembled that of the nurse practitioner. 15 per cent of nurses in this sample wished to extend their role further.

The degree of overlap - or the continuum in practice noted by many commentators - led to Bowling's suggestion that there should be a more detailed analysis of the content of the practice nurse's workload before specific recommendations for a separate nurse practitioner role could be made. She also hints at the possibly unwelcome consequences for practice nurses (Bowling 1987).

But the idea that the nurse practitioner will develop from the practice nurse, rather than from other nurses working in the community, is common within these publications - for example Martin sees the former as an extension of the latter. ('Nurse practitioners: Extending the role of the practice nurse' in *Pulse* Nov. 26th 1991). Such nurse practitioners would obviously be working with a registered practice population.

5.16 Practice nurse numbers more than doubled between 1988 and 1990. Estimates for 1992 suggested that their numbers have continued to grow and that there were 9,500 WTEs working in England and Wales. These nurses were said to have a wide but still poorly defined role which covered clinical activities in the practice, health promotion work and home visits (Atkin et al 1993). The evidence also suggested that there was role overlap between GP employed practice nurses and health authority employed district nurses and health visitors (Lightfoot et al 1992).

5.17 The later rapid expansion in numbers is said to be a consequence of the 1990 contract for GPs. Robinson et al (1993) reported a national survey of attitudes of a random sample of general practitioners towards practice nurses. To fulfil the requirements of the new contract, 50.7 per cent had created a new nursing post, 83.1 per cent had expanded the role of nurses already employed and 89.7 per cent wished to see further expansion. Lack of physical space was the most frequently reported limiting factor. Only 43.7 per cent recognised lack of training as a hindrance to role expansion. (This is an interesting shift to the problem of physical limitation as

opposed to professional liability/competency/ acceptability issues cited in the earlier studies of this type.)

5.18 Coyle et al (1993) conducted a study intended to show if recent changes (particularly the implementation of the new GP contract) had improved the quality of GP care, at least from the consumers' point of view. Two surveys of a random population sample based in SE Thames region were made: the second one included questions about the role of the practice nurse.

Only 41 per cent of those who consulted a nurse received preventive advice during consultation and 53 per cent expected a GP to do this anyway. 49 per cent thought they could consult the nurse without seeing the doctor first, 16 per cent thought they could not and 33 per cent did not know. The main reasons for consultation included treatment for minor injury, removal of sutures and dressings, cervical smear tests, blood tests, cholesterol tests, general health checks on initial registration, ear syringing, ECGs and a variety of clinics.

There are several points to be gathered from this - firstly the diversity of practice nurse activities as reported by patients, secondly the relative ease of access to nursing care (at least for those on GPs' lists) and thirdly the issue of preventive advice. More than half of those surveyed appeared to see this as a 'medical' task and less than half received this from the nurse. These practice nurses may not therefore be incorporating health teaching into their practice in the manner usually claimed by this group - and by nurses in general.

5.19 It might be anticipated that GP fundholding schemes will, in a large part, determine further developments in nursing within general practice. Giles (1993) reported on partnership arrangements in general practice and, in particular, on the way that GP fundholding schemes altered the way in which GPs and nurses look at what they do and how they do it.

This article describes a practice in Runcorn where a nurse practitioner organised the practice's health promotion schemes, managed the practice nurse team and played

the lead role in contracting for community nursing services. (This is the only example found of a nurse practitioner acting as a manager of practice nurses).

5.20 Opportunities for the further development of practice nurses are considered from the nursing, as opposed to the medical, standpoint by Damant et al (1994), who suggest that the route towards managing the overall nursing care for patients could be to develop the role of nursing practitioner.

"This concept implies an independent practitioner working in collaboration with others. The collaboration is possible because of comparable levels of education and experience."

5.21 Bowles, who works as a nurse practitioner, attempts in a series of articles (1992a, 1992b, 1992c) to distinguish between a practice nurse and a nurse practitioner. The papers also report a small scale research project examining the work of nurses using the title 'nurse practitioner'.

She defines a nurse practitioner as a nurse working alongside GPs as an autonomous provider of health care in the setting of a general practice.

"But becoming a nurse practitioner does not mean taking on extra responsibility, but instead, extending our roles into areas where we can offer high quality care to our patients, from a perspective different from that of other health professionals."

The second article is in the form of a case study demonstrating this particular perspective and the third the report on a research project involving six users of the title working in SE England. Bowles reported surprise with what she found - some of these nurses were

"continuing to function in a position subservient to their medical colleagues"

and only two worked in a way 'identifiably different' from most practice nurses. (Criteria were not given.) All made referrals to specialist nurses in the community

but referral to medical consultants was an 'area of concern'. Even within this small sample there was much confusion between the roles of the practice nurse and the nurse practitioner.

This series concentrates on issues of status, authority and the necessity to challenge medical dominance of care. There is no description of the structures within which these nurses were working, of training, or of salary.

5.22 Recently Chambers (1994) has reported the evaluation of the Derbyshire nurse practitioner project. The early history of the project was published previously (Chambers 1991). This is an unusual example in terms of the fullness of the account and the relative independence of the evaluator.

The intentions were to utilise nursing skills more fully, to enable GPs to practice their medical skills more extensively and to give greater choice to patients. (It is unclear which whether the extra training considered necessary was directed at the first as well as the second and third factors.)

The three nurse practitioners, all with the same job description, worked in volunteer practices of similar type and serving similar populations.

Two of the eight listed 'main responsibilities' were:

- to see patients who present for diagnosis, treatment and advice; and
- to carry out examinations, make diagnoses and arrange treatments within the post-holder's competence, as agreed with the partners, and under the guidance of the mentor (a GP).

Two of the three project practices appointed the nurse practitioners from existing practice nurses (each had additional qualifications).

The initial funding was for three part time H grade posts with an additional sum for training.

This was by private study (concentrating on anatomy and physiology), observing GP consultations and consultant OP clinics, tutorials with doctors during which protocols were devised, tutorials with the FHSA pharmacy facilitator and attendance at relevant courses (family planning and counselling cited). In each location a form of practice was developed to fit in with the particular requirements.

5.23 The evaluation of the project used an action research model to assess the impact on the quality of care provided and on the sense of job satisfaction for nurses and doctors in the primary health care team. The key issues to be considered were those of desirability, acceptability and practicability.

- **Desirability**

  Three control practices were used in the evaluation and 200 randomly selected patients from the 6 practices contacted by postal questionnaire on 2 occasions (providing some base line levels). The areas covered were:

  - waiting times for appointments;
  - doctors' listening habits and understanding of patients' problems;
  - the comprehensiveness of the information given;
  - the time given to the patient.

  Chambers acknowledges the weakness of the design - volunteer practices, single FHSA area, use of patient satisfaction as an outcome indicator and the limited contribution to total care made by the nurse practitioners (because they only worked part time).

  There were few differences between those practices with nurse practitioners and the controls in waiting times for non urgent appointments or in the quality of consultation.

  Additional questions were asked of patients from the study practices: in only one case did there seem to a be a notable difference in a comparison between GP and nurse practitioner in the aspects of consultation behaviour

under study - listening, explanation, information and time. (The nurse practitioner scored more highly).

- **Acceptability**

  The rate of consultation (44 per cent of respondents) and reconsultation (half of this sample) was used to indicate acceptability to patients.

  Two rounds of practice discussions using a topic guide were used to gauge acceptability to colleagues, providing qualitative data on the project's impact. This version of the report does not include all the details but team members from every practice expressed a high degree of satisfaction with the way in which the new role 'enhanced' the services they were able to offer patients. There were some indications that the role was welcomed less by district nurses than by either health visitors or practice nurses.

  It was also considered useful to have an additional female 'practitioner' for gynaecological and paediatric problems. (All these nurse practitioners were female.)

- **Practicability**

  There was evidence for this partly in the continued employment of the nurse practitioners by the practices concerned after the initial period of funding had finished.

  However, Chambers concluded that the projects had not yet demonstrated whether there was scope for wider application. The time commitment for training was considerable and although thorough there was some concern that there was no formal recognition of this.

  There were also indications that other nurses were expanding their roles but that this was not being recognised. The nurses considered that there was less overlap between nurse practitioner and nurse roles than between nurse practitioner and GP. In only one case were the medico-legal aspects of practice of any concern.

Elements of the 'Derbyshire model' have been said to have been used elsewhere - in training courses and for other practices developing nurse practitioner schemes.

Chambers considers that the major forces encouraging the development of the nurse practitioner role are the nurses' needs for greater fulfilment, a desire by GPs to share work loads in different ways and the practices' perceptions of increased patient demand (for appointments). In addition the chronic disease management and health promotion work now performed by many practice nurses gives experience of extended roles which in itself acts as a 'stimulus'.

5.24 The nurse practitioners in the above study were employed on a part time basis. It is impossible to say whether this will turn out to be a common feature of nurse practitioner employment in general practice - and associated with very particular and discrete areas of work. Laurent (1993) reports another example in a recently qualified nurse practitioner who worked as a training programme co-ordinator for the Asthma Training Centre but spent one day a week in a GP practice. On that day her work was related to chronic disease management, diabetes, hypertension and menopausal problems. She would also assess 'using triage' patients who requested an emergency appointment with the doctor.

5.25 Nurse practitioners frequently run clinics: so do nurses who are not nurse practitioners. Barnes (1983) (see also 3.12) reports on a nurse-run hypertension clinic. This resulted from an MRC trial of intervention for mild hypertension. It was found in the pilot stage that it was essential to have a nurse to make the project manageable. There were fewer defaulters and compliance improved, which led to the research nurses being retained at the end of the study. (Some nurse practitioner schemes in hospitals have also developed from research projects. See 7.2) Relieving the doctors' workload, reducing waiting times for patients and the adoption of a structured approach to treatment were seen as the main benefits. Suggestions are made for the content of a further training programme which would include ECGs and venepuncture.

5.26 Jewell and Hope (1988) describe a study in which 34 newly diagnosed or poorly controlled hypertensive patients were randomly allocated to be managed in a hypertensive clinic run by a treatment room nurse or by the general practitioners during the course of their everyday work.

A joint GP/nurse clinic had been run for several years previously. The purpose of the study was to see whether the nurse could manage this group as well as the doctors and to establish whether this degree of delegation was acceptable to the patients. (The words 'extension' and 'expansion' are used interchangeably.) Eligible patients were given the choice of entering the study but only three patients declined to enter the trial when invited to do so.

Blood pressure fell in both groups so that, by the end of the one year study period, 67 per cent of those in the nurse-controlled group and 63 per cent in the doctor-controlled group were normotensive. Within this study, nurse appointments were 15 minutes and doctor appointments 10 minutes. The patients were said to have approved of the idea of economising on doctors' time and

"showed some understanding of the process of delegation."

The authors consider this to be a reminder that nurses have more to offer in primary care than doing simple tasks such as dressings, injections and ear syringing. (See 5.6 for the latter listed as a nurse practitioner's responsibility.)

5.27 In the absence of a body of data relating to nurse practitioner developments, writers frequently use material derived from studies involving nurses. Some of the Stilwell publications mention the work of Kenkre et al (1985) as evidence of their competence. Fawcett-Henesy (1987) cites this as the first report of the work of a nurse in the management of hypertensive patients. It is claimed that this model has been applied in practices all over the country with positive patient outcomes.

Stilwell (1991a) also reports a 3 year study designed to provide a functional definition of a nurse practitioner in general practice in Britain in which 11 nurses were

observed during 339 consultations. However, it is not immediately apparent whether the nurses studied were employed as nurse practitioners. (Conversely Stilwell (1991b), in an article for practice nurses, uses examples of nurse practitioner schemes to demonstrate outcomes achievable by nurses.)

Writers advocating the nurse practitioner role are thus using evidence relating to the efficacy of nurses who are presumably working within an existing (?traditional) division of labour between health care personnel. This may not be the most persuasive evidence to support their arguments for a fundamental change in the distribution of that labour.

5.28 It is unlikely that any of the schemes or developments reported would have been implemented unless there had been specific support and encouragement from the GPs involved.

Lenehan and Watts (1994) have recently summarised the position (for a GP readership), providing yet another definition of the nurse practitioner which now includes a formal training element:

"In essence, it is a form of advanced nursing programme legitimised by a specific training programme. This formal training ... has been pioneered by ... the IANE."

They refer to an unpublished study which found that the introduction of the nurse practitioner role into primary care settings can be strongly facilitated or inhibited by the medical profession.

6. NURSE PRACTITIONERS AND COMMUNITY NURSING

6.1 The Community Nursing Review team in its 1986 report (Cumberlege 1986) considered new roles and the development of specialist interests within community nursing. The concept of the nurse practitioner was commended by several organisations.

"We believe that community nurses who have, or acquire, the necessary skills in health promotion and the diagnosis and treatment of disease among people of all ages should have the opportunity to practise those skills in the setting of a clinic in the neighbourhood."

The review also considered whether this role should be a **career grade** for experienced nurses wanting to continue in clinical practice although they saw difficulties with this. They eventually recommended that nurse practitioners should be introduced into primary care. However the nurse practitioner should be managed by the neighbourhood nursing manager and assigned to a general practice for an agreed minimum number of hours. During this work the nurse would be accountable to the general practitioner for carrying out agreed medical protocols. (This report also recommended the phasing out of the subsidy for directly employed nurses.)

6.2 Butterworth (1988) noted the uneven implementation of the Cumberlege recommendations and the seeming inconsistency of government policy. He also commented on the *Promoting Better Health* White Paper (1987) which:

"carves up some dearly held territory in health promotion and screening, offering it fair and square to family doctors and practice nurses."

He reviewed the range of numbers of nurses, midwives and health visitors (there are 8 subgroups in this analysis) working in a community setting and writes of a ninth about to be devised '**the nurse practitioner**' although

"Who will get this accolade is as yet unclear. The District Nurse, the Community Psychiatric Nurse, the Practice Nurse, the Health Visitor could all lay legitimate claim."

6.3 Andrews (1988) has described the work of a district nurse who

- independently fulfils treatment and educative functions;
- provides open access to the public (practice patients);
- undertakes delegated and independent functions;
- works in a variety of settings;
- sees health promotion and education as fundamental to practice.

and considers that, in her health authority, both district nurses and health visitors are being encouraged to work as practitioners. Notes are recorded in medical records, physical examinations are conducted and drug regimes are instigated in accordance with practice protocols. (see also 3.11).

6.4 However there seems to have been a slow adoption of the term (as opposed to the concept) within community nursing. An NHS Management Executive working group visited a number of localities where managers and staff across the provider/purchaser divide and in local authorities were using opportunities presented by the three White Papers (Promoting Better Health, Working for Patients, Caring for People) to investigate the ways in which community services - including nursing - were organised and managed. Options for 5 types of organisational model were set out but in only one is a nurse practitioner mentioned - in a GP managed primary health care team. This is as an option rather than as a core member (Report of the Working Group 1990).

6.5 The literature mainly presents nurse practitioners in the community as a future aim rather than a present reality. For instance, Hancock (1991) presenting her vision for the future of community nursing lists the community nurse '*working in the practice setting as a nurse practitioner*'. The **present** is frequently reported in terms relating to occupational uncertainty. Traynor (1993) describes research at the RCN's Daphne Heald Research Unit which indicates that career related uncertainty is now a major

concern to nurses working in community. Much of this related to structural change (fundholding GPs, proposed changes in training, implementation of Community Care Act) but this uncertainty is also thought to result from the conviction that '*caring values*' are not shared by senior managers and GP fundholders. Health visitors were particularly worried about the invisibility of their work. Their own beliefs which are said to centre on holism, prevention and concentration on the population's vulnerable groups are compared with a '*medical model of care*'.

Trnobranski (1994) also notes the considerable uncertainty regarding the future for community nurses in the UK but suggests the evolution of the independent nurse practitioner may be a way forward for different groups of community nurses and should enable them to meet the health demands of people in a variety of settings. The concept could be developed in different ways. However, the paper presents no new evidence, simply restating the view that nurse practitioner services could be provided to medically underserved populations and those whose access to health care may be limited. In addition she considers that nurse practitioners could be well placed to assist in achieving national and international targets for health promotion.

