Developing a new model of care for patients with chronic musculoskeletal pain

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Aim To evaluate the impact of a nurse consultant in developing a new model of care for patients with chronic musculoskeletal pain.
Background Patients with chronic musculoskeletal pain experience fragmented care and long waits to have their symptoms assessed [Clinical Standards Advisory Group (2000) *Services for Patients with Pain*. Department of Health, London]. A nurse consultant post was created to implement a chronic musculoskeletal pain service and prevent inappropriate referrals to other services.
Methods Seven peers participated in a semi-structured, qualitative, audio-taped interview to evaluate the impact of the nurse consultant's role. Data were analysed using content analysis. A retrospective audit of 60 patients was conducted to determine utilization of hospital services following attendance at the pain clinic.
Results Two main themes were identified from the interview data included: (1) the influence of the nurse consultant in implementing a chronic pain service and (2) the clinical leadership skills of the nurse consultant. The audit demonstrated that majority of patients ($n = 53$) were utilizing less hospital specialities.
Conclusion The nurse consultant's role was pivotal in the implementation of the chronic pain service.

Keywords: nurse-led, pain management

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Introduction

In 1999, nursing policy advocated extending the roles of nurses and introducing more nurse-led services [Department of Health (DoH) 1999a,b]. The profession has responded to this through the development of many innovations including the nurse led in patient rheumatology unit at St Helens (Ryan 2001). The desire to achieve a responsive and patient-focused health-care system with health professionals adapting new roles has been supported in subsequent health directives (DoH 2000, 2002, 2005).

One way nursing has responded to the challenges of extending professional boundaries has been through the

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creation of nurse consultant roles in 1999 (DoH 1999a,b). The role was specifically designed to improve patient outcomes (with the majority of the role dedicated to patient contact) and enhance career opportunities (Haines 2002). Other key functions of the role include research, education, leadership and service redesign (DoH 1999a,b).

Expert rheumatology nurses have demonstrated their impact on patient care by improving both physical and psychological outcomes through enabling patients to manage their symptoms on a daily basis (Hill *et al.* 1994, Ryan *et al.* 2006). But little is known as to whether expert rheumatology nurses can impact on service design, a major role component of the nurse consultant post. Patients with chronic pain, including fibromyalgia, osteoarthritis, back and neck pain, experience fragmented care and delays in accessing advice regarding symptom management (Clinical Standards Advisory Group 2000). There is certainly scope to utilize the clinical expertise of the nurse consultant to develop a new model of care for patients with chronic pain.

Cooper *et al.* (2003) referring to patients with low back pain describe the negative experience many patients encounter with the traditional model of care. This involves consulting a multiplicity of specialists (including orthopaedic surgeons, pain anaesthetists, rheumatologists and rehabilitationists), with each new appointment leading to a growing dissatisfaction with the health-care professional with each failed treatment or communication. A retrospective audit of the case notes of one patient with chronic musculoskeletal pain revealed that the patient had had 204 outpatient appointments, 52 inpatient stays and 10 MRI scans (Kinder *et al.* 2004). This audit demonstrated that, despite the vast array of investigations the patient had undertaken, they had experienced no improvements in their symptoms (Kinder *et al.* 2004).

Most of the literature on the impact of nurse consultant roles is focused on describing service developments or clinical activities (Coady 2003, Bent 2004, Fairley & Closs 2006). This is not surprising as with any new roles it takes time to develop and implement services before evaluation can occur. Coster *et al.* (2006) in an evaluation study of 419 nurse, midwife and health visitor consultants found that just over half of the respondents (55%) reported having 'some positive impact' on their service with 44% having a perceived 'significant impact' on their service. Perceived impact does not necessarily reflect actual impact and Coster *et al.* (2006) recommend a more comprehensive assessment of impact, by obtaining the views of other stakeholders including patients, managers and other peers of the nurse consultant.

Where nurse consultants work as part of a multidisciplinary team, with patients with long-term conditions such as chronic pain, it can be difficult to separate the impact of one role member such as the nurse consultant from the rest of the team. Lathlean and Masterson (2002) question whether it is actually possible to disentangle the nurse consultant's contribution.

Many nurse consultants have encountered challenges in demonstrating an impact (Woodard *et al.* 2005) due to a lack of managerial support and organizational authority (Guest *et al.* 2001). Personal experience of the role within a critical care environment revealed organizational values, managerial hierarchies and power relationships as key influences on role implementation (Fairley 2003). In Coster *et al.*'s (2006) survey, medical support was associated with the successful development of services. This supports the development of collaborative workings ensuring that service development involves all key stakeholders for it to be successful. A lack of support from medical, nursing or management colleagues was cited as the main barrier to service innovations (Coster *et al.* 2006).

