An investigation into practice nurses’ need for further education in musculoskeletal care

The NHS White Paper Liberating the NHS (Department of Health (DH), 2010) emphasized the continued shift towards a primary care-led NHS. It called for an increasing amount of care, particularly for patients with long-term conditions, to be delivered outside hospital and closer to patients’ homes.

Currently around 17.5 million people in the UK are affected by at least one long-term condition and the number of people with comorbidities is set to rise by one third over the next decade (DH, 2005). About 50% of all general practice consultations each year are with patients with a long-term health condition. It is estimated that one quarter of these patients have three or more additional health problems (DH, 2004). In terms of estimating the impact of chronic disease the General Household Survey of 2001 (DH, 2004) suggested that the highest number of self-reported chronic problems were those of ‘arthritis and rheumatism’ (28%) followed by ‘heart problems’ (16.8%). Arthritis and rheumatism are lay terms to refer to a wide range of joint problems that constitute a musculoskeletal condition.

Musculoskeletal conditions, with a prevalence rate of 17%, are one of the most common long-term conditions and, with an increasingly elderly population, the numbers are set to rise (Health Service Journal, 2011). Consultation time in relation to joint pain are high with about 9 million people visiting their general practice each year with an arthritic condition (Arthritis Research UK, 2002). More than 1 million adults in the UK visit their general practice at least once a year with osteoarthritis (Arthritis Research UK, 2008). Yet it has been stated that there is significant variability in access and quality of musculoskeletal services in the community (Arthritis and Musculoskeletal Alliance, 2009; National Audit Office, 2009; Goodwin et al, 2010).

In addition, the overall cost of musculoskeletal conditions is £5.7 billion annually (Health and Safety Executive, 2010). This figure represents health and social care costs from 1999. As a result, this cost will have undoubtedly risen since. These rising costs will have major implications for those working in all fields but particularly within primary care. Practice nurses have an increasing role in primary care and therefore have a vital role in supporting the management of patients with musculoskeletal problems.

There are over 21 000 practice nurses employed in general practice in England (The Information Centre for Health and Social Care, 2011). This number represents an
increase of more than 2000 full-time equivalent staff members, or 11% in the last decade. The introduction of the Quality Outcomes Framework with the new General Medical Services contract in 2004 served as a catalyst for much of this increase (British Medical Association and NHS Employers, 2011). Many nurses take a lead role for the ongoing management and review of patients with long-term conditions and are frequently involved in making the initial diagnosis. However, training in these conditions is not standardized, and access to such training is patchy with a focus on those disease areas that are incentivized in some way, such as through Quality and Outcomes Framework (QOF) payments.

Education and training of health professionals can improve patient outcomes, especially in managing those with long-term conditions. Kinmonth et al (1998) examined the benefits of primary care diabetes training. The results of this randomized control trial suggested that patients who had seen the health professionals in the intervention group—i.e. nurses and doctors who had received an additional half day’s training and a full day in which to practise their skills in delivering patient-centred consultations—were more likely to report better communication with their health professional and greater satisfaction with treatment.

In a more recent randomized controlled trial, patient groups were centrally randomized to receive either care designed by an allergy-trained primary health professional or routine care. GPs and practice nurses who had not previously received postgraduate allergy training attended a comprehensive allergy course. Patient quality of life measurements were improved after seeing an appropriately trained health professional (for both control and intervention groups (Sheikh et al, 2007). Research suggests that practice nurses working with patients with chronic obstructive pulmonary disease (COPD) and asthma frequently have insufficient training for the autonomous level of work they are undertaking considering they also often work without the immediate supervision of a GP (Fletcher et al, 2011).

An older qualitative study investigating research-based knowledge in relation to cardiovascular disease (CVD) and stroke identified that specific training in the prevention of CVD is necessary (Upton et al, 2007). A lack of knowledge and confidence levels among nurses is a barrier to effectiveness (Brown et al, 1999). Another study of CVD found that only 48% of practice nurses felt they had been adequately trained in patient health promotion, suggesting a training gap in the area of lifestyle counselling (Steptoe et al, 1999). Lifestyle is a key factor in CVD management and such findings raise concerns about the training of nurses to manage this condition.

