Primary Health Care Research and Development 2003; **4**: 329–339

Patient satisfaction with skill mix in primary care: a review of the literature

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This literature review focuses on patient satisfaction with skill mix in primary care. This is an important, rapidly changing, topic as the range of health professionals working alongside GPs increases and the roles of staff change. The review is intended to assist primary care organizations in developing skill mixes that meet patients' preferences and needs.

A number of characteristics that influence the type of services that patients want were discovered. Older people and those from ethnic minorities want a 'traditional', GP-led service. Access is important to younger people and those in full-time work. Those from lower socio-economic groups value nurses, but have found the increasingly complex organization of services a problem. There are different levels of knowledge and expectations about health services and information on the skills and knowledge of professionals, what they do and the links between them, needs to be available.

A number of aspects of care are important to patients. Patients liked nurses as they were good communicators, formed good therapeutic relationships, gave information on illnesses and spent more time. The location of services is important and patients liked services provided in the home or community. Continuity of care is key, but has been presented as old fashioned and reorganizations may have reduced continuity; skill mix could be viewed as forming a barrier between doctor and patient, but personal lists and teams where practices are divided into smaller units with shared support may help. The competence of health professionals is clearly vital and patients considered nurses competent, although they had concerns about nurses and pharmacists taking on some new roles.

The literature focuses on patients' views about doctors and nurses, although they also want a wider range of services and professionals available in primary care: occupational therapy, link workers, CAB advisers, pharmacist advice and mental health workers. Despite being satisfied with nurses, some patients still wanted to see a doctor next time or felt that a doctor should be available. GPs can help build awareness and confidence in patients about the roles and contribution of the team.

Key words: literature review; patient satisfaction; primary care; skill mix

Introduction

This literature review focuses on patient satisfaction with skill mix in primary care. Research into the topic is important as there is rapid and substantial change as a greater range of health professionals' work alongside GPs and the roles of practice-based staff change. Key drivers are the increasing demand and cost of care, a shift from hospital-based to community services and difficulties with the recruitment and retention of general practitioners. Despite the importance of the topic, there is little research available and that which does exist is scattered across the specialist literature of different groups and tends to focus on a single aspect of skill mix, rather than the complexity of delegation and diversification.

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10.1191/1463423603pc162oa

In order to determine patient satisfaction with skill mix, the review first considers the characteristics of patients that influence their satisfaction with health services. Then studies which have been undertaken on patient satisfaction with primary care and particular professionals working in primary care are considered, which can, when viewed together start to give an indication of aspects of skill mix, which may be satisfactory or not to patients. The results of the review are intended to assist primary care teams and policy makers in developing skill mixes that meet patients' preferences and needs. A pictorial summary of the issues arising from the literature review is shown in Figure 1.

Methodology: search terms and strategy

The following electronic clinical databases were searched between October and December 2000:

- HMIC (Health Management Consortium database combining the Department of Health, King's Fund and Nuffield Institute's HELMIS)
- Medline
- Cinahl
- RCN journals database
- BNI (British nursing index)
- Embase
- PsychInfo
- Assia
- Amed

The following search terms were used:

- Skill mix
- Primary care
- General practice
- Patient satisfaction
- Patient attitudes
- Patient views

The Boolean operator 'and' and 'wildcard' symbols were used in the search.

'Skill mix' in this case focuses on the mix of disciplinary groups in the delivery of a service. It also encapsulates the definition offered in both skill-mix bibliographies (Halliwell *et al*., 1998; Sergison *et al*., 1998), focusing on delegation and diversification. Delegation is where tasks are transferred from expensive, highly qualified professionals, such as GPs and senior nurses, to cheaper, less highly qualified staff, such as junior nurses and nurse assistants. Diversification is where additional services or professionals are added to the practice meet health needs and/or replace services provided in hospital and other settings.

'Primary care', in this context, means GPs and the clinical teams of directly employed staff – nurse practitioners, practice nurses and nurse/health care assistants. The roles of district nursing, health visitors, mental health workers and community pharmacists are considered less often as the literature does not focus on them quite so much and they are employed by other organizations. However, they do still have a part to play.