This paper describes how the creation of a nurse consultant post was pivotal in developing a new patient-centred service for patients with chronic musculoskeletal pain.

How a new model of care has been developed and put into practice

Within the rheumatology service, many clinicians had observed that the lack of a care pathway for patients with chronic pain had resulted in an uncoordinated service with patients being referred to a number of specialities with no equity in care provision. A nurse consultant was appointed to lead, develop and implement a new service for patients with chronic musculoskeletal pain. The nurse worked with the rheumatology team to identify a clear vision regarding the purpose of developing this new model of care (see Table 1) and ensured that all key stakeholders were involved in

Table 1
The vision of a nurse-led chronic musculoskeletal service

To provide a designated service for patients with chronic musculoskeletal pain
To provide a range of self-management interventions aimed at improving the patients' physical, psychological and social well-being
To develop the patients' coping skills
To reduce inappropriate utilization of hospital services

designing and delivering the change. The nurse consultant endorsed Manley's (2002) concept of a transformational culture, and focused on the proposed new service being a patient-centred and clinically effective service.

The rheumatologists were committed to the development and this acted as a source of reassurance to other medical colleagues. Especially as some general practitioners were initially sceptical referring what they regarded as 'complex patients' to a nurse, perceiving that medical skills were required to successfully manage patients with complex needs.

Operational issues included securing clinic space and secretarial support. Referral criteria were developed to equate with the purpose of the clinic and involved the participation of the multi-disciplinary team.

How the service operates

The nurse consultant runs two clinics per week for a primary health-care trust situated within a community hospital. Patients are given a 30-minute appointment and this enables an assessment of the patient's symptoms including identifying whether a cognitive, motivational, emotional, functional or physical component is affecting the patient's management of their pain. From the assessment, a management plan is devised in accordance with the patients needs. This may include:

- Individual education and support, e.g. exercise, pacing, relaxation and positive attitude.
- Referral to a multi-disciplinary structured pain management programme (as advocated by Clinical Standards Advisory Group 2000) to focus on self-management. This has been developed by the nurse consultant and an occupational therapist.
- Referral to other members of the multi-disciplinary team, e.g. physiotherapist.
- Rationalization of medications.
- Referral to a combined liaison psychiatrist and nurse consultant clinic to assess mood states that fall outside the nurse consultant's level of expertise.
- Referral to voluntary organizations including MIND and community-based exercise programmes.

Evaluation of this new model of care

Two evaluations were carried out: an audit of the utilization of hospital services and an exploration of the perceived impact of the nurse consultant role.

One of the main aims of developing a new model of care was to reduce the fragmentation of the existing system, which resulted in patients being reviewed by numerous different hospital specialities for the same problem. An audit was undertaken to investigate whether the creation of a dedicated service had reduced the number of appointments and the number of specialities patients were accessing. An independent researcher conducted a retrospective review of the first 60 consecutive patients attending the nurse consultant-led clinic. The audit was undertaken by accessing the hospital computerized appointment system and recording both the number of appointments and the number of specialities the patient had attended during a period of 5 years prior to and 3 years following attendance at the nurse consultant-led clinic. Three years was the length of time the service had been in operation. The results of the audit (see Tables 2 and 3) demonstrated that the majority of patients had reduced both their number of appointments and the number of hospital specialities they were attending.

In order to evaluate the impact of the nurse consultant role on service development, a qualitative semi-structured interview study was undertaken. Ethical approval was obtained from the Local Ethics Research Committee.

An experienced nurse interviewer was provided with the names and occupations of 12 members of the nurse consultant's role set. Each member received a letter of invitation to participate in the study. From the 12 members who agreed to take part, the interviewer chose a purposive sample of seven peers representing a range

Table 2
Audit results of the utilization of hospital services following attendance at the chronic pain clinic

60 patients (57F:3 M)
Preattendance at the pain clinic: patients' attending 1–16 hospital specialities (median 5)
Postattendance at the pain clinic: patients' attending 1–11 hospital specialities (median 1)
53 patients reduced the number of specialities they were being reviewed by; seven patients continued being reviewed by the same number of hospital specialities
Total number of hospital appointments fell from a median of 12 (range 1–76) to 2 (range 1–20).