There is a paucity of UK research into the role that practice nurses undertake in relation to musculoskeletal conditions. There is also a lack of published evidence exploring practice nurses’ knowledge, confidence or abilities to manage the most common musculoskeletal conditions. As a result there is little evidence regarding current experience and training needs.

Previous research has found that education and training in musculoskeletal conditions in undergraduate nurse training is insufficient and does not meet the needs of registered nurses as there is minimal exposure to clinical aspects including symptom management and psychosocial issues (Almeida et al, 2006).

Overall, specific clinical training promotes confidence in both professionals and patients alike, leading to greater patient satisfaction. However, from the evidence available it would appear that practice nurse training in many clinical areas is insufficient. The aim of this study is to assess UK practice nurses’ knowledge, confidence and ability to manage musculoskeletal conditions.

Methods
A cross-sectional survey methodology was adopted to collect data on practice nurses’ confidence, knowledge and ability to manage musculoskeletal conditions and their educational attainment. Participants were recruited from current and former students of Education for Health, an educational charity many of whose students are practice nurses. Data were collected using SurveyMonkey and face-to-face interaction with students on Education for Health courses.

The survey was piloted twice, initially with the Education for Health clinical lecturer team to check for face and content validity and overall comprehension, and then to pilot the online version with current students.

Survey methodology
Out of a total of 2867 current and former students eligible to participate, 182 complet-
Research

LONG-TERM CONDITIONS

Table 1. Distribution of age in the survey cohort (n=181)

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Number</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Under 30</td>
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<td>30–39</td>
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<td>34</td>
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<tr>
<td>60 or over</td>
<td>5</td>
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Figure 1. Years of practice nurse experience.

Figure 2. Number of nurses in the respondent’s place of work.

Figure 3. Cohort distribution according to general practice size (percentage of respondents who worked in a particular general practice, according to the size of the practice patient population).

Research surveys were collected during February 2011, 150 of which were the result of an email invitation. This response rate of 5.2% (150/2867) compares favourably with other studies and other survey methods, including paper-based surveys (Shih and Fan, 2009). At the Education for Health premises 32 face-to-face surveys were collected directly from students on courses. All students were briefed by the research assistant at the beginning of the course day, outlining the aim of the survey, and that taking part was optional.

Research ethics

This survey was conducted in accordance with standard ethical guidelines for all research involving human participants. This includes confidentiality of information provided, the right to withdraw at any time, including opt-out links on SurveyMonkey, and the provision of information regarding the aim and expectations of the survey. Both the paper version and the SurveyMonkey version contained a covering participant information sheet and an area within this sheet to provide informed consent.

Results

Demographic data and practice size

The majority of respondents were 40 years or older (Table 1). Of those who answered this question, 60% (n=109/180) had worked as a practice nurse for 2–10 years; 31% (n=56/180) had worked for 11 years or more (Figure 1). A large number of respondents were supplementary prescribers (n=83/132, 63%) and 49/132 (37%) were independent nurse prescribers.

The majority of respondents worked with one or two other practice nurses (n=74/181, 41%), although 28/181 respondents worked alone (15%) (Figure 2). There was also an even distribution of respondents across the cohort in relation to practice size (Figure 3).

Overall, these findings suggest the majority of respondents work within teams of other nurses including nurse practitioners. The nurses and their colleagues may well be working in isolation for at least some of the time, indicating the lack of available peer support for practice nurses.

Respondents were asked if they routinely consulted patients with long-term conditions (n=172/181, 95%) and for which specific conditions they saw these patients (Figure 4). The greatest number saw patients with respiratory conditions, cardiovascular diseases...
and diabetes. Half reported that they saw less than five patients per week with musculoskeletal conditions \((n=90/181, 50\%)\).

**Confidence, knowledge and ability**

Respondents were asked how confident they felt in providing treatment advice for patients presenting with musculoskeletal conditions (180 responses were received for this question). The majority said they were not at all or slightly confident \((n=120/180, 67\%)\). Another 56/180 (31\%) felt moderately confident.

