Do musculoskeletal physiotherapists believe the NICE guidelines for the management of non-specific LBP are practical and relevant to their practice?

Sarah Parr, MSc¹
Stephen May, PhD²*

¹ Department of Orthopaedics, Watford General Hospital, Vicarage Road, Watford, WD18 0HB

² Faculty of Health and Wellbeing, Sheffield Hallam University, Sheffield, UK, S10 2BP

s.may@shu.ac.uk
0114 2252370

*Corresponding author

Word count 3,264
Abstract

Background: Evidence based practice has become fundamentally important in the field of musculoskeletal physiotherapy, which include clinical practice guidelines, such as those developed by National Institute for Health and Clinical Excellence (NICE) for low back pain.

Objectives: To gauge whether musculoskeletal physiotherapist working in the UK are compliant with the NICE guidelines for back pain, and if they believe them to be practical and relevant to their current practice.

Design: Descriptive cross-sectional voluntary electronic survey.

Methods: A survey of musculoskeletal physiotherapists currently working in the UK was conducted through an anonymous online data collection website over a two month data collection period. Data was collected about demographic details of participants, and their views about the NICE guidelines through a specially designed questionnaire, and are presented descriptively.

Results: Two hundred and twenty-three therapists participated. Following a thematic content analysis seven key themes were identified about the guidelines: they facilitated evidence-based practice; they were unrealistic and idealistic; they did not facilitate a multimodal approach; they promoted largely a passive approach; they challenged therapist autonomy; they were outdated; they lacked relevance and specificity.

Conclusion: Musculoskeletal physiotherapists strongly believe in the principles of EBP, and thought the NICE back pain guidelines were relevant to their practice. However the recommendations made within the guidelines were not realistic in day to day practice and they impacted negatively on the practice in a number of ways.
Do musculoskeletal physiotherapists believe the NICE guidelines for the management of non-specific LBP are practical and relevant to their practice?

Introduction

In order to assist physiotherapists in providing care that is aligned with evidence-based practice (EBP) in the treatment of low back pain (LBP), clinical practice guidelines have been developed [1]. These guidelines endeavour to locate, review and summarise the best available scientific evidence and consequently, guidelines are said to be vital tools for clinicians [2,3]. Adherence to recommendations made by guidelines regarding LBP has been linked to both improved clinical outcomes and decreased costs [4].

In the past few decades numerous clinical guidelines for LBP have been published, some of these are national and some are international. As part of this initiative the National Institute for Health and Clinical Excellence (NICE) released UK guidelines on the management of persistent non-specific LBP (NSLBP) [5]. They defined this group as NSLBP between the rib cage and the buttock crease lasting more than six weeks, but less than 12 months. The content of the NICE LBP guidelines appears to
be similar to that of other guidelines produced in other countries [1,3,6], and key components are summarised in table 1 (on-line material).

Since their publication these guidelines and other guidelines have been criticised [7-9]. Therapists identified limitations of guidelines in that they may not be applicable to all their patients, and that they not reflect patients' expectations of treatment [7]. The NICE guidelines have been criticised for omitting part of the evidence [8], ignoring the limited evidence for and risks of manipulation, which is one of the main recommendations, and at risk of bias from the NICE panel [9]. Furthermore, research into EBP and guidelines in general show that compliance is often poor [3,8,10,11]. Three years after the initial publication, a review of the NICE guidelines was conducted, and it was concluded that they should be updated [12]. The aim of the present research was to survey musculoskeletal physiotherapists working in the UK about their compliance with the NICE guidelines, and to determine if they think them to be practical and relevant to their current practice.

Methods
A questionnaire design was used to collect data via an on-line website (www.surveymonkey.com). The questionnaire was designed specifically for this research, and is available from the authors on request, and on the on-line supplementary information. The questionnaire was reviewed by both authors to check whether the research questions would be answered. A pilot study was performed with eight musculoskeletal physiotherapy work colleagues [19], who gave feedback on the survey and slight changes were made to ensure the questionnaire was valid, user friendly and fit for purpose. A web-based survey method was chosen
for cost and anonymity [13]. The validity and reliability of this form of data collection are comparable to those obtained by more traditional methods [14-17].