6.6 Other groups have also seen the nurse practitioner model as part of their future. In an article discussing the implications of an increasing elderly population, Ogden (1992) has suggested that the community nurse could become a nurse practitioner specialising in elderly chronic care. Raynor (1992) writes of the acquisition of diagnostic expertise, with the community nursing sister as the key clinician developing into a community nurse practitioner. (The model of practice advocated is unusual in that it is based on one from Finland).

6.7 During the last two years the SE Thames RHA nurse practitioner projects have received a considerable amount of publicity. The development of nurse practitioners is said to have gathered momentum in the aftermath of NHS reforms and the general practitioners' new contractual obligations. The scheme has involved nurse practitioners working with current community staff but placing them in other locations, presumably on a sessional basis. They are to facilitate access to, and to provide, comprehensive care, by conducting physical and psychosocial assessments and prescribing care and medication within clear protocols. They have also to

assume responsibility for maintaining clinical competence (SE Thames RHA Nurse Practitioner Projects).

6.8 There appear to be a number of nurse practitioner **specialists** working in the community although we have little evidence on this point. Henry (1993) reports that specialists, for example in diabetes care, are becoming reorganised on a community basis. Small centrally based specialist units are being set up with an enlarged team of

"semi-specialist nurse practitioners as travelling advisers."

(This forms part of an article claiming to characterise the special skills needed to be a nurse practitioner.)

In the Inverclyde area, diabetic nurse practitioner clinics are staffed by community nurses who undertake three-monthly monitoring of patients, as well as annual eye screening and retinal photography (McIntosh (1991). These community nurses may have responsibilities in other fields - unlike diabetes specialist nurses.

6.9 There have been isolated examples of independent nurse practitioners working in the community. Burke-Masters (1986,1988) has given an account of the development of her work at a day centre for vagrant alcoholics. She recognised that a traditional nursing role '*with no formal diagnostic skills or autonomy of action*' would not meet the health needs of the patients. Local GPs were said to be reluctant either to treat these patients or to refer them to specialists so Burke-Masters was

"led to take my controversial initiative and become an autonomous nurse practitioner."

Less than 2 per cent of the 2000 people on her list were said to be registered with a GP.

Many of her '***extended*** *skills*' were learned in her previous work in a medical mission. She apparently established links with hospital consultants, attended clinics and ward rounds.

When uncertain of a diagnosis a second opinion was sought from a '*supporting GP*' or a hospital doctor.

She tabulates medicines (antibiotics, anti epileptics, antipsychotic drugs included and a variety of topical applications), instruments used and also details records of her consultations and referrals. (Hospital consultant referrals were said to follow the normal outpatients pattern.)

The original funding for the scheme was from a charity but it later received DHA support (Cohen 1984).

This initiative was the subject of much controversy. There were threats of legal action from the Pharmaceutical Society about the use of prescription only medication. The first centre was closed but a grant obtained from the King's Fund to re-establish the service. The RCN eventually granted indemnity insurance. According to the later paper drug companies donated the medicines used (? via the GP - this is not made explicit).

Burke-Masters regards herself as a substitute doctor

"a nurse with an extended role into medicine"

and is not interested in

"constructing models of nursing ... but ... in meeting health needs."

She cites occupational health nurses, midwives and diabetes nurses as examples of those who already have an '*extended role.*'

6.10 Work at a centre for the homeless in Luton is described by Field and Field (1992). This was a voluntary nursing service.

"The nurse practitioner service we offered to the day centre was not a substitute for a general practitioner and we were well aware of our limitations."

Many of the conditions seen/diagnosed were said to be self limiting or treatable with over the counter preparations. They contrast the 'real care' they offer with that of a previously involved homeopathic doctor. There was some other GP cover as well.

Tables of conditions seen and treated and disposal of clients following treatment are provided. A nursing record was designed and the nurses were prepared to accept the client use of a pseudonym - as long as this was consistent.

Following the success of the voluntary nursing service, the centre was incorporated by the health authority into the locality nursing service and the service continued by district nurses.

6.11 There are other reports of work with the homeless. For example, Cresswell (1993) describes her work at a pilot scheme at a day centre for homeless people in Brighton. This project

"was intended to research the need for the nurse practitioner"

(rather than to find out how health care needs might be met!)

In an account of work at a shelter for the homeless, Smith (1992) reports Stilwell's provision of a nurse practitioner service. Weekly visits are made but health care shared with a project worker and latterly a GP.

"Maintaining stocks of wound care materials, medicines and equipment has been a matter of accumulating supplies from whatever sources have been available."

Laurent (1993) also gives an account of a nurse practitioner working with single homeless people in south London and relates how this has changed since completion of the RCN nurse practitioner diploma course. This is chiefly in respect of her ability to carry out detailed health assessments and initiate treatment within the current prescribing laws. The

"nature of the caseload means (that the nurse practitioner) often gets just one chance to assess and treat, demonstrating the importance of her practitioner role. The more she can do for her clients the better, because there is no guarantee they will follow up referrals."

('*Practitioner*' here is associated with the assessment and treatment).

6.12 Services for disadvantaged or itinerant groups are also provided by community health workers who are not nurse practitioners. Goodwin (1991) points out that a nurse with an existing community nursing specialisation - possibly extended with additional clinical or specialist skills can be used to deliver services. The example given is one of a health visitor jointly employed by two East London health authorities as a health worker for travellers. Her extended role was said to include the administration of immunisations and the provision of family planning services. (There was another scheme of this type set up in Oxfordshire in the early 1980s.)

Nurses are described as a much more heterogeneous population than doctors and 'some of them will aspire to higher things'.

It is further suggested that potential nurse practitioners may wish to consider unhitching themselves from the conventional nursing bureaucracy. Physicians should encourage *'paramedical high fliers'* by supervising selection, training to an appropriate high standard and evaluating performance.

Hill (1992) outlines the progression of the original role and claims that the functions of the rheumatology nurse practitioner are to provide

"holistic care within a nursing clinic in which the traditional, expressive, nurturing role has been combined with techniques once considered the domain of the physician, such as physical examination of the patients' joints."

She stresses the function of the nurse practitioner as an educator. Extended duties are said to have been incorporated after wide ranging discussion and adequate education and where there has been evidence of a clear benefit to the patient. This approach has led to the exclusion of extended duties practised elsewhere. (The author reports a country wide survey of 50 rheumatology nurse specialists: Phelan et al, 1991 'A profile of the rheumatology nurse specialist in the United Kingdom' Brit. J Rheum 30, 105). It could be inferred from this that either there is little difference between the work of the rheumatology nurse practitioner and rheumatology nurse specialist or that the latter group undertake additional activities.

Hill and colleagues have also reported the evaluation of the effectiveness, safety and acceptability of a nurse practitioner working in a rheumatology outpatient clinic (Hill et al 1994). Patients are referred to the nurse practitioner after the diagnosis has been established and drug therapy prescribed. There are no written protocols but verbal agreements regarding referral and biochemical evaluation.

This study was conducted over a period of 21 months. 70 patients were randomly allocated to a nurse practitioner or a consultant rheumatologist and integrated into the normal clinic case load. Effectiveness and safety were assessed by biochemical,

7. NURSE PRACTITIONERS IN HOSPITALS

Out-patient Clinics

7.1 The most complete accounts of nurse practitioners working in hospital based clinics are in the fields of hypertension and rheumatology. Curzio (1983) refers to this as expanding the nursing role in a British context. The aspects of the hypertension clinic which are said to be the most innovative are the use of the nurse practitioner, (referred to as the nurse throughout the article), and the micro-computer based record system.

The result of a 4 year study conducted by the same researchers has also been reported (Curzio et al 1990). A group of patients managed by a nurse practitioner run hypertension clinic were compared with an age-sex matched group of patients attending conventional hospital hypertension OP clinics in two other hospitals. It was found that nurses could control blood pressure in a greater proportion of patients, maintain contact with more efficient follow up of a greater percentage of patients and collect the information needed to assess the effectiveness of care over the long term.

7.2 There is a series of articles relating to rheumatology clinics in Leeds. Hill (1992) describes the background to the establishment of the nurse practitioner clinics which

"combine the skills of nurses with medical input to provide care for rheumatology patients."

The nurse practitioner clinics in Leeds were said to have begun in 1974 when nurses were employed to take clinical measurements for drug trials although it is unlikely that this title was in use at the time. An account by the rheumatologist of the same development refers to research nursing sisters

"whose role has been further expanded into that of "clinical metrologists"

The author describes this as a *two tier* system of care and one that merits attention in a variety of specialities (Bird 1983).

Nurses are described as a much more heterogeneous population than doctors and 'some of them will aspire to higher things'.

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This study was conducted over a period of 21 months. 70 patients were randomly allocated to a nurse practitioner or a consultant rheumatologist and integrated into the normal clinic case load. Effectiveness and safety were assessed by biochemical,

clinical, psychological and functional variables. Patient knowledge and satisfaction were assessed by means of questionnaire.

By the end of the study, the nurse practitioner-treated patients suffered from lower levels of pain, had acquired greater levels of knowledge and were significantly more satisfied with their care. The nurse practitioner saw 1105 patients in 133 clinics and the consultant 2200 patients in 133 clinics during this period. However, as the authors note, patient education is accepted as one of the prime functions of a nurse practitioner

"and teaching patients undoubtedly takes time."

They consider that the study demonstrates the efficacy of nursing care when combined with medical care and demonstrates that the

"most successful outcome for the patient is achieved when the skills of physicians and nurses are combined and they in turn utilise the skills of other health professionals."

7.3 An account of a nurse practitioner developing a clinic for patients with rheumatism and arthritis at Wanstead Hospital is given by Melville (1988). The nurse practitioner conducts physical examinations but concentrates on advice and education in the 30 minute sessions allocated. She is also reported as carrying out blood tests. The nurse practitioner is able to stop, resume and adjust drug regimes but unable to write a prescription. This initiative was said to be part of a unique method of improving the service, reducing waiting lists and improving satisfaction.

7.4 A nurse practitioner is co-ordinating the multi- disciplinary team running a complementary therapy centre at Lewisham Hospital NHS Trust (acupuncture, homeopathy and osteopathy). The aim is to ensure that patients receive the most appropriate treatment for conditions that include asthma, back pain, digestive disorders, skin problems and gynaecological problems (Anon 1994c).

7.5 We have not specifically searched for examples of nurse-run clinics although we believe that these are widespread. It is unclear how they differ from nurse practitioner-run clinics. For example, the former have been reported in the context of nurse practitioner conferences (Menon 1993). It is possible that there are very **few** differences but that the titles differ in relationship to other responsibilities held by the post holder.

Accident and Emergency Departments

7.6 The most voluminous literature in this section relates to nurse practitioners working in Accident and Emergency (A and E) Departments.

Head (1988) describes what is probably the first formal or official example. The introduction of the nurse practitioner was said to have arisen from patients' complaints about waiting times. The Community Health Council were involved in a patient survey which resulted in a number of ideas for improvement in the organisation of the department. The most radical of these was said to be the appointment of a qualified nurse, with A and E experience, to be responsible for dealing with patients for minor treatment. This was followed by a period of local and regional consultations.

Radiographers were reported to be initially concerned about nurses requesting X-rays although the health authority accepted liability for the actions of both groups.

The nurses involved had at least 5 years experience of A and E work. Patients to be assessed and treated by the nurse were to meet the following criteria

- presenting with minor injuries only;
- over 12 years of age;
- not presenting with abdominal or chest pain or head injuries.

The service was to operate for 8 hours daily when medical staff were also on duty.

This paper provides tables of numbers of patients seen and treated during a three month trial period. Clinical assessment of the nurse practitioner's was work conducted by a consultant, senior nurse and clinical assistant. Two members of the local health authority were also involved in monitoring the scheme in its initial stages. Patients were asked to complete questionnaires.

The most important benefit was thought to be the reduction in waiting time although the assessment of this was described as '*subjective*'. There were problems with the requirement that nurses had to have 5 years experience. There were not enough suitably experienced nurses to enable a regular service to be provided.

A manager's report of the same scheme (Ramsden 1986) gives a fuller account. Contrary to the assertion (Fawcett-Henesy 1991) that the nurse practitioner role has arisen because of a lack of medical staff this report appears to apportion culpability to the local community and its abuse of the department. This led to the adoption of '*a more aggressive approach*' which included the nurse practitioner post. There was considerable local publicity aimed at reducing usage of the department.

Nurses had previously received patients and made an initial assessment. The major change appeared to be that there was a

"change in authority of the senior nurse to tell patients when she did not think it appropriate for them to wait."

These nurses were allowed to carry out minor treatment procedures which, at least in the initial stages, did not include giving tetanus toxoid and suturing. The documents refer to this as an extended role and the tasks as delegated. There is also a list of tasks provided which may be dealt with without reference to medical staff. It was also suggested that the role could be further extended in terms of conditions treated and in hours worked.

There were some explanations given with regard to the initial problems with radiographers accepting patients referred by nurses. (This action contravened a requirement in their professional code of conduct.)

It is not clear from the account why the term nurse practitioner was used. One document uses the term interchangeably with practice nurse and practice/triage nurse.

The later recommendations of the nurse practitioners involved in this initiative were that

- the 5 years experience requirement should be reduced to 3;
- that there should be a separation of the triage and nurse practitioner role;
- and that the role should be 'slightly extended' to include suturing and anti-tetanus injections.

There were particular difficulties in using the A and E sisters for these posts because of their other responsibilities.

There is a reference in this document to training which *is to be arranged* but no other details.

It is clear that in its original form this scheme was not concentrating on which staff member performed any particular task but that the major change was the authority given to the nurse practitioners to redirect patients elsewhere or to treat and discharge them.

7.7 Burgess (1992) reported a scheme (in Southend) in which the triage and nurse practitioner roles were combined in an A and E department. This development was again presented as a response to increased attendance at the department.

Triage is said to be capable of being performed by any trained nurse, however junior, provided that the guidelines are clear. Nurse practitioners are however

"senior nurses who provide definitive treatment for prearranged conditions."

The nurse practitioner can diagnose, treat and discharge these patients without reference to a doctor. This is said not to be an extended role but a

"new, separated and dynamic role in its own right"

The scheme applied to self-referred patients. An initial 3 month trial period was assessed in three ways: - patient satisfaction, staff assessment and time management study (nurses' time was better utilised as a result of employing a nurse practitioner).

Following the initial trial period training was introduced -tutorials and practical sessions. Notes were audited daily and 10 sessions a year reviewed by the consultant. For specific tasks (suturing for example) competence certificates were required. Subsequently the department developed the system further by introducing more definitive treatments and the ordering of X-rays.

Burgess suggests that the nurse practitioner role could be an integrated part of the A and E senior nurse role.

7.8 A number of articles have appeared from Lincoln. James and Pyrgos (1989) report a theoretical study on 400 patients of which 332 were assessed by nurses. In 298 cases the management was satisfactory. 12 were mismanaged according to local practice. Nurses also requested more X rays than the doctors.

94 per cent of patients suitable to have been seen by a nurse would use a nurse practitioner if introduced. The waiting time saved was, or would have been, 11 minutes. These authors recommend an adequate training programme along nationally debated guidelines.

Howie (1992) reports subsequent developments following this limited study *'of theoretical management'*. The code of practice was in line with the current DHSS position. Training was given to all first level nurses with 3 years experience and employed at Grade E or above. This consisted of a number of components and was given by A and E consultants and other senior medical staff. Work was assessed annually by senior medical and nursing staff.

A table of defined conditions/ tasks (including tetanus toxoid g antibiotic drops and ointments) is provided. Nurses, however, must not

"assume any extended role from any component where competence is not achieved."

Nurses who have been trained act as practitioners when they are available and a doctor is not. (The implication is that they act as a substitute.)

7.9 The establishment and development of the emergency nurse practitioner (ENP) role at St Mary's Hospital, London has been reported by Woolwich (1992). ENPs are said to work as independent practitioners, treating minor complaints without reference to a doctor.

"They are able to adopt a holistic approach to their patients: they examine, request appropriate investigations, make a diagnosis, carry out the treatment and discharge patients."

Patients are assessed by a triage nurse and consent to nurse practitioner treatment obtained. There was a ten week pilot study before implementation which included a period of supervised clinical practice. A protocol was written for prescribing tetanus immunisation with the local health authority accepting vicarious liability. There was an initial opposition to requesting X rays -indeed this issue proved to be the

"linchpin on which the role of the ENP rested"

(In consequence a 5 day training programme was developed.)