Most respondents said they commonly saw patients for pain related treatment advice for their musculoskeletal problems \((n=86/182, 47\%)\). A similar number said they saw patients for pain only within the context of other reviews \((n=81/182, 45\%)\).

When asked if they felt confident in providing treatment advice for joint pain, 48\% \((n=86/180)\) of those who answered this question said they were slightly confident and 31\% \((n=56/180)\) were moderately confident.

When asked to rate their knowledge in assessing and advising patients with joint pain, the majority stated it was not very good \((n=81/156, 52\%)\) (Figure 5). The other 75 respondents felt they had some level of ability to assess patients.

Overall, this suggests that practice nurses have a general lack of confidence in their ability to manage joint pain.

The respondents were asked to rate their knowledge within the following four areas: joint problems, osteoarthritis, osteoporosis and rheumatoid arthritis (there were 156 responses to this question).

In terms of joint problems, 43\% felt their knowledge was not very good and 44\% felt it was ‘OK’ (Figure 6). Regarding osteoarthritis, 49\% of respondents felt their knowledge was not very good and 40\% felt it was ‘OK’. Similar patterns were apparent for osteoporosis and rheumatoid arthritis, where very similar numbers felt their knowledge was either not very good or ‘OK’. Very few felt very able to do this.

The respondents were asked to rate their ability for assessing and advising patients with joint problems, osteoarthritis, osteoporosis and rheumatoid arthritis (there were 155 responses to this question) (Figure 7).

In terms of joint problems, 22\% \((n=34/153)\), felt they were somewhat unable to assess and advise patients and 24\% \((n=38)\) felt not at all able. Another 34\% \((n=53)\) felt somewhat able, and others were not sure how able they felt \((n=26, 17\%)\). Just 3\% \((n=4)\) felt able or very able.

Nearly half (49\%) felt unable to assess and advise patients with osteoarthritis, and 21\% were unsure of their ability and similar numbers felt unable to assess and advise patients with osteoporosis (47\%) and rheumatoid arthritis (50\%).

When asked how they support patients with joint pain, the respondents could provide more than one answer. About 87\% of respondents said they referred their patients...
to the GP (n=158/182). The majority said they also provided patient education (n=90, 57%). The survey did not explore which types of patient education were provided. Another 54% (n=98/182) said they provided prescriptions or advice; 29% (n=53/182) said they refer to someone other than a GP; and 11% referred patients to patient organizations.

**Further education and training**
Respondents indicated their current training in long-term conditions (Figure 8). Most training had involved informal GP observation or other in-house training. Few respondents were completing formal qualifications including degree or diploma course or modules.
Respondents were asked whether they would benefit from more education or training in musculoskeletal and joint pain (157 responses) and almost all said they would. A considerable amount of interest in learning more about these conditions was shown (n=154/157, 98%), thus highlighting a potential training need. A similar number of respondents felt they would benefit from further education or training in joint pain (n=153/157, 97%).

**Benefits of further training**
The results suggest practice nurses would benefit from further training in musculoskeletal and joint pain. Across all levels of confidence, the majority of respondents felt they would benefit from further training in joint pain (n=153/180, 85%) and training in musculoskeletal condition management (n=154/180, 86%).

Virtually all respondents across the knowledge levels said they would benefit from further training in musculoskeletal conditions and joint pain (i.e. 99% reported a preference for learning more about both musculoskeletal conditions and how to manage joint pain).
Similarly, 98% of those who answered the ability questions felt they would benefit from further training. All of the respondents who felt their knowledge in musculoskeletal conditions and joint pain was very good also said they would benefit from further training. This was also the case for confidence and ability, where all respondents who felt very confident and those who felt very able said they would benefit from further training.
Respondents were finally asked whether they would consider an online learning programme (156 responses), and 147/156 (94%) said that they would.

**Discussion**
This survey measured self-reported knowledge, ability and confidence in assessing and advising patients on musculoskeletal conditions and associated joint pain among practice nurses. The results suggest confidence, knowledge and ability is limited. This shortfall in practice nurse expertise required to deliver high-level nursing assessment, treatment and advice will remain both a challenge for nurses in managing musculoskeletal conditions and a barrier to better care.