'Patient' is taken to mean anyone registered with a general practice, whether they are regular users of the service or not. 'Satisfaction' is taken to mean the extent to which a patient's expectations or needs are adequately met by the service offered.

As expected, a large number of references was generated. An assessment of the relevance of the studies was undertaken by one reviewer (CB) on the basis of the title, abstract and key words. Potentially relevant articles were obtained in full, if possible. In view of the difficulty that the search terms may exclude articles' relevance to the topic, the reference lists of all articles were searched.

The two bibliographies on skill mix in primary care from the National Primary Care Research and Development Centre (Halliwell *et al*., 1998; Sergison *et al*., 1998) were also used; full text articles of abstracts including the key words 'patient satisfaction' or 'patient views' were gained, where possible.

All types of studies and participants were included in the literature review. The main limitation to whether a study was included in the review was the ease with which it could be accessed by the reviewer; generally, studies reported in journals from abroad proved difficult to get hold of.

Details of each study (topic researched, design, number of participants, data yield, key findings, setting and limitations/weaknesses) were entered on to a database constructed using the Excel spreadsheet package. Quality assessment and relevance to the topic area was carried out by one reviewer (CB); all studies were scored using the following principles:

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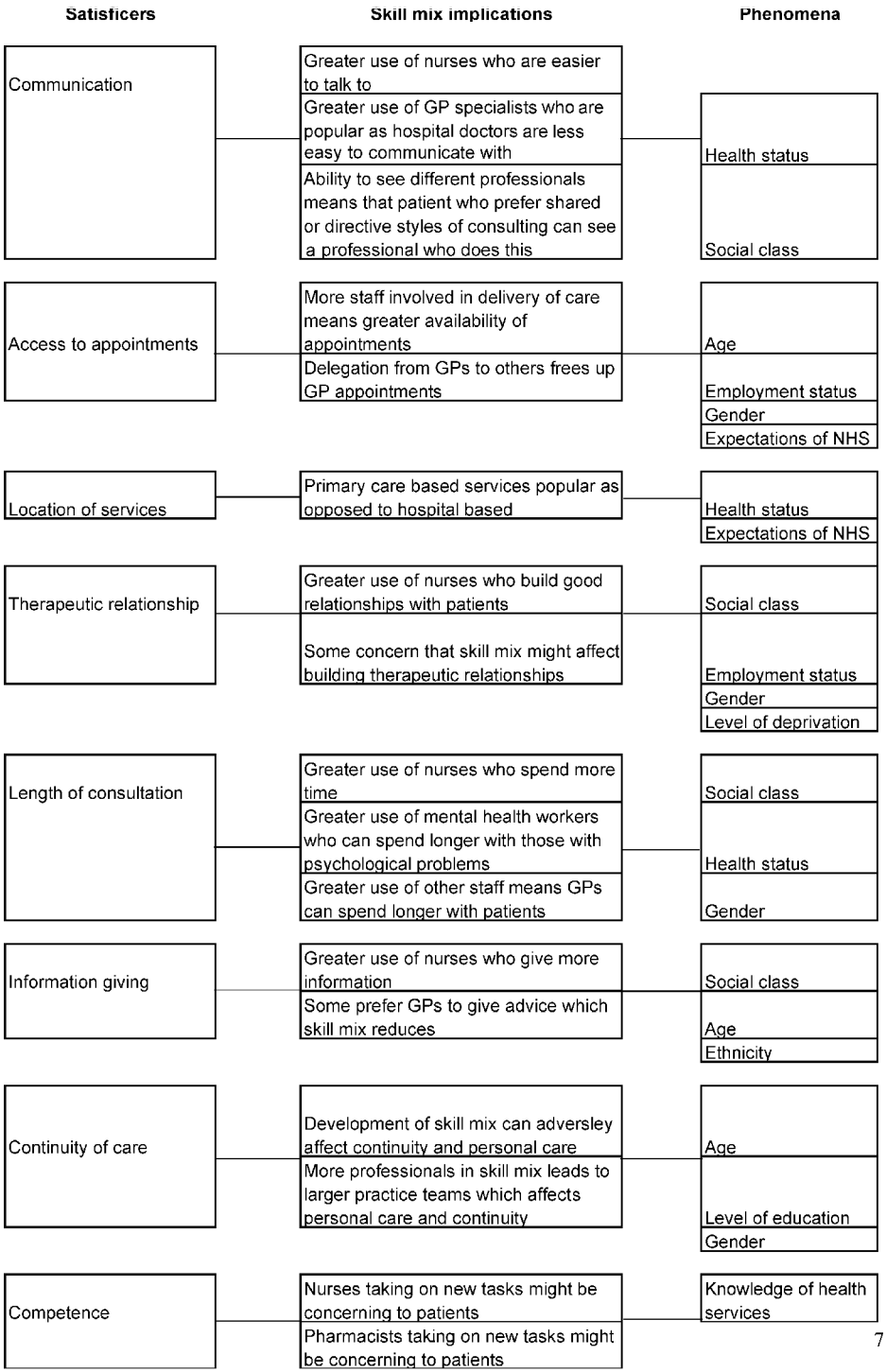