Woolwich discusses the issue of delegation of some nursing treatments (observed also by Read and George 1994) and redirection to a doctor if the waiting time for the ENP exceeded one hour. She also addresses the issue of obtaining competency

"in order to allow formal recognition of skills and knowledge gained by the ENP"

7.10 Most of these schemes have resulted from the perceived requirement to run A and E departments more efficiently and have not specifically addressed the issue of professional status. Potter (1990) is one exception (see 4.8). He considers that the first achievement of the RCN Accident and Emergency Forum working party to examine the role and development of the nurse practitioner has been to define the role of the nurse practitioner.

"A nurse practitioner in accident and emergency is a ***nurse specialist*** *who has a sound nursing practice base in all aspects of accident and emergency nursing with additional preparation and skills in physical diagnosis, psychosocial assessment, the prescribing of care and preventative treatment. She/he constitutes a key member of the healthcare team based within the accident and emergency team. She/he is available to members of the public who present with health problems. She/he has the knowledge, skill and authority to make professional, autonomous decisions about the initial assessment of the patient. She/he may initiate primary management of that patient and if necessary patient care. The nurse practitioner by initiating certain diagnostic tests may prescribe certain treatments within "agreed" policies'."*

(The nurse practitioner in accident and emergency *The Emergency Nurse*, 1988 3, 2 1-20 Emphasis added)

This long definition is said to be necessary to differentiate the nurse practitioner from an extended role nurse (performing delegated functions) or a triage nurse.

Potter addresses issues relating to training with three options

- adaptation of ENB course 199;
- separate course/qualification established;
- an inservice system at departmental or district level to provide knowledge and skill in each of 4 modules (assessment and diagnosis, prescribing and treatment, health behaviour and prevention, communication).

The latter is described as the most feasible. Potter reports an earlier study of the potential role of the nurse practitioner, a *'paperwork exercise'*, conducted in conjunction with medical staff which assessed 122 minor injuries (Potter 1989). Following this various criteria for nurse practitioner treatment were developed.

It was shown that the use of nurse practitioners significantly reduced waiting time, not only for those patients seen by the nurse practitioner, but those seen by medical officers, as they were relinquished to more appropriate patients.

7.11 Burgoyne (1992) gives an account of the subsequent developments in the same department. The US and UK literature were used

"to develop a role for the ENP that would give expert emergency care using a holistic approach."

There was an initial 4 month training programme using written, practical and oral assessment with emphasis on the medical component of the role. Subsequently the scope of practice was enlarged with new training modules.

7.12 The introduction of a nurse practitioner role into a children's casualty department is reported by Kobryn and Pearce (1991). Nurse practitioners could assess and treat children over the age of one year presenting with minor injuries. No child presenting with a medical or surgical emergency, or having a sustained injury was to be seen by the nurse practitioner.

There was no formal agreement with regard to X rays although one of the *nurse's functions is to expedite the progress of children with obvious fractures.* A list of reasons for attendance which nurse practitioners could deal with is included together with a table of the types of injuries/conditions seen over a 17 month period.

Prescription of paracetamol was allowed under certain conditions and nurse practitioners could use lignocaine gel and give doses of ipecacuanha emetic mixture.

Nurses undertaking this role had to have a RSCN qualification, with at least 3 years suitable experience and hold an F grade post or above. Each nurse was said to have the choice whether to ***extend*** his or own role and was *accountable for practice.* Assessment of competence was made by the senior nurse of the department.

7.13 It is noticeable how the lists of conditions or clients suitable for nurse practitioner care differ between departments just as extended role task lists differed between hospitals and health authorities. Most of these publications predate 1992 but we think it unlikely that this approach will have changed in any significant way.

7.14 In contrast with these series of descriptive accounts Read at al (1992) conducted a postal survey to determine the distribution and scope of nurse practitioner schemes in accident and emergency departments in England and Wales. They aimed to describe the caseloads of doctors and nurse practitioners on two days and to estimate the number of patients managed by nurse practitioners in the year ending in March 1991.

The definition of a nurse practitioner used was

"a nurse who is authorised to assess and treat patients attending an accident and emergency department, either as an alternative to the patient being seen by a doctor, or in the absence of a doctor in the department where a continuous medical presence is not maintained. Some nurses function as nurse practitioners without actually holding the title."

560 departments were approached from which there were 513 (92 per cent) replies: 27 (6 per cent) of departments used designated nurse practitioners and 159 (34 per cent) unofficial nurse practitioners.

Among the 20 major departments, 16 combined the role of nurse practitioner and triage nurse with the triage encounters extended to included decisions on diagnosis and management in suitable cases. In other cases triage was performed by another nurse according to protocol or referrals were made by receptionists.

Analysis of the data showed that 9 per cent of the 5814 patients in the 'census' were managed entirely by nurse practitioners with higher proportions in ophthalmic departments and minor casualty departments. The main conclusions were that official nurse practitioner schemes are relatively rare and most commonly occurred in specialised accident and emergency departments where many nurses have the relevant post registration qualification and specialised clinical experience. The differences between official and unofficial nurse practitioners in equivalent departments are small and the volume and range of work in major departments is small.

Two factors are thought important in preventing nurse practitioners *'fulfilling even the limited quota of practice allowed by their protocols'*

- shortage of other trained nurses in the departments;
- diversion of patients to doctors when present.

The nurse practitioner is used when there is an **obvious doctor shortage**. The second occurs more with the unofficial nurse practitioners, the first factor is said to have more effect on the designated nurse practitioner. (This is an interesting irony - the official nurse practitioner acting as a nurse substitute rather than a doctor substitute.)

The study reported above was the unintended consequence of an earlier attempt by the same group of researchers to conduct a clinical trial of nurse practitioner work in one particular hospital. A pilot study, intended to be the preliminary to a randomised controlled trial of the assessment and treatment of patients with minor injuries by nurses practitioners or senior house officers, was completed. However the small numbers of patients managed by the nurse practitioners compared with those by junior doctors made randomisation problematic (as were the means of assessing outcome and relationships between process and outcome (Read and George 1994).

7.15 Just as there are formal and informal nurse practitioner schemes so there are formal and informal processes of triage within accident and emergency departments (and some are associated with nurse practitioner schemes).

A comparison of formal nurse triage with an informal prioritisation process for waiting times and patient satisfaction was conducted by George at al (1992). This study failed to show the benefits claimed for formal nurse triage which may impose additional delay for patient treatment particularly among patients needing the most urgent attention. While this may reflect local practice (the study was conducted in a single hospital) similar results have been found elsewhere. Although

"surprisingly the authors of these studies continued to advocate formal nurse triage."

The triage (nurse) function seemed to be something of an option in the department even when the nurse was on duty so presumably there is a large amount of experience in informal prioritisation mechanisms. Given the similarly 'optional' or 'occasional' status of some of the nurse practitioner schemes the same considerations may well apply.

7.16 In spite of the fact that combined nurse practitioner/triage schemes operate in some departments, it seems that some of their aims - or claims - may be diametrically opposed. In developing a training programme for triage nursing Hankey (1994), drawing on other work, states that assessment should not take more than 3 minutes or it becomes counterproductive because other patients are kept waiting. The additional skills necessary to performing this task include history taking, accurate documentation of findings, and assessing priority for care within a short space of time. Nurse practitioner accounts, on the other hand, rarely give similar attention to the pressures of time (7.9 is one exception).

7.17 Jones (1993) has described the setting up of a nurse-led (G Grade nurse practitioner) community based minor injuries unit. This unit was set up following public opposition to hospital closure. The clinic was initially set up on a trial basis with very limited times of opening. The nurse practitioner was said to offer a professional nursing assessment to all patients on which the decision to treat or refer was based. The nursing staff involved were required to have

*"a sound A and E or **practice nurse** background."* (Emphasis added)

Training was provided by the A and E consultant and the nurse manager. Wounds could be sutured, tetanus toxoid could be given and other medication used but not given to take away.

People were said to use the clinic *'appropriately'* and have appreciated the accessibility and *'fast, efficient service'*. An audit of records by a consultant found no incorrect diagnosis or prescription of treatment made and a decision was made to continue funding.

7.18 An example of 'extended role' activities (provision of hormone therapy oestrogen implant) carried out in an A and E department of a community hospital has been reported by Gane (1994). Here the term nurse practitioner was not used, although direct referrals by GPs or from gynaecology clinics were made to the nurses involved. The protocol was written by a GP/clinical assistant in Gynaecology and Obstetrics and a nursing sister. The aim was to offer a more convenient service to patients. Five members of staff have been trained in this technique and assessed as competent. (They initially observe a number of insertions and then perform at least 3 under supervision). The author is satisfied that the proposal accords fully with the new guidance of the UKCC.

Night Nurse Practitioners

7.19 Haynes et al (1992) describe a programme developed to prepare night sisters and managers to become night nurse practitioners. This followed a survey of procedures carried out by junior doctors at night and the waiting time involved for these to be performed.

They list the skills to be achieved:

- Resiting Venous cannulae;
- Administration of first doses of intravenous medications;
- 12 lead electrocardiograms;
- Interpreting/acting on cardiac arrhythmias;
- Certification of expected death;

- Patient advice and treatment;
- Male catheterization;
- Assisting clients making a will;
- Dealing with the press at night.

These were said to be integrated into an educational programme exploring the *'professional and accountable boundaries of practice'* and *'research based care'*. Initial results suggested that patient satisfaction was increased and waiting times for procedures reduced. An objective evaluation by educational and service managers was planned.

Among the key points identified by the article is the claim that role development is concerned with understanding accountability and not with accepting junior doctors' tasks.

Alternatively, this scheme could be regarded as an agglomeration of fairly disparate tasks, some previously performed by junior doctors, which have been incorporated into a night nurse practitioner role and given 'nursing' credibility by using the vocabulary of professional practice and adult centred learning.

7.20 Morley's (1992) account of the same development places it within the framework of resource management and clinical directorates. As a result of these local and national changes it was

"evident that night nurses/charge nurses in their present form no longer provided a useful function"

The aim was to introduce practitioners whose role would combine

"quality care, site management and general administration."

It would include relieving medical staff of some routine practices carried out at night (and is also clearly a response to the requirement to reduce the hours worked by junior medical staff). The goal was also to improve continuity of care.

We do not know from these accounts how night nurse practitioners would relate to any system of primary nursing operating within the hospital.

7.21 We have been provided with details of night nurse practitioner workshops at Wirral Nurse Education Centre. There are pre-course teaching packs on venepuncture and cannulation, ECG and rhythm recognition, defibrillation, male catheterisation and an 'Expanded role workbook'. Completion of the course is followed by a period of supervised practice. Nurse practitioners sign a statement of intent relating to the responsibility and role expansion as 'an accountable first level nurse'.

Care of the Elderly

7.22 Some developments involving nurse practitioners are much more clearly recognisable as part of the 'New Nursing' philosophy (Beardshaw and Robinson 1990). This is a movement which claims to focus on the 'whole person' and in which partnership is an ideology. (The language associated with this movement is incorporated into many of the accounts of the previous schemes although it is not always clear how this actually alters practice.)

Salvage (1992) uses the Oxford Nursing Development Unit as a study. The staffing structure and work organisation were shaped according to a nursing ideology which regarded the traditional hierarchy and division of labour as obstacles to any personal accountability to the patient. Primary nursing was chosen as the method and philosophy for organising nursing work as it appeared best suited to facilitating closer partnerships with patients and a greater autonomy for clinical nurses. The unit's primary nurses were called 'nurse practitioners'. Selected 'basic nursing' tasks often seen elsewhere as work for unqualified staff were in this unit being 'rehabilitated' as professional work. The primary nurse had autonomy in planning care and delivery.

Several research projects followed. The most extensive study (Pearson at al: Therapeutic Nursing: an Evaluation of an Experimental Nursing Unit in the British National Health Service. Oxford and Burford Nursing Development Units) compared groups of elderly people over a 15 month period and was designed as a randomised control trial. One group was nursed in the unit - the other in a DGH. Patients in the

unit received better and more consistent care, became more independent, had a shorter average stay in acute care. There was also a statistically significant reduction in the death rate of nursing unit patients while in hospital.

The unit was subsequently closed; Salvage noting that

"The reasons ... merit a study in their own right ... and demonstrate the immense obstacles nurses face when they attempt to work as autonomous practitioners."

(It is probable that many advocating the 'nurse practitioner' role would not recognise these primary nurses as nurse practitioners.)

Neonatal Nurse Practitioners

7.23 A number of respondents to our requests for information mentioned neonatal practitioners but our search in this area revealed relatively little literature. Redshaw (1983) documents the organisational aspects of neonatal care resulting from a large scale national survey which considered nursing establishment, medical staffing and use of nurses qualified in the speciality but in this nurse practitioners are not mentioned.

Hale et al (1987) were uncertain to what practices exist

"which fringe on the edge of this role in extended duties of the nurse in neonatal units."

They refer to an earlier document which suggested the use of *'nurse technicians'* to reduce the dependence on junior doctors. They point out the differences between a nurse technician attaining competence in invasive procedures and a consultant neonatal nurse who would make nursing decisions regarding the care of the baby in conjunction with medical decisions. One of the main concerns expressed is that to introduce the neonatal nurse practitioner without the safeguard of adequate numbers

of trained nurses would limit the delivery of 'sound nursing care'. (The educational deficit of nurses is another.)

7.24 Hall et al (1992) report on the developments within the Wessex region where the case for 'extending' the role of neonatal nurses has been accepted by medical and nurse managers and an educational course established. A review of neonatal care provision was necessary because of changes in NHS funding mechanisms, envisaged developments in the nursing profession and decreased working hours of junior doctors. It was considered that neonatal nurse practitioners had the potential to make an important contribution in establishing a higher level and more consistent quality of care.

This article examines the training and professional role of neonatal nurse practitioner in North America and resulted from a study visit to six US centres during the planning stage of the Wessex initiative. The discussion of their findings covers the differences in funding, lack of training of paediatric residents (both countries), differences in medical staffing arrangements in neonatal units and differences in training and function of neonatal nurses (there is no equivalent of the relevant ENB course). In most units neonatal nurse practitioners did not undertake the more traditional functions of staff nurses on neonatal units. It was not feasible for these nurse practitioners to provide total care.

"However it was stressed to us that a holistic approach is very important in the education of other members of the care team."

They refer to the remarkably few formal attempts at objective evaluation of neonatal nurse practitioners to date but state their own intention to evaluate the effect of introducing neonatal nurse practitioners contemporaneously with the programme's implementation.

O'Hagan (1992) provides a commentary to this article pointing out that

"The major difficulty seems to be in confusing the extended role of the neonatal nurse with that of the neonatal nurse practitioner currently employed

in neonatal units in the US and using the all embracing term of the neonatal nurse practitioner to apply to both roles."

The ENB course is said to encourage curricular developments that include extended skills traditionally associated with junior and middle grade medical staff, such as the siting of intravenous infusions, emergency resuscitation, and elective intubation - the emphasis is on practical competence rather than clinical diagnosis.

"This role would be more clearly defined as (an) extended or expanded role."

The role of the neonatal nurse practitioner in the US describes the neonatal nurse having a clinical case load with responsibility for diagnosis and management in addition to the practical competence. These very different roles should be recognised.

7.25 The Wessex course is described as an Advanced Neonatal Nurse Practitioner Course. Course details give a definition and outline of role and responsibilities.

- The neonatal nurse practitioner (NNP) will be a Registered Nurse or Midwife with an established neonatal nursing background who has successfully completed a period of education on a recognised NNP course;
- The NNP will be accountable to a nurse manager and clinically responsible to the paediatric consultant/neonatologist;
- After course completion the practitioner will assume a leading role in the clinical care of the neonate. This will involve assessing, planning, implementing and evaluating total care. This will be undertaken in accordance with local policies and protocols and under the direction of a neonatologist.

(Educational, research and management functions are also mentioned.)

It may be that the emphasis on **total care** rather than **total nursing care** is significant.