Table 3
Services no longer being accessed following attendance at the pain clinic

Rheumatology $n = 39$
Orthopaedics $n = 30$
Accident and emergency $n = 15$
Gynaecology $n = 15$

Table 4
Peer group members

Two consultant rheumatologists
One manager
Two outpatient nurses
One inpatient ward sister
One consultant physiotherapist

of different professions (Table 4). A semi-structured interview schedule was devised by two senior rheumatology nurses and contained open questions to explore the perceived impact of the role based on the criteria defined in the guidance document on nurse consultant roles (DoH 1999a,b). The participants were not asked directly about perceived impact on the chronic pain service, instead the question asked was, 'what has changed as a result of having a nurse consultant?' Each interview was conducted in an office within the hospital and lasted between 30 and 45 minutes. All interviews were audio-taped and transcribed in their entirety. The interviews were analysed using content analysis. This involved reading the transcripts and becoming immersed in the data. Significant words and phrases relating to the role of the nurse consultant were identified and organized into themes (see Table 5). A second independent researcher (DH) reviewed all of the interview transcripts to confirm that the themes identified could be verified with the transcripts.

The results from the qualitative interviews identified two main themes:

- the influence of the nurse consultant in developing and implementing a new model of care for patients with chronic musculoskeletal pain;
- the nurse consultant's leadership skills.

The only negative finding related to the physiotherapist's perception that the nurse consultant was working long hours and that this factor would affect future recruitment into nurse consultant roles.

Discussion

This paper has demonstrated that a nurse consultant can combine clinical expertise with service redesign to develop and implement a new model of care for patients with chronic musculoskeletal pain whilst reducing the need to be reviewed by different hospital-based specialities. Peers identified the influence of the nurse consultant and clinical leadership skills as being pivotal in developing a new model of care.

This small study of the impact of one nurse consultant concurs with the findings of Coster *et al.* (2006) that medical support is associated with reported impact. The nurse consultant ensured that all stakeholders shared the same vision regarding the service redesign and the support of the rheumatologists was instrumental in overcoming potential barriers including initial reluctance from some of the general practitioners. The nurse consultant's own experience of managing patients with chronic pain ensured that the new model would reflect patient need and supports. Woodard's *et al.*'s (2005) study which demonstrated that the experience of the individual is related to successful role implementation.

The nurse consultant had the organizational authority from the rheumatology unit combined with leadership skills to develop and implement this service. Manley's (1997, 2002 nurse consultant conceptual framework identifies the organizational authority of the role as the single most influential factor for achieving cultural change. Manley (2001) states that it is not about developing a cause-and-effect relationship between the person and the outcome, but a system where leadership can achieve a change in culture (Manley (2001)). The success of this new model of care has led to a change in the culture of care throughout the unit by demonstrating that professionals other than doctors can be the lead clinician of specified patient groups.

There are several limitations with this small study. First, the positive impact of the nurse consultant

Table 5
Significant statements from the interview data

Theme 1: Developing a chronic pain service
…'Been excellent in actually developing a new model of how to manage these patients … going away from the medical model … where patients take ownership of their symptoms'. (Rheumatologist 1)
'The chronic pain service she has got it going she has defined it, she's made predominantly the medical team but other professionals think, hang on that's useful'. (Manager)
'What has changed as a result of having a Nurse Consultant … is the culture, so the culture perhaps um the hierarchical structure of doctors feeding down to nurses and allied health professionals has gone … the role has almost given permission for other health professionals to see patients initially rather than being managed solely by the Consultant first'. (Consultant Physiotherapist)
Theme 2: Leadership
'She's a leader but she's also a team builder and a team player … she leads by example' (Staff nurse)
'The difference between the nurse specialist and the nurse consultant role is that she has become more autonomous, she is also very adept at the politics of interpersonal skills'. (Rheumatologist 2)

identified by the peer group participants may have been influenced by the type of methodology used as, although the results were anonymized, it is possible to identify the individuals concerned by virtue of their profession. It must also be recognized that perceptions do not necessarily relate to clinical reality, but the fact that these perceptions were shared across the team enhances their validity.

Second, although the results from the audit confirmed that the number of patients being referred to additional hospital services had fallen, it is not known whether this reduction has resulted in increased usage of GP appointments or access of other health-care services. An audit to investigate this is proposed in the near future.

Conclusion

The creation of a nurse consultant role has positively impacted on service redesign with the instigation of a new model of care for patients with chronic musculoskeletal pain. Despite the difficulties inherent with evaluating the impact of one member of a team, the nurse consultant peers were clearly able to identify the influence of the nurse consultant in changing the present model of care. Future studies involving the perceptions of peers and other key stakeholders from a larger cohort of nurse consultants are required, as well as ascertaining the perception of patients.

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