Figure 1 Skill mix in primary care: satisficers, implications and patient phenomena

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- Grade A, excellent source;
- Grade B, pertinent information, but very limited;
- Grade C, interesting but subjective or of questionable reliability;
- Grade D, not pertinent.

Those studies that scored lower grades, that is C and D, were either excluded from the final review, or mentioned only in support of other higher graded studies. Seventy-five articles were uncovered by the search strategy, and 15 were excluded.

Prospective searching of core journals in this area continues; the journals that are searched are:

British Medical Journal
British Journal of General Practice
Family Practice
Health and Social Care in the Community
Journal of Advanced Nursing
Nursing Standard
Primary Health Care Research and Development

Results

Methodological issues

The majority of research into patient satisfaction with primary care has adopted a quantitative approach characterized by large samples, statistical data yield and a tendency for questionnaires to be used. Of 52 primary research articles collected, 30 were of a quantitative design. It has been noted that quantitative measures lack discriminatory ability (Bond and Thomas, 1992) and the reductionism and standardization involved in quantitative methods can remove much of the meaning and this is evidenced by the high levels of patient satisfaction recorded in the majority of studies (Lewis, 1994; Williams, 1994). The implication is that the design and use of questionnaires is very important, as poorly designed and executed questionnaires can act as censorship, giving misleading results and limiting the opportunity for patients to express concerns (Lewis, 1994; Williams, 1994). Questionnaires also tend to suffer from low response rates, particularly amongst younger people, those in poorer areas and those unable to read or write (Cohen *et al*., 1996; Lewis, 1994); this can lead to nonresponse bias.

Qualitative methods have been identified as allowing a more critical slant to come through in patient satisfaction studies (Williams, 1994). However, few of the articles reviewed used a qualitative methodology; of the 52 primary research articles, only six used a qualitative approach. It was, however, slightly more common for triangulation of methodologies: developing questionnaires from open-ended interviews with patients or focus group work, which was pursued in 16 of the articles. This suggests that further research is required using qualitative methodologies.

There are other issues of relevance to a literature review of this topic area. Primary care teams do tend to be quite different from each other, largely due to the independent contractor status of the GP and the nature of the population that they serve; many of the studies therefore warned that the results might not be generalized to other practices. Different meanings have been found for 'patient satisfaction' (Bond and Thomas, 1992; Lewis, 1994; Mahon, 1996; Mangen and Griffith, 1982) and the lack of definition and discriminatory ability might lead to the high levels of satisfaction reported in many studies (Bond and Thomas, 1992).