Specialist Hospitals

7.26 Heywood (1991) has reviewed the expanding role of the nurse practitioner in the outpatients department of Moorfields Eye Hospital. The ophthalmic nurse practitioner is said to be have been adopted as a **generic** title which embraces a number of specialised clinical nursing posts within ophthalmology. These ophthalmic nurse practitioners work in different areas and have different responsibilities and grades. The posts are said to have a number of things in common -

- the nurses practise a wide range of advanced skills based on extensive knowledge of and experience in the specialty;
- they are also competent to practise independently within their agreed spheres.

7.27 Further information has also been provided in a document provided by the Nursing Projects manager. The ophthalmic nurse practitioner (at Moorfields) has the following profile -

- RGN with ENB 346 with an additional advanced level ophthalmic course;
- be an active practitioner, clinically credible and able to assume responsibility for a group of clients as a 'named nurse';
- have a formalised role in teaching and clinical leadership (ENB 998);
- have an extended role including the ability to conduct examination of the patient (within nursing guidelines), make an assessment, order investigations, interpret findings, treat and prescribe within agreed protocols;
- advise on health promotion, act as an advocate, initiate and participate in research.

7.28 The ophthalmic nurse may be considered an 'ophthalmic nurse practitioner' on becoming an 'expert'. This may be complemented by either of the following courses

- advanced ophthalmic nurse practitioner (Accident and Emergency);
  or
- advanced ophthalmic nurse practitioner (Operating Theatre Course).

In a paediatric setting the ophthalmic nurse practitioner is additionally required to be RSCN.

7.29 There are several strands to the development -

- the development of the primary care clinic - where patients are seen by a team of nurses and doctors and later transferred to a specialist service if the need arises;
- the role of the patient care co-ordinator and increasing day-care surgery. This includes assessment of medical history, performing biometry and keratometry for patients identified for future cataract surgery, discharge planning and establishment of community links;
- the nursing research project into patient education. The decrease in average length of inpatient stay and increase in day care surgery has placed great emphasis on nurses' role in patient education;
- nurse practitioners are also involved in a low-dependency unit for patients. Nurses initiated and took charge of this development.

7.30 Read et al (1992) referred to the extent to which ophthalmic departments/hospitals made use of nurse practitioners. It may well be that this is a division of nursing/medical labour suited to the specialty (and particularly refined within this environment). That is, there are a number of specialist skills which can be acquired by nurses and subsequently used within a nursing framework.

However it would be of interest to have more details of the total nursing staff structure. How many nurses are not nurse practitioners? Is this a form of career progression that most would aspire to? Neither is there any indication of how medical duties may have changed in response to the factors mentioned above.

8. MENTAL HEALTH AND LEARNING DISABILITY

8.1 The term nurse practitioner does not appear to have attracted much usage within these areas although, in describing a new course for RMNs, Cound et al (1989) agreed that the goal was a *'generic autonomous psychiatric nurse practitioner'* but that

"developing nurses into autonomous, skilled practitioners is a complex process"

8.2 The roles of psychiatric nurses have undoubtedly changed but as befits the area these developments have been in the acquisition of psycho-therapeutic rather than specific technical skills and we are unaware of any 'extended role certification' for the former although additional training may be undertaken. The work of nurses as therapists has been described and evaluated by Marks (1985).

Latterly psychiatric nurses have become case managers. Brooking (1991) writes of the deliberate blurring of roles in multi-disciplinary teams and gives the of the 'case management' approach in community psychiatry in which any member of the team may take overall responsibility for all aspects of the care of particular patients, reporting back to the team as a whole.

8.3 Butterworth (1991), in an article about nurse practitioners, cites the work of Paykel and Griffiths (1983). In a matched study of nurses and doctors working with psychiatric outpatients, it was reported that patients found nurses (CPNs) to be acceptable agents of treatment and rated them above medical staff in some categories. He does not claim they are nurse practitioners although nurse practitioner 'criteria' may well apply to this group (see also 3.18) whose work is said to comprise the following areas (Carr et al 1980):

- assessor;
- consultant;
- clinician;
- therapist;
- educator;

- manager.

Cullen (1984), a CPN, writes under the heading *'The nurse practitioner's view'*. There is no further reference to the term in the article which relates to specialisation in CPN teams, in this case towards work with the elderly mentally ill.

8.4 Nottingham Community Health Services employ nurse practitioners in mental health (Drew 1992). They were reported to have been called this to **distinguish** themselves from psychiatric service CPNs (personal communication). They provide

"a comprehensive community mental health nursing service working with the primary health care team and other relevant agencies, with the emphasis on prevention of mental illness through mental health education in the community."

They report and are accountable to a nurse manager in mental health.

8.5 A recent study of mental health professionals in primary care has been reported (Anon 1993) which found that their presence in general practice is unrelated to the distribution of patients who need the service. They tend to gather in large group practices in relatively prosperous areas. CPNs came in for particular criticism for isolating themselves from the mental health team. It is said that, in their haste to be 'independent', they disadvantage those patients who most need them by concentrating on 'minor' mental illness. (There may be analogies here with the nurse practitioner working within general practice - certainly in terms of the type of innovative practice where they are likely to be placed initially. Chambers (1994) has referred to this as a potential problem.)

8.6 Sines (1992) has considered the changes in community care legislation which require mental handicap nurses to investigate and define their role. He gives examples of the specialist nursing roles which have emerged and been 'supported by career developments and rewards reflected in the clinical grading structure'. Examples provided are as care managers, behaviour therapists and 'advanced domiciliary community nurses acting as consultants to the primary health care team (and generic services)'.

8.7 We have located one job description of a RNMH nurse practitioner (Parkside Health) accountable to a day services manager at a community hospital and working within a multi-disciplinary team (grade/salary not mentioned). We have no indication that this post differs substantially from those of others with RNMH qualifications working in the community.

9. CONCLUSIONS

9.1 As many commentators have noted, there is no universally accepted definition of nursing. It is an occupation which works in widely differing ways in a great variety of settings. Even if the idea of a universal definition made any kind of philosophical sense - which we doubt - it would be difficult to encompass such range of variation without being either abstruse or banal. It is recognised that nurses practice at varying levels of expertise in ways which are not related to education, speciality or location in primary, secondary or tertiary care. Their roles develop in an organisational context and nurses frequently occupy multiple roles - as administrators, as independent professionals or as doctors' agents (Alexander 1984). This is no less true of nurse practitioners. Any 'medical' work incorporated into the nurse practitioner role will also vary according to setting. Medicine is no less varied an occupation than nursing. This is one of the problems underlying the 'list' approach to nurse practitioner characteristics and the attempts to present a unitary view of the development.

9.2 As Birenbaum (1990) notes, a new professional identity for the nurse practitioner cannot be assigned - it has to materialise out of new responsibilities. It is an emergent niche in the division of labour in health care. However it is unlikely that nurse practitioners will ever become completely independent of the discipline of medicine. The boundaries of, and restrictions to practice will be defined with or by others providing health care. The most powerful actors may be doctors, but other groups in the division of labour will also have an impact: for instance, several A and E studies point to the influence of radiographers. Independence could similarly be affected by the rigid application of protocols which may prove to limit rather than increase the extent of professional discretion. However, nurse practitioners are unlikely to be alone in this: many US commentators have noted the extent to which protocol-based care has reduced medical autonomy in HMOs.

9.3 In emphasising the 'nursing ' rather than the 'medical' element of the nurse practitioner role some of the arguments for its wider adoption are undercut. If the nurse practitioner is seen as an extension of the holistic ideologies of the occupational leadership, then it is not clear what will distinguish it from the practising nurse or the practitioner of nursing and why providers should construct and fund it as a distinct role. It is only to the extent that nurse practitioners do in fact represent a

form of labour dilution, a lower-cost alternative to doctors at an appropriate level of quality, that the case for development seems entirely clear. In doing so, however, it is essential to recognise that there needs to be a resource transfer from medicine to nursing rather than a simple addition to the existing workload of nursing. Alternatively, space would need to be cleared within the nursing workload by some form of dilution there, with a different role for sub-professional staff. But in doing this, the occupation would simply be accepting the fundamental social and historical logic of the division of labour in the health sector.

9.4 It should be clear from what we have said so far that the picture of what a nurse practitioner is, or should be, is, to say the least, confused. However, it is doubtful whether it can, or even should, be clarified. The perception that there is a problem may tell us more about the state of mind of the perceivers than about the state of the world itself. The point can be succinctly stated: the idea that the ambiguities around the nurse practitioner role represent a problem derives from a specific philosophical position which now finds very little favour among scientists who are actually seeking to understand the world in which we live. For ambiguity to be a problem, we must believe that occupations are imperfect copies of some pure form or essence to which, in an ideal world, they can be made to correspond. This is a model whose basic features derive from Greek writers like Plato and Aristotle. One of the obvious difficulties with these theories is their inability to account for change in either nature or society. If forms or essences are fixed, then nothing can change, except in the sense of successive approximations to the ideal. The problem with the nurse practitioner is that he or she is an illegitimate species, with no corresponding ideal or essential form. This means that an essence must be defined: however, a key feature of the model is that essence precedes existence. The real is a copy of the ideal and it is difficult to make the relationship run in the other direction by declaring that this new reality means that some ideal form has languished unnoticed all along.

9.5 This is not to say that the search for an essence or a pure form is without interest. However, its interest may lie more in what it tells us about the searchers and their desire to proclaim stability in a world of uncertainty. It is this world that is preferred by modern sciences, who tend to see the relationship between existence and essence as historically contingent. In the present context, what this means is that health work is seen as something which is a fluid terrain given shape by the categories that are

imposed upon it at particular times and places. At one level, there are the debates over the boundaries of health work itself: between formal and informal care; between paid and unpaid work; between health and social services; and so on. Within this space, there are constant struggles: between those who would be rational planners of the whole and between particular groups for the right to own particular kinds of work. Some writers have used the metaphor of a city, where the possible options for development may be constrained by the underlying landform but where the actually shape is the result of a complex interaction between planners, developers and users who are constantly reshaping the plots, erecting buildings of different designs, competing for prestige sites or trying to remake urban values to favour the sites they control.

9.6 It is argued that this is a better model for understanding the condition of nursing than anything which assumes an eternal ideal. Health occupations are an arbitrary way of carving up some part of the healing or caring work that needs to get done in a society. Nursing is no different from any other occupation in that respect. It has a distinctive character which derives from the licensing regime which it managed to establish at the end of the First World War. But all that licensing really does is to establish a few relatively fixed points in the chaos. That is part of what law is for, to achieve a degree of certainty for the practical purposes of a particular historical moment. But even then, the legal structures around licensing do not freeze development: they merely slow it down as a balance to the economic and technological forces that are constantly driving change in health work.

9.7 If we see nurse practitioner developments in this kind of context, we can recognise that we are seeing nothing very different from the events around the emergence of modern nursing itself in the nineteenth century. Technical and economic change in the 1830s created a demand for a new kind of health worker. It took some 60 or 70 years to decide what sort of person that should be - a woman from a lower middle-class, farming or respectable working class family with a degree of secondary education who could be relied upon to carry out medical instructions conscientiously and with a modest degree of initiative. The debates around the work of nurse practitioners have many echoes of, for example, the debates around the role of nurses at Guy's Hospital in the 1880s and whether they should be allowed to use stethoscopes to make observations of patients. This settlement lasted from roughly

1900 to the 1960s, partly as a result of a variety of compromises that made it possible for nursing to continue unchanged by hiving off developing areas that required more advanced or specialised skills such as radiography and physiotherapy. There is a well-established pattern of doctors developing new types of work in partnership with a small group of nurses who then, in effect, become the nucleus of a new occupation distinct from nursing. The settlement began to collapse with the opportunities for social mobility opened up by the post-war welfare state, the greater variety of education and career paths opened up to the traditional pool of women recruits and the changing nature of medical practice which meant that the course of illness depended less on bedside nursing and more on technical interventions or support. These issues were fought out around the Briggs Report of 1972, when they began to merge with the growing consciousness among women that a wider access to the means of opportunity did not guarantee an wider access to the outcomes. From this point, the politics of nursing was also a feminist politics, at least in elite circles.

9.8 In the absence of this feminist dimension, it is arguable that the issues over nurse practitioners would have been resolved in the traditional way, with the demarcation of a new kind of paraprofessional health worker to meet the changing needs of the 1980s and 1990s. In effect, it could be argued, the same combinations of economy and technology that gave rise to modern nursing in the 1830s as a cheap, semi-skilled assistant to the doctors of the time are now creating a new space in the division of health labour. In the 1830s, it had become uneconomic for doctors to perform certain kinds of work, which could be packaged and delegated to a trustworthy auxiliary. In the 1980s, we have looked closely again at the economics of medical work and concluded that doctors may be too expensive to perform certain tasks. The tasks themselves are, of course, more sophisticated than in the 1830s and demand a higher level of education. However, as always, nursing offers the largest and most immediately available pool of people with a relevant middling sort of education in the health sector. This pool can be sieved for those capable of working at an appropriate level. The argument finds further support from the earlier development of nurse practitioners in the USA, where the costs of care have long been more transparent and the educational upgrading of the nursing workforce began much earlier. If the historical parallels had been exact, then we might have expected to see a nurse practitioner role emerge from nursing and then detach from

it, acquiring its own entry routes and licensing structure. The driving force would have been the economics of the modern hospital and the managerial objective of creating the lowest cost mix of skills, in this case by substituting nurse practitioners for doctors. In primary care, the same effect could well be achieved by fundholding, with GPs trading the costs of a medical partner against the salaried provision of some elements of their service by a nurse practitioner.

9.9 The position has been complicated, though, by the professional politics of modern nursing. The ambivalence of the occupation's response to nurse practitioners reflects internal uncertainty about the attempt to raise the status of the whole occupation, the claim, in effect, to be a profession separate from but equal to medicine. In part, this is marked out by the claims to being specialists in the psychosocial aspects of health work, to a right to make independent diagnoses of nursing needs and to prescribe nursing care accordingly. For this reason, there is much uncertainty about the idea of a role which is founded upon the delegation of medical tasks. It is interesting that Christine Hancock (1994) is now claiming ownership of nurses who work as assistants to surgeons when the first appointment in Oxford was greeted with a wave of hostility and public challenges to the incumbent's right to be considered as a nurse. She had, some suggested, sold out to the medical enemy. Thus one finds in the literature various attempts to talk up the extent to which nurse practitioners are really doing something different from the doctors who they have replaced, or who were not available in the first place.

9.10 This politics is also reflected in the phenomenon with which we started this section: the search for essences. If the occupation could only establish what its pure form might be, then it would have a firm ground from which to challenge all attempts to redefine its turf, whether by doctors, by NHS managers or by the state. It would be a real profession, with the status and autonomy that goes with that. There are traces of this in the nurse practitioner debates. Interestingly, this literature is full of attempts to draw up lists of attributes that may be used as criteria for defining nurse practitioners. When these fail, an argument is made in terms of the spirit or culture of the work or in terms of its autonomy. This is a fascinating re-run of the attempts to define a profession over the last half century and just as misconceived. As the transformation in the markets and regulatory frameworks for other professions in the

last 15 years has reminded us, a profession's autonomy is always conditional and its culture cannot be divorced from the world around it.

9.11 The debate over the definition of a nurse practitioner is, then, in an important sense, largely irrelevant. It is clear that a new niche is emerging in the division of health labour. This is situated somewhere between the traditional work of nurses and doctors. It demands a level of education and skills that some nurses are capable of acquiring and others are not. Whatever this niche is called, some nurses in some areas will be recruited to it. If they do not colonise it, for whatever reason, some other group will. In fact, it seems unlikely that nurses will ignore the opportunity, whatever the national professional policy might be. There are probably enough people in prominent positions who would see this as a means of job enrichment or occupational mobility to encourage others into this course. There seems no particular need for a special regulatory framework at this point. Provided that Trusts and other employers are prepared to accept the liability implications of changing the relationship between skills and levels of employee in their workforce, then experiment and innovation are more likely to be impeded than encouraged by statutory regulation. If a sufficient group of employers establish a sufficient body of similar roles, then it may be worth considering whether to set up some structure of accreditation for courses intended to equip people for those roles. This would set a national standard and give employers a reliable signal of quality, facilitating the mobility of employees.