Given the research question only musculoskeletal physiotherapists working in the UK were invited to participate, at any level of seniority, any years of experience, any age, and work in the NHS or in the private sector. Physiotherapists working within other specialities were excluded from the research. Although these criteria could not be strictly enforced due to the anonymous data collection method, it was hoped that the professional nature of the individuals concerned would ensure that these requirements were met [18].

To aid recruitment an advertisement was placed in the Charted Society of Physiotherapists (CSP) fortnightly magazine, Frontline. The interactive CSP (iCSP) website, which is the online learning and networking resource for members of the CSP, was also used to gain participants (www.csp.org.uk/icsp). In addition to this other forms of web-based and social media were used to request musculoskeletal physiotherapists to take part in the study; namely Facebook (www.facebook.com), Twitter (www.twitter.com) through general channels, and the physiotherapy based discussion forum, PhysioForum (www.physiobob.com/forum) [20].

A two month data collection period was used, from May to end of June 2012. The survey produced both quantitative and qualitative data; however the majority of the quantitative data was primarily demographic in nature and did not relate directly to the research question. The quantitative demographic details were presented as summed totals and percentages to give a general description of the therapists
involved. The data addressing the research question were principally yes / no responses, and open text boxes. The closed questions were presented in percentage terms. The open question responses were analysed by confirming consistent responses from different participants around common themes [21,22]; this was done by the first researcher and reviewed by the second author to ensure that themes were consistent and comprehensive. At least 50% of respondents had to raise similar ideas, although the words used might be slightly different, for it to constitute a theme.

Results
Following the two month data collection period, there were 239 respondents in total with an 82% rate of completion of the full questionnaire. Following the removal of questionnaires that did not fulfil the inclusion criterion of therapists currently working within the field of musculoskeletal physiotherapy, the study was left with 223 participants and an 84% rate of completion of the full questionnaire (187 participants). Incomplete surveys were included in the final data analysis, in order that all relevant information could be evaluated, and where incomplete data was substantial the percentage of missing data has been given. The majority of participants were women, they represented a range of ages and experience, they had trained both in the UK and abroad, and they worked both in the NHS and in private practice (table 2). This appears to be representative, as the majority of therapists are female, and do range in age, years since qualification, and practice settings.
This is clearly a very small proportion of the total number of therapists practising in
the UK; there are 48,209 registered on the Health and Care Profession Council’s
website (www.hpc-uk.org). However the majority of these would be non-
musculoskeletal therapists and so not eligible to participate, maybe only a quarter
are musculoskeletal therapists, but this is merely an estimate. If 12,000 therapists
would have been eligible to participate then 223 is still a very small percentage of the
whole, no more than 0.02%.

On the question of whether or not musculoskeletal physiotherapists should conduct
EBP, 99% felt that they should. When therapists estimated the percentage of their
patients who presented with LBP they reported this to be 0-24% by 6% of therapists,
25-49% by 36%, 50-74% by 45%, and 75-100% by 13% of therapists. When
therapists estimated the percentage of their LBP patients who fitted the NICE
guideline criteria 29% reported 0-24%, and 25-49% each, 28% reported 50-74%,
and 14% reported 75-100%.

Of those who provided this information 73% thought the guidelines were relevant to
daily practice, 27% not; 43% thought they were practical and realistic, 57% not; and
73% reported they implemented them in daily practice and 27% not. There was
about 15% missing data to all these questions. About half of therapists (51%)
reported that they used other guidelines, which they personally selected; however,
upon examination of the descriptive responses to this question it became apparent
that the actual percentage of physiotherapists using other guidelines was
considerably lower, as many of the responses given related to individual treatment
methods and outcome measures rather than actual guidelines. Table 3 lists the actual guidelines commonly utilised in the treatment of LBP.