Influences on patient satisfaction

Patient satisfaction is affected by knowledge of health services (Bond and Thomas, 1992; Mangen and Griffith, 1982; NHS Executive, 1999). Expectations of services have also be found to be influenced by previous experiences of health care. Knowledge and experience of the changing roles of different health professionals, such as doctors and nurses (Bond and Thomas, 1992) can therefore affect satisfaction and this should be an important consideration in implementing skill mix changes. The literature shows that patients are less sure of the role of the nurse than the doctor (Phillips and Brooks, 1998; Staniszewska and Ahmed, 1998) and to explore further patients' perceptions and knowledge of these roles a study has been undertaken on a nurse-led pilot, where the nurse employs the GP (Chapple *et al*., 2000). Patients' perceptions of the role of the nurse were influenced by a number of sources, including letters from the health authority, comments from receptionists, newspaper articles, information leaflets, their own and other patients' experiences and previous contact with a nurse practitioner. There is clearly a need for patient information on the skills and knowledge of

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different health and social care professionals, what they do and the links between them (Forum on Teamworking in Primary Care, 2000). It may also be the case that people's perceptions of doctors and nurses taking on new roles may change when they have actually experienced this.

Age is the most frequently cited influence on patient satisfaction, with 23 studies in this area. There is a tendency for older people to be more satisfied (Department of Health, 2000; Grogan *et al*., 1995; Howie *et al*., 1999; Hull and Hull, 1984; Jenkins-Clarke *et al*., 1997; Larsson, 1999; Treadway, 1983) although not all show a link (Baker, 1990; Kaim-Caudle and Marsh, 1975). It is also difficult to determine the preferences of 'young' and 'old' people, as people aged 16 and under were excluded from most of the review studies and definitions of younger and older people were seldom given or differed. The link between increasing age and satisfaction is complex (Baker and Streatfield, 1995) and may be because some older patients can remember before the NHS existed (Larsson, 1999). It may also be because they are treated with more respect and consideration by some health professionals (Larsson, 1999; Lewis, 1994) as they feel more comfortable dealing with more passive elderly people, compared with consumerist younger people (Williams, 1994). Their views will also be determined by the services they receive (Baker and Streatfield, 1995) and studies show that older patients seem to receive better services (Baker, 1990; Department of Health, 2000; Freeman and Richards, 1993; Howie *et al*., 1999; Kaim-Caudle and Marsh, 1975; O'Reilly *et al*., 2001). It is also important to remember though that older people do tend to have more complex health problems and higher levels of need (Larsson, 1999). It may be that skill mix divides the young and the old, providing more satisfactory services for younger people. As older people want a more 'traditional' service (Baker and Streatfield, 1995; Jenkins-Clarke *et al*., 1997; Lewis, 1994; Williamson, 1995) they may be more resistant to skill mix (Forum for Teamworking in Primary Healthcare, 2000). But, as access issues are most important to younger people, particularly those that work (Department of Health, 2000; Forum for Teamworking in Primary Healthcare, 2000), skill mix involving nurse-led services at weekends or early in the morning or later at night (Dobson, 1999) may meet their needs better. Chapple *et al*., (2001) also found that younger people would be more likely to use a NHS walk-in centre.

Health status has been shown to influence services required and satisfaction, as evidenced in 13 articles. A distinction can be drawn between patients presenting with chronic or psychological problems and, acute or physical problems. Those with chronic or psychological problems prefer a shared consulting style, characterized by good communication and patient centred consultations (Savage and Armstrong, 1990). However, other studies have shown that they want a more directive style, to get reassurance or to avoid responsibility for a poor outcome (Little *et al*., 2001; McKinstry, 2000). Continuity does seem to be important for those with chronic problems (Freeman and Hjortdahl, 1997), whereas those with acute problems are less bothered who they see (Taylor, 2001) and they prefer a directive style of consultation (McKinstry, 2000; Savage and Armstrong, 1990). This is supported by Sibbald *et al*. (2001) who found that those with urgent health care problems would be more likely to use a NHS walk-in centre as they did not mind who they saw.

Although it has been stated that there are few class differences in patient satisfaction with primary care (Department of Health, 2000; Kaim-Caudle and Marsh, 1975), 13 studies were found showing socio-economic preferences relevant to skill mix developments. Those from nonmanual social classes prefer a shared consultation style (McKinstry, 2000), which is likely to be connected to their view that the GP does not always know best (Department of Health, 2000). Working class people have been found to value nurses most, possibly because they find them easier to talk to (Bowling, 1981). However, increasingly complex organization of health care can inhibit the participation of this group (Brearley, 1990). Those in paid work or full-time education are least satisfied with access to primary care (Department of Health, 2000) and tend to use the community pharmacy as a 'first point of call' instead (Hassell *et al*., 1997).