9.12 The most urgent need is for better dissemination of information from independent sources about what is actually going on. As we noted at the beginning, it is striking how much of the literature is programmatic, polemical and anecdotal. Where evaluations have been set up, the quality is often poor. Few of them include control groups or seek to specify the differences between medical and nurse practitioner intervention in a rigorous fashion. How comparable are patient satisfaction reports following a 20 minute nurse intervention and a 5 minute medical intervention, for instance? They often take little account of the knock-on effects, failing to locate the innovation in the context of an organisation of care and a division of labour. How do these systems change around nurse practitioners? This is not necessarily the traditional conclusion that "further research is needed": most of the schemes currently running are too small to justify heavy academic projects. It is, rather, a call

for better quality evaluation, which may involve some academic advice, and for a better diffusion of the results. If there is to be a next step, it may well lie in a more detailed consultant's report on what is currently going on, based on a range of site visits, and an attempt to lay out the options available to employers considering such developments. It may only be as patterns emerge from employer's choices that large-scale research would become feasible or desirable.

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PHYSICIAN'S ASSISTANTS: A LITERATURE REVIEW

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1 INTRODUCTION

1.1 The physician assistant as a category of health care worker is not found exclusively in the USA. Similar practitioners are used in other countries. The best known examples include the *feldsher* in the countries of the former USSR and the 'barefoot doctor' in China, but there is a wide range of variously named health workers working primarily in developing countries (See Celentano 1982). In the Netherlands specially trained 'doctors' assistants' have been described as key workers in primary care (Fry and Horder 1994). A Physician's Assistant has previously featured in the British literature (Horrocks and de Dombal 1973) and there have been suggestions that Britain has 'barefoot doctors' (Anon 1976). Since the latter is a description of nurses working for a private health care organisation this is, perhaps, indicative of the confusion surrounding the use of 'non-physician providers' of health care and the purposes for which they are required.

However the major difference in the case of the US physician assistant is the development of a formal regulatory framework for the training and accreditation of people performing this work. For this reason the US literature will receive the most attention.

1.2 The source material has been obtained mainly by conducting literature searches through computerised data bases (MEDLINE and Lexis). Given the difficulty of obtaining some of the original material, it has also been necessary to use secondary sources such as the selected bibliography on nurse practitioners and physician assistants produced by the National Center for Health Services Research (Jackson 1981).

Terminology

1.3 Many publications refer to loosely-defined groups of health care workers which mix physician assistants together with people holding other qualifications. The following are the most common:-

- physician extenders - new roles created to extend the care provided by physicians (nurse practitioners, physician assistants e.g. Birenbaum 1990, Schafft and Cawley 1987);
- new health care practitioners (nurse practitioners, physician assistants e.g. Reedy 1978, Levine et al 1976);
- mid-level practitioners/providers - these may include references to certified nurse-midwives in addition to nurse practitioners and physician assistants (e.g. Briggs et al 1978);
- non-physician health care professionals.

1.4 Various titles were originally associated with particular physician assistant training programmes - for example physician associate, child health associate or Medex - and attempts made to draw distinctions between them (Adamson 1971). However, physician assistant has become the generic title for graduates from accredited programmes. It seems to be important that the post is **not** titled the *physician's* assistant (Hanlon 1980, Schafft and Cawley 1987 p181).

1.5 The term physician does not necessarily appear to be used in the British sense of distinguishing the position, or work, of the title holder from that of a surgeon. Publications may refer to surgeon's assistants and there are specific training programmes for this group but this does not mean that physician assistants do not work with surgeons. Some are termed surgical physician assistants (Perry, Detmer and Redmond 1981).

2 HISTORICAL BACKGROUND

2.1 The 1959 Report of the Surgeon General's Consultant Group on Medical Education identified a shortage of medically trained personnel in the USA, particularly in the field of primary care. The Group proposed to address this by an immediate expansion in medical education. They do not seem to have considered the possible alternative strategy of a partial substitution of other, lower-cost health professionals for doctors. Implicitly, they asserted that all patients should have access to a fully-trained doctor for all medical services at whatever cost was set by the providers. However, the problems of the 'underserved' - the old, the poor and those in rural communities - did not feature prominently in their discussions. The shortages were seen as absolute, rather than reflecting the ability of particular groups or areas to afford the cost of insurance or medical services at the prevailing price levels. Concerns over access emerged later and drove forward the Medicare and Medicaid legislation, as amendments to the Social Security Act, in 1965. The states and the Federal government became the insurers of last resort for the underserved. As the financial consequences of this guarantee emerged, however, governments became seriously interested in health care cost-containment for the first time and began to encourage experiments with alternative methods of providing medical services. These programmes included the introduction of 'new' para-medical personnel, with the almost simultaneous development of training programmes for nurse practitioners and physician assistants, primarily to work in rural areas.

2.2 Contrary to the impression given in some accounts and histories, there were already physicians employing helpers/assistants with no formal training (Ver Steeg 1975, Wilson et al 1983). The initial demonstration of the training and use of physician assistants by Stead (1967) at Duke University (North Carolina) was followed by a number of similar developments. Programmes of this type were often a means of utilising the skills of already trained medical corps personnel as the fighting in Vietnam was scaled down (Celentano 1982). Indeed some of the earliest were initially restricted to people who had had at least two years of military service as corps staff. Nevertheless the idea that this was a logical solution to the twin problems, of discharging medically trained corpsmen into a civilian population with no equivalent occupational position and a shortage of suitable health care personnel,

has been described as both naive and revealing an innocence about professional territorial imperatives and the 'tradition-bound' laws of licensure (Ver Steeg 1975).

Other commentators considered that the US had been inspired by models of care seen in other countries and were concerned that the role of new workers in primary care would have little impact without substantial accompanying changes in the health care delivery system particularly in the prevailing patterns of payment and practice (Bicknell el al 1974).

2.3 The two basic features of the occupation were:

- the training would be relatively brief in comparison with medical school education;
- the physician assistant would serve in supervised practice under the direction of a medical doctor. The emphasis was not on the development of new skills but on the acquisition of a standard medical model.

Braun et al (1973) provided an early task analysis focusing particularly on supervised and non supervised work. Questionnaires were used to supplement time and motion studies.

The physician assistant would be trained to

- take medical histories - including psycho-social data (Petrusa et al 1978);
- elicit symptoms;
- develop diagnoses;
- perform medical tests;
- take over some patient management tasks.

2.4 Federal government involvement followed swiftly. The Health Manpower Act (1971) provided capitation funding to medical schools for the training of medical personnel to resolve problems relating to undersupply of medical care. Physician assistant training programmes were included in this funding and by 1974 there were more than 50 training sites.

2.5 The American Medical Association recognised the occupation in 1971 and began work on a scheme for national certification and codification of its practice characteristics. National recognition did not ensure universal acceptance. There were, and continue to be, distinct differences in patterns of practice between states. (Some resistance to physician assistants remains. In one or two economically depressed states physician groups have pressed legislators to rescind funds that support physician assistant educational programmes.)

2.6 In 1976 a committee was established to report on the health personnel needs of the country. This predicted a surplus of physicians, recommended the reduction of medical school class sizes and restrictions on the use of foreign medical graduates. It also suggested reassessment of the extent of training programmes for 'non-physician healthcare providers ... in the perspective of the projected oversupply of physicians'. (Summary Report of the Graduate Medical Education National Advisory Committee 1980, quoted by Schafft and Cawley 1987)

In spite of these recommendations there continued to be Federal funding for training programmes. Increasing numbers of students were applying, physician assistants continued to find employment and legislative advance was still pursued. However one consequence was that the occupation directed its efforts towards proving its cost effectiveness. Of necessity, this effort continued under later neo-conservative administrations.

3 TRAINING

3.1 Hughbanks and Freeborn (1971) reviewed 22 of the early physician assistant training programmes, both generalist and specialist. Some were preceded by studies of task performance and delegation in general medical practice (Stewart and Entwisle 1971). Programmes now appear to have become more standardised. Most last two years. Approximately half the time is spent in clinical attachments while students work under close supervision by a physician.

There have been claims that the success of some programmes has been dependent on the careful matching/selection of physician (preceptor) and physician assistant although an evaluation of the programme operating in Utah points to some of the difficulties in preceptor selection (Kane and Olsen 1977). Those physicians in need of assistance were not necessarily those able to provide adequate training. The mobility from practice to practice in a New England Medex programme was also said to result in part from a lack of respect for the way the physician was practising medicine (Breer, Nelson and Bosson 1975).

3.2 Many programmes result in the award of a first degree. A master's degree may be an option. The institutional affiliations of the 53 physician assistant (primary care) programmes then in existence were published in 1983 by the US Bureau of Health Professions (summarised in Schafft and Cawley 1987). Of these, 25 were based in a school of allied health of a 4 year college and 18 in an allopathic medical school. 3 specific surgeon's assistant programmes are included.

3.3 By 1986 women had become the majority student group in training programmes (Carter 1986). In selecting students the criterion of previous medical experience is still important. (For example as medical technicians, physical therapists, nurses or nurses' aides. Garcia and Fowkes (1987) cite a number of others.)

Within nursing this additional training was not necessarily seen as an occupational advance although responses and reactions were not uniform. Some of the antagonism directed at this development was also aimed at the nurse practitioner movement (Mereness 1970, Rogers 1972, Chaska 1990). But Shaw (1970), in a

nursing journal, lists a number of physician assistant programmes which require a nursing qualification - these are nurse practitioner schemes subsumed under the physician assistant heading. She also comments on the 100,000 or more nurses already moving into 'physician assistant type relationships'. A similar ambivalence may have existed among physical therapists (Blood 1974, Robinson 1974).

Schafft and Cawley (1987) reported an increase in the proportion of students with a formal background in biological sciences.

3.4 There has been some emphasis on recruiting students from minority backgrounds (for example Garcia and Fowkes 1987). It was thought that there were links between the numbers of minority health care professionals and the adequacy of resources found in minority communities. One study showed that black recruits tended to be older than white and were more likely to value the status, income and stability associated with the occupation. Black students were also said to be more likely to be in favour of national health insurance and to look forward to working in 'ghetto' areas (Schneller and Wiener 1978).

Ethnic and racial minorities were well represented among physician assistants in the earlier years although later demographic data indicate a decrease in black participation in the occupation. Many affirmative action initiatives were discontinued in the 1980s.

3.5 Graduates from the educational programmes frequently practice where they have been trained which may, or may not, fulfil the intentions of policy makers. For example, Fowkes et al (1983) describe a 'decentralisation process' aimed at the deployment of physician assistants away from the San Francisco area, site of the original programme. After training moved into community colleges with well developed clinical sciences departments 100 per cent of students took their first job outside San Francisco. This programme was also unusual in the lack of a required student-preceptor match at the outset.

By the mid 1980s fewer graduates were entering primary care medicine and a higher proportion directly entering specialist practice (Carter and Perry 1984, Schafft and Cawley 1987).

3.6 The total direct costs of training a physician assistant have been estimated as $16,900 compared with $86,100 for a physician in 1985 (OTA 1986). A substantial part of the cost has been accounted for by government support of training programmes.

4 COMPARISON WITH NURSE PRACTITIONERS

4.1 The physician assistant occupation was created by physicians unlike nurse practitioners, who developed from qualified nurses. Ford and Silver (1967) reported the first formal nurse practitioner programme in Denver although the model of the 'semi-autonomous' health practitioner had been in existence for many years previously in the form of the nurse-midwife and public health nurse (Celentano 1982). The Colorado-trained paediatric nurse practitioners worked in low-income communities and provided first contact facilities, preventive services and well-child care. They were largely independent of physicians although they exchanged referrals with them.

4.2 The philosophical roots of the physician assistant are very different from those of the nurse practitioner - nursing has adopted the belief that it is quite distinct from medicine and utilises a different set of skills, the performance of which can not be judged by physicians. The nurse practitioner's training is grounded in multiple theories whereas the physician assistant's focuses more on medical tasks and their underlying principles (Huch 1992).

4.3 In practice, as the US Congressional Office of Technology Assessment noted in its 1986 report (OTA 1986, Jacox 1987), there is a considerable overlap in the functions of physician assistants and nurse practitioners. There are similarities in their respective histories and, in assessing the performance of mid-level practitioners in terms of productivity and clinical capabilities, the assumption made in a large number of studies has been that nurse practitioners and physician assistants are interchangeable (for example, Goldberg et al 1981, Sox 1979). Authors advocating the employment of physician assistants use evidence relating to nurse practitioners (Lieberman and Ghormley 1992). Kaminiski, in an invited editorial comment to the paper by Brandt et al (1989) - a retrospective study of the training and utilisation of surgical physician assistants - also pointed out that the tasks outlined are, in other circumstances, performed by **nurses**.

Studies which have attempted to explore the differences between the two groups include that by Mendenhall et al (1980). This was a national study to assess the

utilisation and 'productivity' of both groups in primary care settings. The accumulated data indicated clearly that physician assistants were more productive than nurse practitioners. (Productivity measures used have included dollar income generated, numbers of patients seen per hour, time spent in direct patient care, number/time of telephone encounters.)

4.4 There are some differences in preferred work settings and, more obviously, in career patterns. Nurse practitioners are more likely to be working in paediatrics and less likely to be working in family practice or surgery than are physician assistants. Perry (1984) refers to the lack of long term follow up data but states that one third to one quarter of graduates from nurse practitioner programmes are no longer working in that capacity in contrast to the 13 per cent of physician assistant graduates who have left the field. (It is not known if these figures have allowed for factors such as age and gender.)

4.5 While there have been numerous studies relating, in whole or part, to public acceptance of physician extenders (for example Lawrence's 1978 review) few have concentrated on a relative assessment of physician assistants and nurse practitioners. In a telephone survey of Baltimore households reported in 1979, only half the population surveyed had heard of physician assistants and nurse practitioners and 4 per cent had received care from them (Storms and Fox 1979). The public did not distinguish between the two roles and regarded both as assistants rather than substitutes although slightly more respondents were in favour of nurse practitioners performing delegated tasks.

4.6 Most of the 300 or so nurse practitioner programmes now in operation award a master's degree. Many of the current federally funded programmes are those for nurse-midwives. Initially there was little articulation between nurse practitioner and physician assistant training programmes and professional organisations despite similarities in curriculum and graduate practice. Fowkes et al (1979) describe and evaluate a co-operative educational venture between a university family nurse practitioner programme and another university's primary care associate programme who merged clinical curricula. A multidisciplinary training programme in geriatrics

involving both groups, as well as physical therapists and medical students, has also been reported (Stark et al (1984).

Perry, a physician, considers one of the most critical issues facing the nurse practitioner movement to be the drift away from using physicians in the formal instruction of nurse practitioner programmes and that the trend towards reliance upon nurse practitioners to train other nurse practitioners will eventually be detrimental to the quality of training (Perry 1984). Equivalent changes in physician assistant training have not attracted similar criticism and other writers in the same volume mention with approval how the training of new physician assistants is facilitated by the presence of more mature and experienced physician assistants (Greenberg and Rheinlander 1984).

4.7 The total costs of training a physician assistant are slightly higher than those of a nurse practitioner but both have been heavily subsidised by federal government (Weston 1984). The average earnings of a physician assistant are also slightly higher, $24,000 versus $23,500 (OTA 1986).

4.8 Physician assistants are directly associated with their sponsors through state legislation. The legal scope of the nurse practitioner's work is affected each state's medical and nurse statutes. It is said that these acts are rarely consistent with each other, resulting in ambiguity and physician concern about legal liability. As in similar studies, the results of one survey of New York physicians to determine their attitudes towards employment and task delegation indicated that physicians were more likely to employ physician assistants than nurse practitioners - the comparison made is between the former as 'a role enhancer' and the latter as 'role competitor' (Fottler 1979). Other writers claim that the roles of both groups have been similarly constrained by legal and reimbursement issues (Weston 1984).

4.9 Although the nurse practitioner is viewed as able to practice independently of the physician this may be questionable (Huch 1992). The medically related functions must still be sanctioned by a physician. Nursing functions can be conducted independently. However challenges to as to what constitutes the traditional field of

medicine have been undertaken by nurse practitioners and there have been some court decisions (Birenbaum quotes *Sermchief v. Gonzales,* Missouri 1984).

4.10 Whether physicians support or oppose the use of nurse practitioners and physician assistants there is a widespread agreement that the approval of the physician is necessary for effective functioning (Birenbaum 1990 p79). It has been suggested that approval by early supporters was for different reasons:

- physician assistants increased productivity and reduced costs of service delivery;
- the nurse practitioner improved the quality of care through the application of psychosocial knowledge and the willingness to provide continuity of care.