Following the thematic content analysis of the response to the open-question seven main themes were identified (table 4). The first highlights a positive perspective on the guidelines, whilst the other six highlight negative perspectives on the guidelines. These themes will now be explored further, and in italics are examples of statements to illustrate the themes taken from a range of participants; the number is the numerical code of that therapist.

1. Facilitate EBP

In response to the question whether the physiotherapist implemented the NICE LBP guidelines 75% said yes and 72% thought they were relevant to their current practice:

They validate my treatment; it is useful to back up practice with evidence. (43)

They help inform evidence based practice. (23)

However, in the majority this positive support for the guidelines was only if they could be implemented in a pragmatic and partial manner:

My treatment is based around these principles but does not adhere to them strictly. (146)

NICE guidelines are all very well but ONLY if they are seen as just that – guidelines. (127)

There was, therefore, a definite feeling that the guidelines were useful and facilitated EBP within the management of LBP, but with reservations, as above.
2. Unrealistic & Idealistic

When participants were asked if they thought the NICE LBP CPG’s were practical and realistic to implement within their practice, 58% felt they were not. In addition, of the 42% who felt they were, it was generally in a modified manner:

The NICE LBP guidelines are relevant but the suggested management is unrealistic. (89)

Physiotherapists working within the NHS nearly all commented on the fact that the number of treatment sessions recommended within the guidelines was not realistic:

I do not know of anyone within the NHS who could offer the amount of treatment to align themselves with the recommendations . . . If you treat someone more than three times, eyebrows are raised in the management hierarchy! (112)

The majority of respondents commented on the fact that they have limitations placed on the number of treatment sessions available to them:

We are encouraged to keep a new to follow-up ratio of 1:3. (122)

We are only able to give our patients 4 follow-up appointments. (81)

The therapists doubted that the recommended number of treatment sessions was realistic because of cost:

Due to financial constraints of the NHS, it is not feasible to offer such intensive physio. (65)

The guidelines need to be reviewed to represent current economical and governmental policies to be able to implement what’s realistic and achievable. (19)

The private practitioners also commented on the fact that the number of sessions suggested was impractical:
We are under scrutiny to deliver, with restriction on sessions from insurance companies. (62)

In addition to this, the guidelines were criticised by many for being idealistic as not all of the treatment options suggested were always available:

We do not have access to psychosocial treatment programmes. (78)

Acupuncture is not available in all centres. (57)

3. Multimodal Approach

One of the key themes identified from the data was that 76% of therapists, both NHS and private, felt a multimodal approach to patient care was more appropriate; and acceptable than the individual treatment approach suggested within the NICE guidelines:

I think the treatments suggested are appropriate however I feel that it is more effective to offer a combination of treatments rather than just one modality. (88)

The NICE guidelines separate manual therapy, acupuncture and exercise from each other. I believe a combination of these treatments is extremely effective in dealing with LBP. (106)

What is more, the guidelines only advocated a combined physical and psychological treatment programme once other options have been exhausted and the patient has high disability and/or significant psychological distress. Many physiotherapists thought that a bio-psychosocial treatment approach should be implemented from the outset:

Why offer psychosocial intervention after failed physical treatment, why not assess for relevance using a tool such as STarT Back. (74)
4. Primarily Passive Approach

Overall, 72% of physiotherapists felt that the recommendations made within the guidelines did not empower or actively engage patients in their own care:

*Apart from advocating exercises the treatment is particularly passive, this seems to contradict the aim of the guidelines to promote self-management.*

(93)

They also felt that if patients themselves were aware of the recommendations made within the guidelines it promoted passivity and noncompliance with an active treatment approach:

*If patients are aware of the guidelines and they themselves are very passive, preference may be to receive the more passive treatments whilst a more proactive approach is needed.* (68)

5. Therapist Autonomy

Due to the prescriptive nature of the guidelines 80% of participants commented that they were too autocratic in nature and stifled the profession and clinical reasoning:

*They are setting the profession back 20 years.* (104)

Musculoskeletal physiotherapists work in an autonomous self-governing manner and as such participants felt this should be reflected within the guidelines:

*They say they are a ‘guideline’, so it is up to the clinician to take what they need from them. Autonomy called for.* (55)

*There should be a section that states treatments will be given based on the physiotherapist’s clinical judgement of individual patient cases.* (77)
6. Outdated
A substantial number of the therapists surveyed felt that the recommendations made were outdated. Since their publication some of the evidence within the NICE LBP CPG’s has been put into question:

*They would benefit from reviewing, in the light of the available evidence.* (10)

*They need urgent update as acupuncture is being discredited.* (114)

In addition to this, other treatments frequently used by practitioners, such as TENS, were omitted from the recommendations made.

7. Relevance/Specificity
Physiotherapists (74%) felt that the guidelines themselves did not offer assistance with all their LBP patients. NHS practitioners commented that the patients they see often have symptoms lasting longer than 12 months and private practitioners that they treat patients with acute LBP of less than 6 weeks in duration:

*The majority of my patients have had their symptoms for more than 12 months – even if they are episodic, so makes NICE hard to apply.* (116)

*I work privately and usually deal with acute LBP.* (81)

What is more, the guidelines are aimed at NSLBP, whereas therapists suggested that most LBP can be related to a diagnosable cause and so guidance is needed on the management of all LBP patients:

*NSLBP is a dustbin diagnosis for a heterogeneous group of patients of which a large number can be attributed to a specific cause, MRI is appropriate so that subsequent interventional strategies can be implemented.* (100)

Discussion
The overwhelming majority of the physiotherapists believed that they should conduct EBP, and were aware of the NICE LBP guidelines. However the majority also felt that the guidelines were excessive and impractical to implement, and so not always useful in day-to-day practice.

The NICE guidelines suggest up to nine sessions of manual therapy, but Ernst (2009) [8] argued that NICE overestimated the effectiveness of spinal manipulation and underestimated the risks of this treatment. A systematic review about acupuncture concluded it was slightly better than no treatment short-term, and was no better than other active treatment and sham acupuncture [23]. The participants suggested that the guidelines were too passive in nature, but also that the evidence was outdated and in need of review.

Although 61% of participants felt that the NICE LBP guidelines were relevant to their current practice, this was with major reservations. The generic diagnosis of NSLBP and the recommended treatment timeframe of over six weeks but less than 12 months were criticised for lacking relevance in their clinical practice. One of the main reservations of therapists concerned the recommended numbers and types of treatment sessions suggested within the guidelines. The majority of the therapists, working in both the NHS and the private sector, felt that the suggestions made were not practical given the time and resource limitations that constrained them. The NICE LBP guidelines did not consider or offer any suggestions regarding implementation, despite the fact that lack of implementation strategies has been identified as a major barrier to the use of clinical practice guidelines [4, 6].
The physiotherapists stated that the recommendations made within the NICE LBP guidelines appeared to be somewhat dictatorial in nature, and therefore were at odds with their professional autonomy and clinical reasoning process. Previous research has already highlighted the discrepancy between guideline recommendations and therapist behaviours relating to very similar areas, for instance around assessment and individualisation of healthcare [7]. Consequently, this must be addressed within guidelines; a section highlighting the essential need for clinical reasoning and therapist autonomy would be prudent within any future guidelines.

In the NICE guidelines it recommends that the treatments are offered sequentially, whereas the therapists commonly used multimodal treatments. There is evidence to support the multimodal use of treatments in the management of LBP [24], although it might be suggested that multimodal treatment is equally a barrier to clinical reasoning. If the patient improved, it would be impossible to know which aspect of the treatment package was responsible for that improvement. Furthermore, the use of a combined physical and psychological treatment programme seemed to be a last resort within the guidelines, whereas evidence suggest a multimodal bio-psychosocial approach to rehabilitation is effective [25].