There is no clear link in the 12 studies found on gender and satisfaction. Some studies suggest that women are less satisfied (Department of Health, 2000; Larsson, 1999) and others that they were more satisfied (Grogan *et al.,* 1995)! Women do use health services more often than men (Department of Health, 2000) so satisfaction may be linked to how well they feel their expectations

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were met at their last visit (Thorsen *et al*., 2001). Similarly, men have been found to be both satisfied with consultation time (Baker, 1990; Department of Health, 2000) and dissatisfied (Hull and Hull, 1984).

There has been very little research involving patients from an ethnic minority, particularly those who may have a limited understanding of English; only five studies were found. Lower levels of satisfaction with primary care, organized around the GP practice, have been found (Department of Health, 2000) and Sibbald *et al.* (2001) found that as a result of this, people from ethnic minorities would be more likely to use a NHS walk-in centre. They also feel that it is important for the GP to carry out basic tasks, such as taking blood and giving injections (Lewis, 1994) which obviously has implications for skill mix, as delegation of these procedures to nurses is common.

The literature on what influences satisfaction appears to have a recurring theme of the impact of expectations and knowledge of health care, regardless of other characteristics. Those who use the service more are more knowledgeable about it, and can decide whether it meets their expectations and from this how satisfied they are. Age, health status and socio-economic status appear show the most firm evidence for determining levels of satisfaction. The literature is either scarce or contradictory for gender and ethnicity, suggesting that further research is required in these areas.

What matters to patients

Communication is the most frequently mentioned satisfier, mentioned in 26 studies on satisfaction. Patients require good communication with a health professional and they also expect health professionals to talk to each other (Ovretveit, 1997). A number of studies indicate that nurses are viewed by patients as good communicators, sometimes better than doctors (Mangen and Griffith, 1982; Paykel *et al*., 1982; Paxton and Heaney, 1997; Venning *et al*., 2000). However, this may only be applicable to primary care as hospital studies have shown that patients felt that nurses' communication was poor (McColl *et al*., 1996; Staniszewska and Ahmed, 1998). This is supported by work on doctors' communication which found that GPs are viewed as better communicators than hospital doctors (Murphy *et al*., 1992; Williams, 1994). This may be due to the setting; Rapport and Maggs (1997) found that patients felt more able to voice their concerns to district nurses as they saw them in their homes and they felt more comfortable in this setting.

Patients are concerned about the amount of time that professionals spend with them, and 22 studies were found in this area. High levels of satisfaction have been reported with nurses (Kinnersley *et al*., 2000; Mangen and Griffith, 1982; Paykel *et al*., 1982; Poulton, 1995; Shum *et al*., 2000; Venning *et al*., 2000). The NHS survey also found that people were satisfied with GPs (Department of Health, 2000) although patients probably expect consultations with general practitioners to be shorter (Poulton, 1996). Regardless of professionals, there is a quality argument for longer consultations (Jenkins-Clarke *et al*., 1997; Morrell *et al*., 1986; Venning *et al*., 2000) and to achieve this, reductions in home visiting and delegation through skill mix have been suggested (Hull and Hull, 1984; Forum for Teamworking in Primary Healthcare, 2000).