5 ACCREDITATION AND REGULATION

5.1 The physician assistant occupation is placed within various state and federal laws and regulations as well as diverse forms of medical supervision. It was always intended that the medical care would be provided under the supervision of a physician - known as 'dependent practice'. The self identification of physician assistants as dependent practitioners[1] has been described as a strategic choice - by accepting a legally dependent position the physician assistant is able to assume more responsibility, a judgement which has been ratified by experience in the courts (Johnson 1983). So, for example, Arizona physician assistants can order X-ray examinations whereas nurse practitioners in the same state do not have that authority. States may register both physician assistant and supervising physician thus ensuring that the dependent practice regulations are met.

In the period between 1970 and 1986 enabling legislation for physician assistants was adopted by 47 states and the District of Columbia. State definitions differ but all specify the educational qualifications and dependent nature of practice. All indicate the number of physician assistants who can work with a particular supervising physician. For example, Miller and Hatcher (1978) point out that no physician in Georgia may employ more than two physician assistants at any one time.[2] Physician assistants may also have more than one supervisor.

Supervision clauses may limit the site of practice. In West Virginia the supervising physician may send the physician assistant off the premises to perform duties under direction but a separate place of work must not be established. At least two states

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1 The term 'dependence', in relation to practice, does cause problems within the occupation. Schafft and Cawley (p36) consider that the role could be better described as 'independent tasks within dependent practice'. There are also a number of references to 'interdependent' practice (for example Stuetz 1992).

2 Goldberg and colleagues (1981) report the evaluation of the quality of care provided by physician extenders in US Air Force clinics with a ratio of 2 to 3 physician extenders to each supervising physician and claim these are ratios which have never been reached in previous studies. This study may be unusual in its inclusion of nurse practitioners (in terms of calculating ratios) and, as care is given in a non civilian setting, will be subject to other legislation. Nevertheless the authors consider the practice transferable.

recognise that the degree of supervision should vary with the task - implicitly acknowledging that some tasks are riskier than others (Johnson 1983).

There is considerable variation in prescribing rights accorded to physician assistants between states and from one setting to another.[3] Kissam (1977) pointed to the influence of state pharmacy laws in the practice of non-physician providers.

Physician Assistants: State Laws and Regulations is published periodically by the American Academy of Physician Assistants. However medical facilities operated by the federal government are able to work outside state regulations.

5.2 Accreditation of the occupation is the responsibility of the Committee on Allied Health Education and Accreditation of the American Medical Association which establishes the standard for physician assistant programmes.

5.3 From 1975 the National Commission on the Certification of Physician Assistants took responsibility for certification and recertification processes. Glazer (1977) described this as a model of unprecedented co-operation among a group of health professional organisations - 14 national bodies are cited. The commission had also to assure the relevance of the examinations to subsequent practice.[4] Until 1985 physician assistants could take the certifying examination without having undergone a formal training.

5.4 To maintain certification continuing education (100 hours per 2 years) is mandatory. Recertification takes place after 6 years of practice. Initially this examination focused on primary care but later recertification examination in surgery was offered. Schafft and Cawley (1987) note the lack of consensus in the profession about the need for

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3 As a group, physician assistants have also been urged to endorse proposed regulatory changes in the generic drug approval process (Huntington 1990).

4 Some elements of the certifying examination have been challenged, in particular the use of the Clinical Skills Problems as a reliable indicator of clinical competence. The National Board of Medical Examiners discontinued this type of examination in 1963 after a 10,000 subject study, even so it was introduced and has been maintained for physician assistants (Gilliam and Staropoli 1990).

recertification pointing to the extent to which practice may become specialised over a six year period. Some research on the correlations between original and recertification examinations has been reported (Campbell 1984). Performance on a variety of biographical variables was analysed and the only variable found to change performance significantly was current employment status.

5.5 Workplace rules are developed by the employer/employers within which supervision may take many forms. Some allow the physician assistant more autonomy than others. Record at al (1977) have described satisfactory supervision as one of the most elusive goals - the public must be protected in terms of quality and employers must be protected from increased malpractice risks. At the same time the professional competence of the physician assistant must be allowed to develop and neither physician nor physician assistant time should be wasted in oversupervision.[5] As Smith (1992) points out, the development of video link systems also means that supervision may become more thorough and less labour intensive.

Supervision may be:

- prospective - elements of supervisory policy established before physician assistant sees patients;
- concurrent - supervision while functioning;
- retrospective - deals with performance review .

5.6 The number of physician assistants that can be supervised by one physician may cause problems in some institutional settings - for example in prisons. It is reported that physician assistants have had to request additional supervision. Nursing homes may also present problems in terms of supervision particularly in smaller homes which find it difficult to finance a full time physician. Massachusetts was one of the first states to pass legislation allowing the physician assistant (and nurse practitioners) to work semi-independently with telephone supervision. In rural

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5 Patients and physicians also have different views about what constitutes adequate supervision. Patients are said to be more 'comfortable' when they know that physician assistant functions are closely supervised (Smith 1981).

communities it is acknowledged that exceptions may be made to stringent supervisory rules (Frary and Reimer 1984).

5.7 Nurses have been encouraged to report inadequate and 'marginal' supervisory arrangements in hospitals (Regan 1982) and hospitals have been held to be negligent in their supervisory policies (*Polischeck v. United States* quoted by Regan who describes the case leading to the decision.)

5.8 The accreditation standards of the Joint Commission on Accreditation of Hospitals allow hospitals to utilise physician assistants as members of the medical staff and provide details regarding bylaw amendments that permit accreditation and utilisation of physician assistants.

Hospitals can individually decide which practitioners can admit and treat patients, an institutional right based on the principle that the hospital is responsible for the quality of care provided there and is liable for the negligent selection or retention of incompetent physicians as employees or agents of the hospital. Under newer legal doctrines there is also the responsibility for the hospital to screen private physicians who apply for privileges (for example admitting patients and performing surgery) and to monitor their performance on the basis of the duty to protect patients (Warren 1984). In these circumstances it is not surprising that the question of hospital 'privileges' for non-physician providers has been described as 'controversial' (Schafft and Cawley 1987).

Typically a physician assistant candidate for hospital privileges would be:

- a graduate of a Council on Allied Health Education and Accreditation approved physician assistant training programme;
- eligible for, or have passed, the national certifying examination administered by the National Commission on Certification of Physician Assistants;
- registered with the state board of medical examiners.

Substantial numbers of hospitals have incorporated physician assistants as members of the hospital medical staff and made the necessary amendments to their bylaws in order to permit physician assistant employment.

6 ROLE OF THE PHYSICIAN ASSISTANT

6.1 A study conducted by the American Academy of Physician Assistants in 1985 (Schafft and Cawley do not provide a precise reference) showed nine general clusters of activities common to physician assistants across specialty lines.

- gathering data;
- seeing common problems and diseases;
- conducting laboratory and diagnostic studies;
- performing management activities;
- performing surgical procedures;
- managing emergency situations;
- conducting health promotion and disease prevention activities;
- prescribing medications;
- using interpersonal skills.

There are said to be no tasks exclusively performed by the physician assistant. In some settings - those which do not support a full health care team - physician assistants may also substitute for a nurse or social worker.

6.2 It was estimated that in 1986 there were approximately 18,000 physician assistants in the US. A nationwide survey conducted in 1984 (Masterfile survey, reported at length in Schafft and Cawley) showed that physician assistants spent most of their time in clinic or office settings. They were underrepresented in nursing home care and home health care - possibly because of difficulties in receiving reimbursements for care provided in these locations and restrictive state practice acts. (Legislation passed in 1986 allowed for Medicare Part B coverage of physician assistant services in nursing homes, hospitals and as assistants at surgery.)

Unemployment is said not to be a major problem among physician assistants although women physician assistants are more likely to be unemployed at any given time (Carter 1986).

6.3 Much of the discussion about physician assistants originally revolved around the kind of illness/conditions they were qualified to treat. This ignored the possibility that physicians and physician assistants treated patients with different social characteristics. Relationships observed in a rural community suggested that the higher a patient's socio-economic status the more likely it would be that treatment was given by the physician (Rushing and Miles 1977).

Hospitals

6.4 Over a third of departments of surgery in large teaching institutions were said to be employing physician assistants by 1979 (Perry, Detmer and Redmond 1981). Rosen (1986) writes of adopting the opposite concept to that proposed by Stead (the original Duke University programme), advocating the physician **substitute** rather than **assistant**. Physician assistants were hired to replace house staff.[6] The aim was said to be a situation in which the physician assistant gave medical care that did not have to be given by a physician. (Much of the job is described as 'scut work').

In 1987 an estimated 6000 physician assistants were employed in hospitals, some of which provide medical care to prison populations and elderly populations. The justification was said to be that one of the most basic and important skills taught to all physician assistant students is the performance of a medical history and physical examination and that this is relevant to the majority of medical settings (Cawley 1991). Although most physician assistant training programmes emphasise primary care their graduates seem to move easily into specialty roles with little additional formal training. (It should be pointed out that these are claims made by physician assistant teachers. Shelton et al 1984 make similar suggestions.) Formal training programmes are available in some specialties (including emergency medicine, neonatology, paediatrics, surgery and occupational health).

6.5 Hospitals are said to be the fastest growing area of physician assistant employment. Extensive use of physician assistants is made in Veterans Administration hospitals.

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6 Miles and Rushing (1976) had already elaborated on these different functions in respect of primary care.

Physician assistants working in private single or group practices may also care for the practice's hospitalised patients.

Changes leading to increased employment include the decrease in size and number of physician residency programmes in major fields with changes in accreditation policies of these programmes, changing federal regulations governing reimbursement of hospitals and a decrease in the number of foreign medical graduates entering US graduate medical education programmes.

There are suggestions that in some circumstances physician assistants may be seen as preferable to foreign medical graduates. Heinrich et al (1980) describe enthusiastic American college graduates who 'communicate clearly, easily and pleasantly with patients' and Robyn and Hadley (1980) note the increasing need of hospitals to compete for patients and patients' more favourable reaction to physician assistants than to foreign medical graduates with whom they may face a language barrier.

6.6 A number of titles are associated with the physician assistant in the house staff role (for example staff associates, staff assistants, associate residents). While functioning at the same level as first year residents, they are able to provide continuity on a hospital service over a longer period (Silver and McAtee 1983).[7] Physician assistants are said to become more familiar with patients and more effective employees in terms of awareness of established protocols, compliance with medical record requirements and physician preferences in performance of diagnostic procedures. Several papers (for example Hatcher and Fleming 1974, Miller and Hatcher 1978, Othersen et al 1979, Rosen 1986, Frick 1986) report the planned introduction of physician assistant house staff. The programme reported by Frick used attending physicians and senior medical residents for supervision and

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7 Other studies have also pointed to the equivalence of their practice with some hospital resident staff. A number of health care professionals, including physician assistants, were evaluated in their ability to diagnose malignant and benign skin disease. There was no significant difference between the performance of medical students, physician assistants and residents in internal medicine or surgery although the dermatology residents did significantly better ((Wagner et al 1985).

consultation although still required a *moonlighting* house physician for evening and weekend backup cover.

6.7 Physician assistants are also employed in any number of medical and surgical specialties where they combine house staff roles with specific specialised procedures. Contributors to Carter and Perry (1984) describe their performance in emergency medicine, cardiothoracic surgery, renal transplantation, burns unit, anaesthesia and critical care, urological surgery. Lieberman and Ghormley (1992) report the use of the physician assistant in performing endoscopic procedures but also point to the variety of other fields where they have been successfully used (flexible sigmoidoscopy, cardiopulmonary resuscitation, cardiac catheterization, first assistance at surgery, harvesting of saphenous vein grafts and management of patients with AIDS). Smith (1992) mentions studies relating to their accuracy in interpreting mammograms and their use in the performance of abortions and Gunderson and Kampen (1988) advocate their use in neurology. Ellis (1991)[8] and McCowan et al (1992) describe their potential and actual use in various specialised fields of radiology. (The latter also outline their university's physician assistant training programme and state requirements for practice.)

The very wide variety of duties undertaken - even within a specialty - has created problems for credentialing agencies and the physician assistants who must provide continuing education credentials to maintain their professional status. (See 5.4)

6.8 Although it is claimed that physician assistants may, in some circumstances, be preferable to nurses responsible to a nursing hierarchy, in larger organisations it has been found necessary to develop a separate physician assistant administrative system. Physician assistant administrators will not supervise clinical activities but may co-ordinate other activities (Schafft and Cawley 1987).

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8 Thompson (1974) reported a pilot programme in which radiologic technologists were trained as physician's assistants in radiology. The more recent writers have used physician assistants with a generic training.

Health Maintenance Organisations (HMOs)

6.9 The Health Maintenance Act was passed in 1973, providing an environment suited to the growth of pre-paid practice. HMOs employ sizeable numbers of physician assistants and nurse practitioners. Their structure and size provide opportunities to make economies of scale and changes in the 'traditional' division of labour. Because practice income is prepaid the HMO has a direct incentive to minimise its total salary costs. There is also no problem in obtaining reimbursement for care given by physician assistants/nurse practitioners as may occur in fee-for-service practice. The character of prepaid practice allowed physician assistants, from the start, to be appointed on a salaried basis.

A number of well regarded studies have originated in HMOs - for example the work of Record and colleagues (see 8.2 and 8.3) - and it is probable that some of this is applicable to other settings. Greenfield et al (1978) reported a prospective study conducted in a pre-paid practice setting in which mid-level practitioners using protocols were compared with a physician only/no protocol system.[9] They concluded that the protocol system saved physician time and reduced costs.

Geriatric care

6.10 Physician assistant services to the elderly were not covered under Medicare until 1986. By this time most educational programmes included formal lectures on geriatric care.

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9 Originally considerable emphasis **was** placed on the development of protocols, or clinical algorithms, which were used in a wide variety of settings and for specified conditions. Sparer et al (1977) reported a study of four algorithm developmental projects some of which were designed for personnel with minimal health care experience. Komaroff et al (1976) used 'physician assistants' with 4 week training (diabetes and other chronic disease care) and Tompkins et al (1977) study of care for acute respiratory illness used military corpsmen trained for 13 weeks.

Johnson (1983) has suggested that physicians could be liable for direct negligence in drafting or approving protocols.

A study of physician assistant working in 9 very different sites was conducted in 1985 in order to develop models of geriatric care provided by physician assistants (Schafft, G and Rolling, B *Physician Assistants Providing Geriatric Care* 1987 quoted in Schafft and Cawley 1987). It was found that the role of the physician assistant varied not only from setting to setting but, in some cases where more than one physician assistant was employed, very different clinical responsibilities were held within the same place of employment. The authors also imply that supervision in some circumstances was inadequate. However a number of physician assistants working in long term care facilities found that they could have a level of responsibility unmatched in other settings and this proved to be an incentive to working with the client group.

Other settings

6.11 It seems that physician assistants may work in areas of work avoided by physicians - geriatrics is a frequently quoted example. Occupational medicine, prison medicine and rural practice seem to be similarly unpopular with physicians (Work in these settings is described by McElligott and Fortney, Echard, and Boutsellis - all in Carter and Perry 1984). The physician assistant is also described as indispensable in military medicine as now practised (Stackhouse and Cheney 1984).

Relationships with other professionals

6.12 Few publications examined have explicitly focused on the relationships between physician assistants and other professional groups although Kane et al (1976) studied the communication patterns between physicians and their assistants (Medex) in 19 practices. Interaction relating to patient problems was approximately 30 minutes per day with Medex more likely to initiate contact. Generally both physician and Medex showed a striking similarity in communication styles. (The Medex programme was noted for its elaborate matching system of physician and assistant.)

6.13 A study of physician assistants using semantic differentials suggest that other members of the health team are viewed favourably by physician assistants and also,

possibly surprisingly, that their self perceptions may change over time to become more like their perceptions of nurses and less like those of physicians (Engel 1980).