Obviously a survey of this nature has major limitations. Although over 200 therapists participated, this was a very small fraction of all UK musculoskeletal therapists, and furthermore some participants did not answer all questions. However the range of experience suggests they may be reasonably representative, though this cannot be known for sure. It is not clear if a longer data collection period would have produced more data, but in the last two weeks there were few additional participants, and no
new themes. Randomised recruitment might have ensured a more representative sample, but was not feasible though the CSP or the HCPC. As with all surveys there is a potential selection bias, as those with strongly negative or strongly positive views may be more likely to participate. This seemed unlikely as the majority were in favour of EBP, and thought the guidelines relevant and they tried to implement them in daily practice. However they were critical of them for being impractical, unrealistic and lacking relevance.

There is always the potential for social desirability bias in responses to questionnaires, as therapist respondents might not want to admit to not being in favour of EBP, or using guidelines. However as this was an anonymous questionnaire this partly challenges this limitation. As with all questionnaires participant responses are dependent on their veracity, but it is hoped that from a professional group they answered as honestly as possible. The data also depended on them making estimates, which obviously cannot be validated.

The demographic data produced from this study were not dissimilar to that of other studies relating to musculoskeletal physiotherapists [26]. The demographic data demonstrated a wide range of participant characteristics, which suggests that the findings from this survey may be generalisable, though this cannot be guaranteed.

Finally it is worth noting that it is recognised that guidelines become outdated and generally need reviewing every three years [27]. Moreover, NICE have stated that they will be updated shortly [12]. Despite therapists’ support for EBP and guidelines in general, they had found the NICE LBP guidelines to be too costly and impractical
to implement, to deprive them of the clinical reasoning process they usually applied, and to down-play the importance of self-management in a problem of high prevalence and persistent symptoms.

**Conclusion**

It appears that musculoskeletal physiotherapists strongly believe in the principles of EBP and as such feel that the NICE LBP guidelines are inherently relevant to their practice. However, the recommendations as they are currently made within the guidelines are not practical or realistic to implement in their existing format. Musculoskeletal therapists felt that the recommendations made were excessive and unrealistic in terms of treatment sessions, and passive in nature, not promoting patient empowerment or self management, and a more multimodal/bio-psychosocial approach to care would be more appropriate than the exclusive treatment suggestions made within the guidelines. Given the fact that the NICE guidelines are aimed at recommending the best care available in the NHS, any future guidance would ideally need to be aligned with current governmental and economic policies in mind, as well as any barriers to implementation being considered prior to publication.

**Ethical Approval:** Ethical approval for the study was granted by Sheffield Hallam University Health and Social Care Research Ethics Committee.

**Funding:** The study has not been funded by any third parties to influence the outcome and findings in any way. Any costs incurred during the research process have been the sole responsibility of the primary researcher. The study was safeguarded by Sheffield Hallam University’s liability and indemnity cover.
Conflict of Interest: None to declare.