Continuity of care has been shown to be important to patients and was mentioned in 21 studies. It has been found to be particularly important for older patients, females and those from disadvantaged communities (Chapple *et al*., 2000; Jenkins-Clarke *et al*., 1997; Ross and Tisser, 1997). But, despite its importance to patients, continuity can be seen as old fashioned and in opposition to the development of modern primary care (Guthrie and Wyke, 2000) and concerns have been expressed that NHS reorganizations seem to reduce personal continuity (Baker and Streatfield, 1995; Guthrie and Wyke, 2000; Hull and Hull, 1984; Neuberger, 1998; Williamson, 1995). Further, continuity and satisfaction may decrease as the size of practices increases (Audit Commission, 2001; Baker, 1990; Baker and Streatfield, 1995; Howie *et al*., 1999) and skill mix could also affect continuity and be viewed as forming a barrier between doctor and patient (Bowling, 1981). However, the study by Jenkins-Clarke *et al*. (1997) found no clear relationship between practice size and continuity. Proposals have been put forward to help achieve personal continuity where larger practices have personal lists and are divided into a number of smaller, individual patient-centred teams with shared administrative and support functions (Baker and Streatfield, 1995; Forum on Teamworking in Primary Healthcare, 2000);

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Guthrie and Wyke (2000) identified primary care trusts as a mechanism to do this.

The competence of health professionals is clearly important to patients and is discussed in 20 studies. Some have suggested that patients cannot assess competence (Brearley, 1990; Mangen and Griffith, 1982), although others advise that although they may judge 'technical ability' differently from professionals this does not mean that one is correct or better (Bond and Thomas, 1992). Patients have judged the competence of nurses favourably (Department of Health, 2000; Paykel *et al*., 1982; Poulton, 1995; 1996; Shum *et al*., 2000), although there are concerns about nurses' competence in new roles (Paxton and Heaney, 1997; Wiles, 1997).

It is important for patients to receive adequate information as shown in 18 studies. Again, patients have expressed high levels of satisfaction with the amount of information that nurses provide (Kinnersley *et al*., 2000; Shum *et al*., 2000). However, the studies on patient satisfaction with GPs show contradictory results: some showed patients were satisfied (Department of Health, 2000; Kaim-Caudle and Marsh, 1975), whereas others showed that patients would have liked more information (Baker, 1990; Brearley, 1990; Grogan *et al*., 1995).

Depth of relationship has been identified as a key attribute of patient satisfaction with primary care, identified in 12 studies. Some patients are most satisfied with their relationship with nurses (Paykel *et al*., 1982; Shum *et al*., 2000) and in some studies, patients seemed more satisfied with the relationship with the nurse than with the GP (Shum *et al*., 2000). However, another study showed poor depth of relationship when patients were seeing the nurse for the first time (Poulton, 1995).

The location of services is important and skill mix has lead to some services being provided in the home or community, when previously the patient had to travel to a hospital or other location; there are 12 studies in this area. Accessibility, reduced waiting times, reduced travelling costs and depth of relationship have all been found to be advantages to patients (Diabetes Integrated Care Evaluation Team, 1994; Forum for Teamworking in Primary Healthcare, 2000; Galvin *et al*., 2000; Gillam *et al*., 1995; Murphy *et al*., 1992; Wiles, 1997). However, some disadvantages have been identified as well – notably concerns from patients about quality and competency (Diabetes Integrated Care Evaluation Team, 1994; Hindler *et al*., 1995; Wiles, 1997).

The literature on what matters to patients seems to focus on communication, time spent with professionals, continuity of care, competence and information giving. It suggests that nurses are seen as good communicators, who spend time with patients and give them adequate information on their illnesses. However, there are some concerns about competence and the effect on continuity of introducing other professionals into the care process. Depth of relationship with professionals, and satisfaction with the location of services, is less frequently reported although relationships with nurses are again viewed positively, as were a greater range of services from practices.

Professionals involved in skill mix in primary care

The literature tends to focus on the patient views about doctors and nurses in primary care, with 38 studies in this area. However, patients also want a wide range of services and professionals to be available at the practice including physiotherapy, podiatry, osteopathy, consultant sessions, housing advice, social services and benefits advice (Neuberger, 1998). Patient satisfaction with these services, if they even exist, is much less frequently reported and suggests that further research would be required in this area.