6.14 Several sources hint at, rather than confront, problematic relationships between physician assistants and other health care professionals (including medical students who may resent being taught by physician assistants). For instance, in their discussion of the process by which physician assistants can be granted limited staff privileges, Schafft and Cawley write of initial barriers, including opposition from nurses, and imply that these issues continue to be problematic in some circumstances. On a larger scale, there are also suggestions that legislative change at state level has been impeded by nursing interest groups.

Many studies of implementation make reference to nurses (for example, Frick 1986, Maxfield et al 1975, Williams et al 1984). In some cases nurses were involved in hiring and orientation programmes and in others formal liaison committees were established. Miller and Hatcher (1978) claimed that the relationship between (cardio-thoracic surgical) physician assistants and nursing staff was not a problem and that attempts were made to prevent physician assistant infringement on traditional nursing territory. In the discussion following this paper, Rheinlander mentions difficulties with 'hospital administration, nursing and pharmacy'.

Hanlon (1980) alludes to the problems in the 'operating room' with a handful of competitors (primarily operating room nurses and surgeon's assistants) with varying skills jockeying for positions. Concern about the physician assistants' scope of practice has also been raised by the Association of Operating Room Nurses (Palmer 1990).

There seems to be little evidence on the relationship between nurse practitioners and physician assistants in the working environment although Fowkes and colleagues (1979) mention the sensitive issue of the competition between these two groups stemming from their 'unacknowledged similarity'. Jackson's annotated bibliography also refers to a conference paper (Godkins, T.R. *'Physician's Assistant: A Decade of Experience'* presented at Oklahoma University Health Sciences Center June 1976) which addressed the issue. Frick (1986) refers to *clinical nurse specialists* and

physician assistants working well together in complementary and not competitive job situations - but also notes that there are exceptions.

6.14 Janicek (1992) writes in 'a personal capacity' as a registered nurse with 25 years experience, considering that the development of the physician/surgical assistant is entirely beneficial although she acknowledges that in general other nurses do not agree with this. She regards the physician assistant as the link between the nurse and the physician. In contrast, Stradtman (1989), although describing the physician assistant as helpful to both nurse and physician in a medical intensive care unit (where there are shortages of nurses as well as physicians), views the creation of another layer of communication between doctors and nurses as a major problem.

Law cases involving nurses and physician assistants

6.16 Increasing numbers of nurses are said to be questioning the legality of following orders from physician assistants which have not been countersigned by supervising physicians. A court case involving the Washington State Nurses Association and the Board of Medical Examiners (*Washington State Nurses Association v. Board of Medical Examiners 605 P.2d 1269 Wash 1980*) is reported by Bennett (1984). The nursing association claimed that such orders required nurses to execute directions given by non-physicians, thereby exceeding their statutory authority and exposing them to liability. The nursing association lost their appeal with the court indicating that physician assistants are not independent practitioners but agents of the supervising/ employing physician who retains responsibility for the practice of the assistant. The court concluded that a nurse could not be civilly or criminally liable for the unauthorised practice of medicine by executing a prescription given by a physician assistant since the physician cannot disclaim responsibility for that prescription. (Johnson (1983) uses the same case as an illustration of the 'rocky' interprofessional relations between hospital staff nurses and other non physician providers.)

Bennett suggests that nurses should familiarise themselves with local state statutes and internal rules regarding the practice of physician assistants. If these policies permit the physician assistant to write orders for immediate implementation which a

nurse under particular circumstances deems unreasonable then other procedures should be followed.[10]

Studies relating to career

6.17 Unlike many of the other studies most of these are generated within the occupation itself. Many relate to elements of career mobility and job satisfaction (for example, Brady 1980 and Breer et al 1975). Others are studies of the process of professionalisation (Tworek 1981, Brutvan 1985). A descriptive study of professionally active physician assistants also examined career prospects in terms of salary and specialty - salaries are highest in industrial medicine and lowest in obstetrics and gynaecology. There appears to be no significant increase in salary related to experience after five years of employment (Carter and Perry 1984).

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10 A growing number of cases have found the nurse (and hospital employer) liable for physician negligence when the nurse should have exercised independent judgement to refuse to follow physician's orders (Johnson 1983).

7 EARLY EVALUATIVE STUDIES

7.1 The US Department of Health, Education and Welfare initiated research to evaluate the impact of physician assistants on the practices where they were working, the quality of care delivered, their acceptability to physicians and patients and on the distribution of medical services in previously underserved areas. As Miles (1975) reported, this study did not produce the information that had been sought. In consequence smaller studies, usually initiated by the physician assistant programmes themselves, assumed greater importance even though they may have used small samples and no control group, and been subject to possible investigator bias. In some cases researchers have emphasised the non-generalisability of their findings to other states (Toffler 1977).

The findings have, however, been consistent. Most reported acceptance of the physician assistant as primary care provider by patients and satisfaction by the supervising physician (for example, Nelson et al 1974, Joiner and Harris 1974). There was little evidence of increasing the availability of primary medical care or of controlling costs through the use of lower paid personnel.

7.2 Repeated studies have shown that the quality of care delivered by physician assistants (and nurse practitioners) is equivalent to that of physicians. Objective measures of quality of care used were either the degree of concurrence regarding diagnosis and recommendation between physician and non physician or experimental studies relating to outcomes in which patients were randomly distributed between different categories of provider.

Although much quoted in various contexts, the Sox (1979) review of 21 studies makes the point that these were office-based studies and that there was no experimental basis for extending their conclusions to care given outside the office, to care that was unsupervised and to care of the seriously ill patient. Nevertheless the research findings on physician assistant quality of care were regarded as so consistently positive that the Congressional Budget Office in 1979 recommended that no new studies in this area were required (*Physician Extenders: Their Current Role in Medical Care Delivery* 1979 US Congressional Budget Office).

7.3 The same report also acknowledged the contributions made by physician assistants in improving access to medical care. A later study (Ferraro and Southerland 1989) reported a modest change in the maldistribution of physicians by location and specialty although consider that the depth and permanence of these trends remain to be judged. They refer to a 1986 paper by Brooks and Johnson ('Nurse Practitioner and Physician Assistant Satellite Health Centers' *Medical Care* 24: 881-90) which showed that a majority of rural satellite health centres originally staffed by nurse practitioners and physician assistants had either ceased to function or been replaced by physician practices.

7.4 Most studies have shown that physician assistants spend more time per patient than did physicians, possibly because of the less deferential context of care provided and the likelihood that patients will distribute themselves between physicians and non physicians according to both patient and provider preferences for dispatch or leisurely contact (Record et al 1980).

7.5 Maxfield (1975), referring to the 290 plus articles written about physician assistants between 1969 and 1975, claimed to find only one which referred to general surgical practice - the majority related to primary care. The Maxfield paper describes the emergency department of a small general hospital and the use of physician assistants over a 4 year period. Work was divided between minor trauma, obtaining and recording data from physical examinations and assistance with routine surgical procedures and endoscopies. It was concluded that there were significant time savings for surgeons. An earlier paper (Maxfield et al 1975) emphasised the rigid supervision of this programme, noting that the time spent in teaching, supervision and development of written policy was great and at times threatened its continuation.

7.6 The experience of employing 16 physician assistants over a five year period in general surgery, orthopaedics, oncology and primary care in a small town clinic was reported by Lohrenz (1971). Acceptance by patients was good but it was found that several physicians were unable to delegate adequately. The author suggested that the success of any such initiative depended as much on the supervising physician as the physician assistant.

8. COST EFFECTIVENESS STUDIES

8.1 Although the performance of physician assistants has been extensively evaluated and the impact of physician assistants on access to health services, quality of care and physician and patient acceptance has been measured with generally positive results, it is less clear to what extent their utilisation is cost effective. (If they **are**, then Schafft and Cawley (1987: 68) also ask if these benefits accrue to the employer, the patient or society as a whole.)

A number of federal health policy organisations (including the Congressional Budget Office, the Congressional Office of Technology Assessment, the Health Care Finance Administration, and the Bureau of Health Professions) have tried to assess physician assistant cost effectiveness, particularly in relationship to investment in education and deployment. They have also considered the issue of physician assistant cost effectiveness when practices employing physician assistants are reimbursed through Medicare. The Report of the Congressional Office of Technology Assessment (1986) analysed physician assistants and nurse practitioners from the point of view of cost savings to society. This contained an extensive review of the literature but concluded that existing data precluded a definitive cost-effectiveness analysis. Although any financial benefits would accrue primarily to employers, the use of mid-level practitioners in a prepaid group practice setting may serve to keep overall patient premium costs down.

The 1986 bill providing Medicare coverage to physician assistants suggests that policy makers **did** recognise the capabilities of physician assistants to provide care at reasonable costs, even in the absence of specific confirmatory data.

8.2 Studies in primary care use a number of approaches (see also 4.3)

- comparison of time taken by physicians/physician assistants to complete an office visit;
- comparisons of numbers of visits performed in a given time (for example Nelson et al 1975);
- total number of visits performed with the addition of a physician assistant .

Early predictions of productivity gains of up to 90 per cent were challenged: studies had ignored changes in patient waiting time, practice hours and supervisory requirements which, when included, may reduce productivity gains to 20 per cent, with a negligible increase in net income (Hershey and Kropp 1979). This led to further debate over the weight to be given to non-economic outcome measures such as physician and patient satisfaction (Major 1980).

A 1978 report (Physician Extender Reimbursement Study) said that practices with physician extenders provide more patient visits per $1000 of practice cost, at a higher quality of care than do traditional practices. An examination of a national survey of more than 6000 practising physician assistants in 1981 showed that they were able to generate substantial revenue for private practices (Carter, R.D, Perry, H.B. and Oliver, D. *Secondary Analysis: The 1981 National Survey of Physician Assistants* Arlington VA Association of Physician Assistant Programs 1984).

8.3 Most studies suggest that assistants can perform anywhere from 50 to 75 per cent of services performed by doctors in primary care (Record et al 1980). This substitutability level remains the major standard by which the physician assistant is judged to be cost effective. However, as Schafft and Cawley point out, it is not clear which services are included in these percentages and which are left out. Figures will also vary according to practice setting and specialty. Both factors will affect the degree of delegation. Allowance should also be made for variations in state medical laws.

In HMOs the differential in salary between physician and physician assistant must remain high enough to provide a cost saving to the organisation after taking into account the substitutability of the physician assistant for the physician (between 50 and 70 per cent), the market advantage of the physician employee and the local regulations. The salary differentials quoted for 1984 were $24,500 for the physician assistant versus $106,300 for the physician. The experience at Kaiser Permanent Health Plan in Portland was that one physician assistant could substitute for 63 per cent of a physician at 38 percent of a physician's cost (Record et al 1980).

8.4 Physician assistants may be performing work complementary to the physician in terms of education and preventive services. The evidence suggests that physician assistants perform better (than physicians) in these activities (OTA 1986). Commonly it is not known how cost beneficial these practices are, let alone how cost beneficial physician assistants are in their performance. (Preventive services are not usually reimbursed by third party payers.)

Hospitals

8.5 Most of the previously cited studies have been carried out in primary care settings. A comparable analysis of productivity is more difficult within hospital practice. Cawley (1991) reasserts claims of cost effectiveness made in Schafft and Cawley (1987) but provides little hard evidence. The most significant point made seems to be the parallel increase of employment of physician assistants over a period when hospitals were under pressure to reduce costs. However the 1986 OTA report pointed out that a major change in US health care was the growth of investor owned hospitals who (at that time) were focusing their efforts on attracting medical specialists and showed no interest in employing physician assistants (or nurse practitioners and nurse-midwives).

Most physician assistants working in hospitals are salaried employees. Different hospitals have used physician assistants to replace different levels of staff. The salary levels of physician assistants, residents and fellows are roughly equivalent. A full-time licensed house physician would be paid at a much higher rate.

Frick (1986), in a study which compared the costs before and after the adoption of a physician assistant house staff programme, claimed appreciable cost savings although many of the advantages to physicians were non monetary. Other studies have been published to demonstrate how the employment of physician assistants has also allowed rationalisation of teaching programmes - these need no longer be determined by service requirements (for example Perry and Detmer 1984, Greenberg and Rheinlander 1984). Benefits to the institution have already been mentioned (6.6) and patients experience increased continuity of care.

Nursing homes

8.6 Under some conditions (that is with 'appropriate' levels and type of supervision - see 5.6), it is said that there are significant cost savings through employment of physician assistants (Schafft, G and Rolling, B.(1987) *Physician Assistants Providing Geriatric Care* USHSS HRP0907021 quoted in Schafft and Cawley 1987).

9 MALPRACTICE CLAIMS

9.1 In theory, the tort system aims both to compensate the victims of medical injuries and to create an incentive to offer high quality health care by penalising low standards of professional work. In practice, of course, it may not do either particularly well (Johnson 1983). Malpractice insurance analysts consider physician assistants to be low-risk providers, based on the fact that they are dependent practitioners and that their actuarial experience has been so low in the past (US DHHS. Fifth Annual Report to the President and Congress in the United States March 1986.) It is also suggested that, because mid-level practitioners deliberately cultivate better provider-patient communication, claims motivated by anger and disappointment may be reduced (Johnson 1983).

The exact incidence of malpractice claims against physician assistants is difficult to determine. The frequency of claims from 1981 to 1986 was about one claim per 100 physician assistants compared with an average of more than ten per 100 physicians (American Academy of Physician Assistants Task Force on Professional Liability Report to the House of Delegates. *Medical malpractice and the physician assistant profession: an overview* quoted in Lieberman and Ghormley, 1992). Some work place settings will incur more risks than others. Shellenburger (1986) referring to the field of occupational medicine, claims to have no knowledge of any malpractice claims.

Johnson (1983) points out how the figures may have been skewed by the failure of physician assistants to carry adequate insurance. There is an argument that the existence of adequate insurance encourages malpractice claims and courts may be unwilling to place liability on the non-physician provider if the victim will be uncompensated.

9.2 Tozzini (1989) considers that the evolution of malpractice law has seen dependent practitioners held accountable to a standard of care expected to be provided by peers and that physician assistants are no longer protected from liability or suit. The most common action of liability is professional negligence and interpretation of the law has begun to shift. However there is still only a limited number of precedent

setting cases that show clearly how the courts will determine liability when a physician assistant is named in malpractice suits. The cases examined in the article include a physician assistant working in a prison - action was brought against the state because it was the 'deep pocket' responsible for inmates' care -and two other cases in which suits were brought against physician assistant, physician and hospital.

9.3 A Lexis search for this review found 148 reported cases which referred to physician assistants in Federal courts over the last two years. The vast majority were cases brought by prisoners against the prison authority for a violation of the Eighth Amendment - Deliberate Indifference to the Medical Needs of a Prisoner. In some of these cases the prisoners are arguing that a particular physician assistant was deliberately indifferent, while in others they argue that the prison authority, in employing a physician assistant rather than a physician, was deliberately indifferent. US prisoners are known to be active litigants because of their constitutional right to have access to legal advice and this seems to be the main reason impelling these cases. The second major category involved physician assistants in cases where they were used to give evidence of a claimant's health. These seemed largely uncontroversial and the courts appeared ready to accept the expertise of physician assistant witnesses. Only one other case stood out as significant. This considered the duty of a physician assistant to blow the whistle on a fraudulent physician.

It would seem, on the basis of this review, that physician assistants are not a particular source of negligence litigation, although it might be useful to supplement the search with an investigation of state courts, where negligence cases are more commonly heard.

10 TRANSFERABILITY

10.1 It is occasionally tempting for the British observer to invest or present developments in the United States with a uniformity (an internal transferability?) that they do not in fact possess. Some of the achievements are also more limited than it would first appear. For instance, as a proportion of the total health care work force, the number of physician assistants is still quite small. Robyn and Hadley (1980) give figures for 1979: there were 8,000 physician assistants practising in a field employing 340,000 physicians. Assuming a 1:1 supervisory ratio only 2.4 per cent of physicians would have worked with a physician assistant. (There were 14,000 nurse practitioners and 900,000 nurses.) Fry and Horder (1994), in their admittedly brief description of primary care in the US, mention nurse-midwives and nurses but not physician assistants.

Cautions relating to the introduction of physician assistants have been expressed at both the level of the state (Ver Steeg 1975), the hospital (Vanderbilt and Rosen 1984) and the individual physician (for example Perlman 1976[11], Kersten 1981). Ver Steeg pointed out that, in California, there had been no organised attempt to discover whether physician assistants had been needed: the initial legislation had simply assumed that they were. For any state under less immediate pressure, a concerted effort to determine the scale of the need and the alternatives available should be most certainly carried out.