References


Table 2 – Demographic information of participants

<table>
<thead>
<tr>
<th>DEMOGRAPHIC DETAIL</th>
<th>NUMBER (%)</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>TOTAL RESPONDENTS</th>
<th>n = 223 (100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63 (28)</td>
</tr>
<tr>
<td>Female</td>
<td>160 (72)</td>
</tr>
<tr>
<td>AGE</td>
<td></td>
</tr>
<tr>
<td>21-29</td>
<td>45 (20)</td>
</tr>
<tr>
<td>30-39</td>
<td>85 (38)</td>
</tr>
<tr>
<td>40-49</td>
<td>61 (28)</td>
</tr>
<tr>
<td>50-59</td>
<td>27 (12)</td>
</tr>
<tr>
<td>60 or above</td>
<td>5 (2)</td>
</tr>
<tr>
<td>COUNTRY OF QUALIFICATION</td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>175 (80)</td>
</tr>
<tr>
<td>Overseas</td>
<td></td>
</tr>
<tr>
<td>- India</td>
<td>16 (7)</td>
</tr>
<tr>
<td>- Australasia</td>
<td>9 (4)</td>
</tr>
<tr>
<td>- Europe</td>
<td>5 (2)</td>
</tr>
<tr>
<td>- Americas &amp; Canada</td>
<td>4 (2)</td>
</tr>
<tr>
<td>- Africa</td>
<td>4 (2)</td>
</tr>
<tr>
<td>- Ireland</td>
<td>3 (1)</td>
</tr>
<tr>
<td>- Not stated</td>
<td>4 (2)</td>
</tr>
<tr>
<td>YEARS SINCE QUALIFIED</td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>43 (19)</td>
</tr>
<tr>
<td>6-10</td>
<td>60 (27)</td>
</tr>
<tr>
<td>11-15</td>
<td>47 (21)</td>
</tr>
<tr>
<td>16-19</td>
<td>15 (7)</td>
</tr>
<tr>
<td>20-25</td>
<td>24 (11)</td>
</tr>
<tr>
<td>26-30</td>
<td>22 (10)</td>
</tr>
<tr>
<td>30 years or more</td>
<td>12 (5)</td>
</tr>
<tr>
<td>YEARS OF MSK PHYSIOTHERAPY PRACTICE</td>
<td></td>
</tr>
<tr>
<td>0-5</td>
<td>75 (34)</td>
</tr>
<tr>
<td>6-10</td>
<td>62 (28)</td>
</tr>
<tr>
<td>11-15</td>
<td>32 (14)</td>
</tr>
<tr>
<td>16-19</td>
<td>17 (8)</td>
</tr>
<tr>
<td>20-25</td>
<td>25 (11)</td>
</tr>
<tr>
<td>More than 26</td>
<td>11 (5)</td>
</tr>
<tr>
<td>AREA OF PRACTICE</td>
<td></td>
</tr>
<tr>
<td>NHS</td>
<td>122 (55)</td>
</tr>
<tr>
<td>Private</td>
<td>54 (24)</td>
</tr>
<tr>
<td>Both NHS &amp; Private</td>
<td>24 (11)</td>
</tr>
<tr>
<td>Other (e.g. Sport, Military, Research)</td>
<td>14 (6)</td>
</tr>
<tr>
<td>Not stated</td>
<td>9 (4)</td>
</tr>
<tr>
<td>NICE GUIDELINES</td>
<td></td>
</tr>
<tr>
<td>Therapist aware of</td>
<td>205 (92)</td>
</tr>
<tr>
<td>Patient aware of</td>
<td>16 (7)</td>
</tr>
<tr>
<td>Professional duty to make patients aware of them</td>
<td>136 (61)</td>
</tr>
</tbody>
</table>

MSK = musculoskeletal; NHS = National Health Service

Table 3 – Table of other commonly utilised guidelines in the treatment of LBP
### CLINICAL PRACTICE GUIDELINE vs RESPONSE RATE

| European guidelines for prevention in LBP | 10 |
| CSP Clinical guidelines for the management of persistent LBP | 10 |
| **New Zealand Acute Low Back Pain Guide** | 6 |
| Clinical Standards Advisory Group (CSAG) on LBP | 3 |
| Company In-House LBP CPG’s (e.g. British Military, Nuffield) | 3 |
| NICE Neuropathic Pain CPG | 3 |
| Royal College Of General Practitioners Back Pain Guidelines | 2 |

LBP = low back pain; CSP = Charted Society of Physiotherapy

### Table 4 – Key themes identified from open questions following the content analysis

<table>
<thead>
<tr>
<th>Key Themes Identified</th>
<th>Examples of Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Unrealistic &amp; Idealistic</td>
<td>Lack of time, money, resources and capacity.</td>
</tr>
<tr>
<td>3. Multimodal Approach</td>
<td>Combined treatments not suggested.</td>
</tr>
<tr>
<td>5. Therapist Autonomy</td>
<td>Too prescriptive. Set the profession back.</td>
</tr>
<tr>
<td>6. Outdated</td>
<td>New research available.</td>
</tr>
<tr>
<td>7. Relevance/Specificity</td>
<td>Timescales. Only covering non-specific LBP.</td>
</tr>
</tbody>
</table>

EBP = evidence-based practice