The results also suggest that, while patients might not visit the practice nurse primarily about their musculoskeletal conditions, joint pain related to musculoskeletal conditions is seen by practice nurses with varying degrees of frequency and may be in relation to patients presenting with other long-term conditions. The skills gap highlighted in this study may undermine efforts to deliver a
patient-centred approach to care that enables those with joint pain to achieve pain relief and return to normal functional ability. If patients’ needs are not met this may place further burdens on the health service.

An opportunity is being missed for practice nurses to elicit important information from patients regarding their musculoskeletal conditions. With the right training, nurse-led interventions could significantly improve quality of life particularly through better pain management. Estimates of the prevalence of musculoskeletal conditions in the UK and the number of primary care consultations for these strengthen the case for better training of practice nurses in this area.

Most of the nurses surveyed reported that they would benefit from training in the assessment of musculoskeletal conditions and effective strategies required to offer pain relief. This survey suggests that there is a strong interest in training among nurses themselves. However, further education and training for practice nurses is often secured independently (Atkin and Lunt, 1995). Practice nurses can face barriers in addressing training and education needs owing to funding shortages and pressures on their time.

This survey has highlighted the fact that patients do not have access to knowledgeable specialist practice nurses when seeking support and guidance for musculoskeletal conditions. An investment in practice nurse training is warranted and this survey has shown that educational initiatives would be welcomed by the practice nurses themselves.

Practice nurses with the appropriate training could competently provide a proactive patient-centred approach that could encourage self-management approaches in order to achieve greater pain relief, maintain function and ultimately independence. With the increasing incidence of joint pain in an ageing population compounded by the predicted 18% increase in joint replacement surgery over the next decade practice nurses with musculoskeletal expertise would be a valuable and effective health-care resource (Health Service Journal, 2011).

If greater investment in training was made, practice nurses with specialist knowledge of musculoskeletal management could help promote much needed patient self-management. Such a health professional resource could produce improvements in patients’ functional ability and alleviate pressure on other areas of the health-care system.

Limitations
The main weakness of this survey is its reliance on self-reported responses from students and alumni of Education for Health gained via email or face to face during a training course. Education for Health students represent those nurses who had the inclination to attend further training courses and had limited barriers to accessing training, and may not be representative of the practice nurse workforce as a whole.

This email survey achieved a 5.2% response rate. Email surveys are generally considered to provide lower response rates than other modes, including paper-based surveys (Shih and Fan, 2009), and this survey was intended to provide snap-shot findings and the basis for further investigation.

Conclusions
This study represents an initial step in providing evidence for UK practice nurse management of musculoskeletal conditions. The findings provide scope for future work, as well as a clear indication that musculoskeletal conditions need to be urgently considered in health policy terms as the demands on knowledgeable practitioners is set to rise.

Overall, practice nurses do not feel confident or competent in their knowledge and ability to manage musculoskeletal conditions. Furthermore, there appears to be a significant training need. This is particularly relevant given the prevalence of these conditions, associated pain and the impact on patients’ quality of life.

The results of this survey have the potential to guide policy decisions for the education of nurses in this important area of clinical care. There is a high prevalence of musculoskeletal conditions in the UK (Arthritis Research UK, 2002). To foster a high quality and cost-effective service, patients and GPs could benefit from the support of a well-trained practice nurse. Previous research suggests that training practice nurses results in an uplift in care quality and patient outcomes (Sheikh et al, 2007). To provide such support, practice nurses require the knowledge, confidence and ability to manage musculoskeletal conditions as part of the primary care team and encourage patient self-management.

With the average age of the UK population projected to increase over coming decades, the need to develop an integrated system in primary care for managing musculoskeletal conditions is an increasingly pressing one.
Suggestions for further research

Further research could consolidate the findings of this study. This study provides an initial step to understanding practice nurse management of musculoskeletal conditions, based on the responses gained from nurses studying at one UK-based institution. The next step may be to replicate this study with a larger sample of UK practice nurses to provide further evidence and address the potential bias inherent within this study’s sample.

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References


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