Vanderbilt and Rosen consider there are three main elements in the preparation of a hospital for the introduction of the physician assistant - analysis, education and supervision. They suggest that the following questions should be answered 'honestly and completely':

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11 A physician (allergist) commentator who expressed more enthusiasm for nurses to develop roles emphasizing the existing familiarity and approval of their presence and performance.

- Why precisely are you considering a physician assistant? What role are they expected to play? Could this role be satisfied by other types of health care personnel? If so why choose the physician assistant?
- Where does the idea come from? If it is from the administration, will medical staff accept the physician assistant? If the idea originates from the medical staff, is there still a strong group who are vigorously opposed? Will administration give the necessary short and long term support?

They point out that physician assistants are not cheap and salaries are not the only expense. The indirect costs, particularly those to do with supervision, must also be calculated. If physician assistants are used to improve or supplement a service, costs will rise.

10.2 Developments in British primary care organisation led to an early examination of US models. Reedy (1978) considered that there were present and potential future indications for the British equivalent of the new health practitioners although he believed that, in Britain, only the nurse practitioner could survive. Even if the special conditions existed which would make the creation of the physician assistant possible, British nursing was said to be too powerful a profession to allow the equivalent to emerge.

10.3 Nevertheless Reedy et al's (1980) study of the attachment of a physician assistant to a general practice in Berkshire provided firm evidence of the capacity of this particular type of health worker to work in primary care. The success of this initiative was considered to depend on the initial briefing for the staff, preliminary assessment by the whole practice and the information given to patients. It was said that he dealt with common acute problems rather than **the routine examinations that figure largely in American practice.** (Americans are said to regard this as the only way in which any health professional who deals with patients can obtain the data needed to make decisions.) Mechanic (1972) and Marsh et al (1976) have documented some of the differences in primary care practice, although clearly there may have been subsequent changes. The Berkshire practice had attached health visitors and district nurses but it seemed that it was the work and role of the treatment room nurse which most closely resembled that of the physician assistant. This study convinced the

authors that it would be possible to train 'auxiliaries' of this type to work in problem areas. Cost issues were not examined.

10.4 The best known British example of the 'surgeon's assistant' equivalent is the post held at the John Radcliffe Hospital, Oxford (Alderman 1992). This was advertised originally as an open position but, because the successful applicant was a qualified nurse, some of the discussions have been obscured by the debate surrounding *the extended role of the nurse*. This development was evaluated by the Royal College of Surgeons.

More nurses/nurse practitioners are now functioning as first assistants at surgery and there are a number of initiatives in which they are employed to function in a manner comparable to junior medical housestaff. We are unaware of any scheme involving health care providers who are not trained nurses although there were very early suggestions from the US that nurse training is not an economic preparation for the physician assistant role (Coye and Hansen 1969). If nurses, as well as physicians, are in short supply, training some to become physician assistants will merely exaggerate the problem.

10.5 The natural history and experiences of similar health practitioners in other countries has been examined by US writers (Cawley J and Golden AS (1982) 'Nonphysicians in the United States: Manpower Policy in Primary Care' *Journal of Public Health Policy* 4: 69-82). In comparison with the US experience of mid-level practitioners, it was clear that few parallels existed. It is suggested that the successful or unsuccessful integration of non-physician health care providers into a country's health delivery system is based primarily on how any such workers fit into the medical, economic and cultural systems of the nations that employ them. Rarely are experiences with non-physicians exportable to other countries and each nation that has created and utilised non-physician providers has fashioned them and their roles to meet specific needs and requirements in that country's system (Celentano 1982).

10.6 Schafft and Cawley consider that the broadest generalisation that can be made is that non-physicians must adjust and adapt to changing forces within the health delivery system in which they work once they outlive the rationale of their initial

creation. This is what has occurred with physician assistants in the US. The occupation was founded out of a concern to deliver access to groups excluded by the costs of an insurance-based, fee-for-service health care system. Since that time, however, the occupational leadership has taken a rather conservative approach towards the US medical establishment in contrast to the more competitive stance of the nurse practitioners and certified nurse-midwives. The concern to contain costs in order to promote access has given way to a concern to contain costs in order to gain a market advantage.

11 REGULATORY ISSUES FOR THE UK

Statutory Accommodation

11.1 At present the physician assistant would not fit easily into statutory definitions of health care providers. They are neither doctors nor nurses nor an occupation accepted under the Professions Supplementary to Medicine Act 1960. The easiest method of accommodation would probably be to bring them under the framework of this Act, although a separate Act could be created, as in the case of chiropractors. The following occupations are currently covered by the 1960 Act: Chiropodist, Dietician, Medical Laboratory Technician, Occupational Therapist, Physiotherapist, Radiographer, and Speech Therapist. A parallel Board could be set up under s.4 to approve courses of training leading to registration. After registration the practitioner may be employed within the NHS. (National Health Service (Professions Supplementary to Medicine) Regulations 1974 (SI 1974 No 494) - no member of these professions can be employed within the NHS unless they are state registered).

11.2 In the absence of registration, however, there is no bar on employing anybody with any other job title. Both hospitals and GPs may use their ancillary staff budgets to employ physician assistants. The only form of regulation would seem to be the general professional accountability of the supervising doctor:

> *"a doctor who delegates treatment or other procedures must be satisfied that the person to whom they are delegated is competent to carry them out. It is also important that the doctor should retain ultimate responsibility for the management of these patients because only the doctor has received the necessary training to undertake this responsibility. For these reasons a doctor who improperly delegates to a person who is not a registered medical practitioner, functions requiring the knowledge and skill of a medical practitioner, is liable to disciplinary proceedings."*
> *Professional Conduct and Discipline: Fitness to Practice GMC, January 1993, paras 42 and 43.*

11.3 In the absence of a specific legal regime, physician assistants would be unable to prescribe prescription only (PoM) medicines and, possibly, to order X rays, although other tests could be ordered within whatever local protocols are established consistent with the GMC statement cited above.

Duty of Care

11.4 All medical professional liability rests on the duty of care owed by the practitioner to the patient. A patient receiving the services of a medical practitioner may reasonably expect that the practitioner will act as a reasonable practitioner (*Bolam v Friern Barnet HMC* [1957] 2 All ER 118). In other words, the care provided will be regarded as adequate by a significant body of professional opinion. In the present instance, though, the position is complicated by the judgement in *Wilsher v Essex AHA* ([1988] 1 All ER 871). This considered the question as to whether a different standard of care might be set for junior doctors attempting tasks beyond their normal level of experience. It was held that there was only one standard: if a junior were doing something that would normally be done only by a consultant, then they must do it to the same standard or be held negligent.

In theory, then, the courts might set the standard of care required of a physician assistant in either of two ways:

- Using the *Bolam* approach, as 'the standard reasonably expected of a reasonable physician assistant'
- Using the *Wilsher* approach, as 'the standard expected of a reasonable doctor doing that particular job'

Subsequent cases in relation to midwives have suggested that the latter approach is more likely, especially as the physician assistant is likely to be supervised by a doctor who will be clinically responsible for the delegated work. If the doctor would have done the work personally but for the availability of the physician assistant, then the doctor's standard of care would be expected. Even if the physician assistant establishes the greater autonomy claimed by midwives, it seems unlikely that the

courts would accept a lower standard of care from a mid-level practitioner than that offered by the dominant profession in that area.

An issue to be explored very carefully would be the extent to which a physician assistant would be able to further delegate - especially in terms of giving orders to nurses.

11.5 An important element of this is the principle that patients have a right to appropriate information and to give consent to their treatment. It is well established that consent may not be valid if the identity of the person touching or treating the patient is not known to the patient. With medical students, for example, patients must give their explicit consent to being touched if this is not to constitute a battery (*Medical Students in Hospitals* (HC (91) 18 April 91). However, there is no guarantee that a particular named doctor will carry out an NHS treatment, although this could be a term of the contract in a private case (*Michael v Molsworth* [1950] 2 BMJ 171).

If a physician assistant were employed, it would have to be made clear to the patient that they were not a doctor or a person qualified in some other way. In legal terms, this may be satisfied by the provision of a distinctive uniform, as with nurses and other supplementary professions.

Duty of Confidentiality

11.6 Although the General Medical Council and the UKCC impose special duties of confidentiality on doctors and nurses, there is a general legal duty which applies to everyone who receives confidential information. The principles are set out in *AG v Guardian Newspapers Ltd (no. 2)* [1988] 3 All ER 545. This provides that:

"a duty of confidentiality arises when confidential information comes to the knowledge of a person (the confidant) in circumstances where he has notice, or is held to have agreed, that the information is confidential, with the effect that it would be just in all circumstances that he should be precluded from disclosing the information to others."

Lord Goff went on to provide three limiting factors to this principle:

1) the information must have the necessary quality of confidence about it;
2) it must be imparted in circumstances importing a obligation of confidence;
3) there must be unauthorised use of the information to the detriment of the party or parties concerned.

He accepted also that

"although it is generally in the public interest that confidentiality should be respected this may be outweighed by some countervailing public interest that favours disclosure"

The Lords did not agree as to the extent to which detriment must be shown, although it is accepted that in cases of medical confidence the principle is in itself so important that a breach of confidence is detrimental, even if no particular repercussions follow it.

It would seem therefore that no real problem need arise concerning confidentiality of patient information with the employment of a physician assistant. Although they might not be bound by the specific rules pertaining to doctors or nurses, the general common law duty would apply. A prudent employer might wish to write a specific duty into a contract of employment to facilitate an internal disciplinary response. The main difficulty would be that a patient with a complaint would only be able to pursue it by the costly method of litigation rather than by handing it over to the profession's own processes. However, some commentators might also think that this was an advantage.

11.7 A more difficult situation might arise where the physician assistant became privy to information about fraudulent or incompetent behaviour by another health care provider. The UKCC, for example, imposes a specific 'whistle-blowing' obligation on registered nurses and it would probably be unlawful for an employer to dismiss a nurse for fulfilling this obligation in good faith.

12 CONCLUSION

12.1 In considering the applicability of the US experience to the NHS, it is important to recognise that physician assistants emerged because the economic and cultural conditions of the American health care system in the 1960s created a space for a mid-level practitioner which was has been maintained, for rather different reasons, over the last 30 years.

12.2 In the 1960s, the primary concern was over the access of certain marginal population groups to health care. Ageing rural communities with low population densities simply could not generate enough wealth under an insurance-based system to make the presence of a doctor economically viable. It is not clear that there are any sizeable areas of the UK which are comparable and, in any case, the NHS has evolved a system of subsidies that make it feasible for doctors to locate in remote areas. Although the US did experiment with some similar schemes in the 1960s, where doctors agreed to work in rural areas in exchange for training grants, or the remission of all or part of the debts they had incurred in funding their training, they proved unpopular with the 'drafted' doctors, who found their longer-term career prospects compromised, and were hard to sustain. The costs of entry dictate minimum earning levels for US doctors which then form constraints on the location of their practices. The switch to loan-based student funding in the UK is too recent to observe whether similar effects will operate in the UK. Mid-level providers offered a partial solution in the USA: by reducing the costs of entry and limiting mobility prospects, care could be delivered within the resources available. In an area where the population numbers and health needs might imply a volume of work for two or three doctors but the level of poverty made this unsustainable, one doctor with extenders could offer an acceptable and affordable level of service.

12.3 More recently, US health care providers have looked more closely at the cost implications of a medically-dominated division of labour and been drawn into the skill-mix questions that have begun to concern the NHS. Some of this reflects the same shifts away from the abuse of medical training posts, especially internships, as cheap labour. The clerking and continuous cover service provided at this level has declined, albeit for rather different reasons. More generally, particularly in the HMO

context, the cost of medical labour has provoked plan managers and hospitals to try to focus it on those tasks where substitution is not possible. Mid-level providers have come to play an important role in this process, although the published evidence on the cost savings suggests that these may not be large. Nevertheless, in a competitive environment, they are worth having, especially as there is no evidence of patient dissatisfaction or increased malpractice risk.

12.4 It must be noted, though, that these are *general* arguments about mid-level providers and, as such, cover nurse practitioners as much as physician assistants. Indeed, it seems that, numerically, nurse practitioners have been the preferred alternative in most US contexts. There does not seem to be any research evidence why one group should have been preferred to the other. The best suggestion may be to do with the culture of particular organisations and the preferences of their associated physicians. To the extent that there is a defining characteristic of the physician assistant, it seems to be that they are trained to work within a medical model rather than adopting the more autonomous stance of the nurse practitioner. This may make them less liable to challenge established practices in their work setting. However, it may be dangerous to make too much of this, since it seems from other work that there may be a gap between the rhetoric of nurse autonomy and the behaviour of nurses in practice settings.

12.5 At an institutional level, any provider unit considering the introduction of a physician assistant needs to address the questions posed by Vanderbilt and Rosen (1984) and cited in para 10.1. The first issue to consider, though, may be the broader one of whether a mid-level practitioner is needed and Vanderbilt and Rosen's sequence should be inverted to ask whether an existing group of health care personnel could see their role extended or expanded, rather than creating a new one. There may, of course, be good reasons for doing this: the existing regulatory frameworks around registered health care occupations may inhibit an appropriate degree of flexibility in deployment and it may be better to start with a clean sheet and a new job title. If this is the case, however, the champions of the scheme will need to make a long-term commitment, if the innovation is not to be obstructed by traditional craft barriers. This has clearly been an issue in some UK hospitals where the authority of nurse

practitioners has been challenged by other registered occupations who are accustomed to receiving orders only from doctors.

12.6 The DH seems to have two options available in this area. One is to respond to innovation. Provider units may be reminded of their scope for innovation and encouraged to develop local schemes. The Department could then commission a survey to see to what extent these developments had common features that might form the basis of registration or certification, if these seemed desirable. Purely local solutions may inhibit labour mobility, since the skills acquired from one employer may not be recognised by another, and impose unnecessary costs on providers from training small numbers of people for similar tasks in a large number of places. It is possible, for example, that there could be a considerable demand for nurses to be trained to act as first assistants in operating theatres but the numbers needing to be trained in any one hospital at any one time may be quite small. Similarly, the lack of a statutory authority to prescribe may inhibit the use of non-nurse mid-level practitioners and it may be desirable to have a means of giving legal recognition to a wider group of prescribers through a system of certification. This may be particularly helpful in relation to minor injuries centres if these become a widespread means of dealing with low-level A&E work.

Alternatively, the Department may wish to give a central lead by commissioning further skill-mix research targeted specifically on the question of mid-level practitioners. Rather than looking at the allocation of work between existing occupations, it would need to consider whether the basic map could be redrawn with work moving up, down or sideways from several groups to form the basis of a new occupation. The Department could then use this to issue advice to the NHS and to encourage pilot training schemes through the higher education system. This would be a more coherent approach but runs the risk of producing outcomes which are not acceptable to the majority of providers and lead to difficult inter-occupational politics if they seek to appoint the graduates of the pilot programmes.

12.7 Much of the US experience with physician assistants has been in primary care. However, this seems to be the least promising area for development in the UK. Although this may change if the current shortage of recruits for GP training is

sustained, primary care has been an area of particular workforce flexibility for several decades, which has been further enhanced by the additional budgetary devolution involved in fundholding. Much of the work done by physician assistants in the US is already being done by treatment room or practice nurses in the UK. To the extent that a DH response is called for, it may lie in trying to enhance the training and certification opportunities for these existing staff. The exception might be in out-of-hours service development if the current difficulties with out-of-hours cover lead to the development of night treatment centres. Although there does not seem to be much discussion of the possibility, these might be combined with minor injuries clinics as a 24-hour walk-in service for urgent primary care problems. Mid-level practitioners would seem to have a great deal of potential value here.

12.8 It may be most helpful in formulating a UK approach to focus more on the concept of the mid-level practitioner and its possible place in the UK system of health care than to become too involved in the search for specific models that can be imported directly. Within the US there is a great degree of variation and much of the impulse has come from pressures that are not replicated in precisely the same form here. The American experience can alert us to the possible alternatives to our traditional ways of allocating work between health care personnel but it will be necessary to develop our own way forward reflecting our own culture and conditions.

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