Patient satisfaction with nurses in primary care is high because they are felt to be easy to talk to, professional, spend more time, give good advice and information and are good at dealing with children and parents (BBC News, 2000; Bhopal, 1994; Brown and Grimes, 1995; Department of Health, 2000; Dolan *et al*., 1997; Drury *et al*., 1988; Jenkins-Clarke *et al*., 1997; Kinnersley *et al*., 2000; Poulton, 1995; 1996; Salisbury and Tettershall, 1988; Shum *et al*., 2000). However, patients feel that there are limits to the nurse role with patients still preferring to see the doctor at the next visit for a minor illness (Kinnersley *et al*., 2000; Shum *et al*., 2000) and female patients preferring to see a female GP rather than a nurse (Phillips and Brooks, 1998). However, Murray and Paxton (1993) found that apart from an initial consultation for oral contraception, patients would prefer to see the nurse for family planning. Patients seem to value access to the nurse, but she is seen as an

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assistant to the GP which suggests a lack of understanding of their potential (Phillips and Brooks, 1998; Wiles, 1997; Williamson, 1995). GPs can help to raise awareness and confidence in their patients about nurses (Jenkins-Clarke *et al*., 1996; Wiles, 1997; Williamson, 1995).

There are few examples of other staff working with primary care teams and a measure of patient satisfaction with these services. Eight studies were found on primary care-based mental health services which were popular with patients who preferred talking therapy to medication (Goldberg *et al*., 1996; Greener, 2000; Mangen and Griffith, 1982; Paykel *et al*., 1982; Priest *et al*., 1996; Simpson *et al*., 2000; Spiers and Jewell, 1995); a study on the management of depression showed that collaborative working arrangements, either between GPs and psychiatrists or psychiatrists and psychologists, were most popular with patients (Katon *et al*., 1997). Only four studies were found on patient satisfaction with community nurses which showed satisfaction with care, relationship and time with district nurses, but lower levels of satisfaction with health visitors (Poulton, 1996; Rapport and Maggs, 1997). However, another health visitor study on their role in managing acute minor illnesses found that patients reported higher levels of satisfaction than those seeing the GP or practice nurse (Pritchard and Kendrick, 2001); this may be because the numbers seen by health visitors were small and they focused on children under 5. Other services which appeared only once in the literature were nurse and occupational therapist-led clinics (NHS Executive, 2000), link workers (Gillam and Levenson, 1999) and CAB advisers (Galvin *et al*., 2000); although satisfaction was high, more studies would be needed to provide an evidence base.

The literature focuses largely on views of doctors and nurses in primary care, with few studies considering other services. Nurses are viewed positively, although there are some concerns about limits to their role. Of the other professionals reported, primary care mental health services are popular with patients and there is some satisfaction with community nurses, although more research is needed.

Conclusions

The information on what influences patient satisfaction, what patients want and patient satisfaction with professionals in primary care can assist in designing skill mix for different populations depending on their preferences. This information will be useful to practices considering their own skill mix developments and primary care organizations engaged in primary care development.

The studies in this area were mostly quantitative, characterized by large samples, statistical data yield and a tendency for questionnaires to be used. The literature on what influences satisfaction appears to have a recurring theme of the impact of expectations and knowledge of health care, regardless of other characteristics. Age, health status and socio-economic status appear to show the most firm evidence for determining levels of satisfaction. The literature is either scarce or contradictory for gender and ethnicity, suggesting that further research is required in these areas. The literature on what matters to patients focuses on communication, time spent with professionals, continuity of care, competence and information giving. It suggests that nurses are good communicators, who spend time with patients and give them adequate information on their illnesses. However, there are some concerns about competence and continuity. Regarding professionals, the literature focuses on doctors and nurses with few studies considering other services. Nurses are viewed positively, although there are some concerns about limits to their role.

The literature review has highlighted areas where little research has been undertaken. There is a need for further research to consider patient views on a much wider range of services in primary care, such as physiotherapy, podiatry, osteopathy, consultant sessions, housing, social services and welfare benefits. Despite a wealth of research on practice nurses and nurse practitioners involvement in skill mix, there is little research available on how patients feel about the involvement of 'attached' nurses, such as district nurses and health visitors in practice skill mix developments. There is also the potential for more studies on the satisfaction of the under-16s and those from ethnic minorities and, further studies on the effect of gender.

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