

## OCCUPATIONAL HEALTH/ERGONOMICS

## Guidelines on Low Back Pain Disability

*Interprofessional Comparison of Use Between General Practitioners, Occupational Therapists, and Physiotherapists*

Stéphane Poitras, PhD, PT,\* Marie-José Durand, PhD, OT,† Anne-Marie Côté, MSc, PT,† and Michel Tousignant, PhD, PT†

**Study Design.** Individual semistructured qualitative interviews.

**Objective.** To evaluate barriers to use of management recommendations, aimed at preventing low back pain (LBP) disability, with general practitioners (GPs), occupational therapists (OTs), and physiotherapists (PTs) working in Quebec (Canada), and identify areas of convergence and divergence between health professions.

**Summary of Background Data.** Studies have demonstrated inadequacies of practices of clinicians with regard to LBP management and prevention of persistent disability. Barriers to use of evidence by clinicians should be evaluated to understand these inadequacies and develop implementation strategies.

**Methods.** Sixteen PTs, 8 OTs, and 8 GPs were recruited with different levels of experience and practice location (urban or rural). They were asked to follow management recommendations (Clinic on Low-back Pain in Interdisciplinary Practice [CLIP] guidelines), with a minimum of 2 patients. Individual semistructured interviews were used to identify barriers to use of management recommendations aimed at preventing LBP disability. Barriers between health professions were compared.

**Results.** Barriers to use were lesser for OTs and greater for GPs, with divergences among PTs. OTs agreed with the guidelines, found them compatible with their current practice, and thought that using them would prevent persistent disability. GPs and PTs thought that the guidelines did not provide enough information on the pathophysiological management of LBP. GPs thought that it would be difficult to implement the guidelines in everyday practice. All 3

groups thought that management recommendations could conflict with patient expectations.

**Conclusion.** To address identified barriers, a process of care is proposed by fitting tasks to the most compatible providers. The task of GPs could focus on pain management through medication, red flag screening, encouragement to stay active, and reassurance. The tasks of PTs could center on pain management, general exercise, and encouragement to stay active. The tasks of OTs could focus on disability prognosis, yellow flags management, and return to activity parameters. The efficacy of this process of care to prevent persistent LBP disability should be assessed in a trial.

**Key words:** back pain guidelines, barriers to use, qualitative study, interprofessional comparison, general practitioners, occupational therapists, physiotherapists. **Spine 2012;37:1252–1259**

Although low back pain (LBP) is highly prevalent in the general population, only a minority of subjects develop persistent disabling LBP lasting beyond the first 3 months, with these subjects having the poorest health outcomes and longest worker absences, engendering the majority of costs to the health care system.<sup>1</sup> Research has identified predictive factors of persistent disability, termed “yellow flags,” which should be assessed and managed by clinicians to prevent persistent disability. These factors are not only biological but also psychological, social, and occupational.<sup>2</sup>

Studies have demonstrated inadequacies of practices of clinicians with regard to management of LBP and prevention of persistent disability.<sup>3–8</sup> To understand these inadequacies, research suggests evaluation of barriers to use of current evidence by health care professionals. This allows the development of health care processes taking into account identified barriers, improved management of LBP, and ultimately preventing persistent disability.<sup>9</sup> Barriers to use of LBP management recommendations have been studied<sup>10–16</sup> but mostly on 1 stakeholder at a time, making the comparison between stakeholders and the identification of convergent/divergent areas difficult. This is particularly important to assess, because a coherent multilevel approach seems important to prevent persistent LBP disability.<sup>17</sup> Also, these studies have mostly focused on physicians and physiotherapists (PTs), neglecting occupational therapists (OTs). In Canada, general

From the \*School of Rehabilitation, University of Ottawa, Ottawa, Ontario, Canada; and †School of Rehabilitation, Université de Sherbrooke, Sherbrooke, Quebec, Canada.

Acknowledgment date: May 5, 2011. First revision date: October 3, 2011. Second revision date: November 21, 2011. Acceptance date: November 25, 2011.

The manuscript submitted does not contain information about medical device(s)/drug(s).

Quebec Rehabilitation Research Network grant funds were received to support this work.

No benefits in any form have been or will be received from a commercial party related directly or indirectly to the subject of this manuscript.

Address correspondence and reprint requests to Stéphane Poitras, PT, PhD, School of Rehabilitation, University of Ottawa, 451 Smyth Ottawa, Ontario K1H 8M5, Canada; E-mail: stephane.poitras@uottawa.ca

DOI: 10.1097/BRS.0b013e31824b6adf

1252 www.spinejournal.com

Copyright © 2012 Lippincott Williams & Wilkins. Unauthorized reproduction of this article is prohibited.

June 2012

practitioners (GPs), OTs, and PTs are the 3 health care professionals most frequently involved in primary care management of LBP when it is work-related. OTs tend to be involved when a health problem has an impact on the occupational activities of a patient, as is often the case with persistent LBP disability.<sup>18</sup> OTs typically address occupational problems by ecologically identifying and managing factors affecting occupational activities. Studying practices of OTs is particularly warranted because this profession uses a biopsychosocial model of care,<sup>19</sup> corresponding hypothetically well to the management of yellow flags to prevent persistent disability.

Primary care interdisciplinary practice guidelines, aimed at preventing persistent LBP disability, were developed, using a group of researchers and key informants.<sup>20</sup> Although potential barriers to use were discussed during the guideline development process, this was not the objective of the process and was not evaluated formally. Thus, it is not known what barriers to use exist when primary care clinicians actually use the guidelines. The objective of this study was to evaluate barriers to use of management recommendations aimed at preventing LBP disability with GPs, OTs, and PTs, and identify the areas of convergence and divergence between health professions.

## MATERIALS AND METHODS

### Study Design

The study was accomplished using qualitative methods because of the complexity of factors affecting the use of guidelines.<sup>21</sup> A prestructured qualitative design with a case study approach<sup>22</sup> was used, with the views and perceptions of participating clinicians representing the cases. Ethics approval for this study was obtained from the Research Center on Aging Ethics Committee of the Centre de santé et des services sociaux—Institut universitaire de gériatrie de Sherbrooke (Canada). The COREQ statement was used when preparing this article.<sup>23</sup>

### Management Recommendations

Recently, guidelines of LBP management have been prepared by an interdisciplinary group of university researchers and clinicians in the province of Quebec, Canada (Clinic on Low-back pain in Interdisciplinary Practice [CLIP] guidelines).<sup>20,24</sup> These interdisciplinary guidelines target primary care clinicians (GPs, OTs, and PTs), with the main objective of preventing persistent disability related to LBP. To ensure quality, they were developed using “Appraisal of Guidelines Research and Evaluation” (AGREE) criteria.<sup>25</sup> These guidelines have been officially endorsed by the Quebec organizations regulating the previously mentioned health care professionals (Fédération des Médecins Omnipraticiens du Québec/Ordre Professionnel de la Physiothérapie du Québec/Ordre des Ergothérapeutes du Québec). The recommendations found in these guidelines (Table 1) are typical of those found in other published LBP guidelines.<sup>26</sup>

### Participant Recruitment

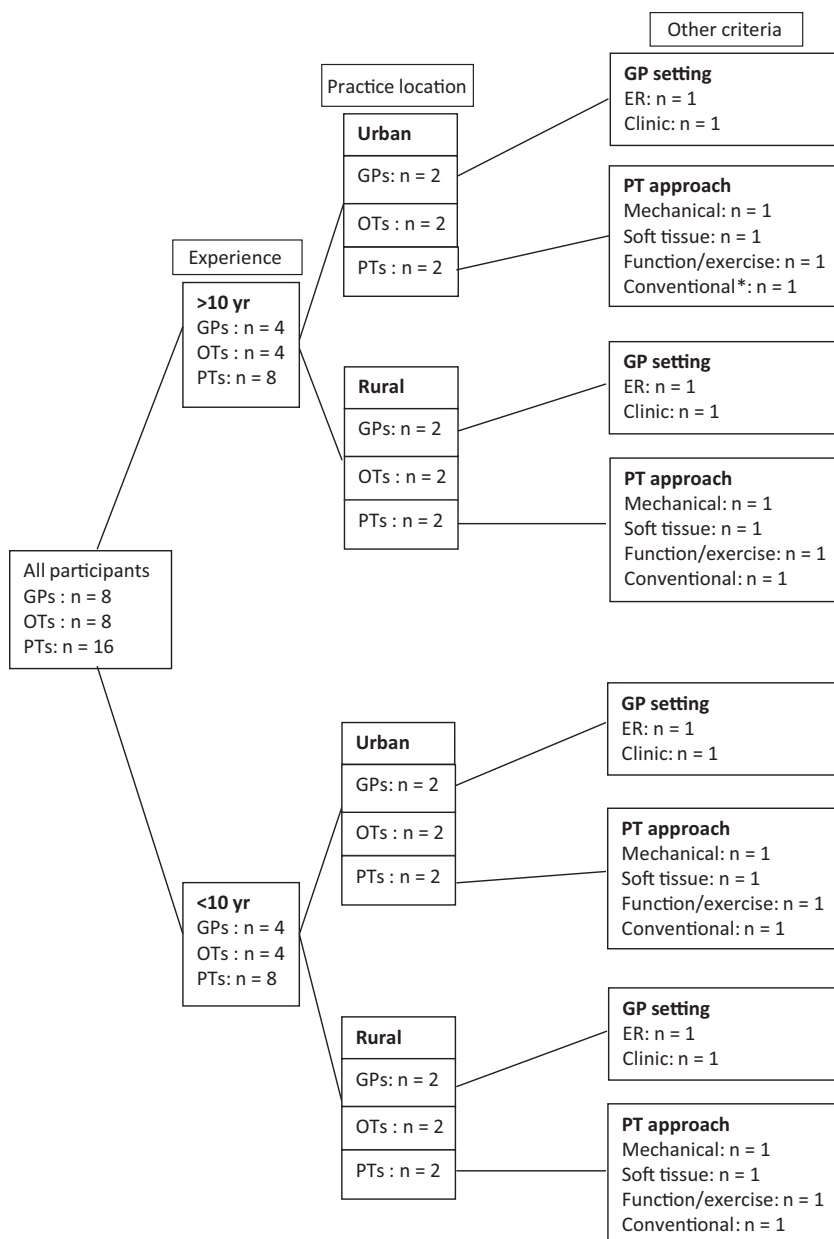
GPs, OTs, and PTs working in the province of Quebec, Canada’s second most populated province (7.5 million),

**TABLE 1. Summary of Clinical Recommendations of the CLIP Guidelines**

Recommendations for the Evaluation of Low Back Pain
<ul style="list-style-type: none"> <li>To detect serious problems requiring immediate or specialized treatment, the clinical examination should triage clients according to the 3 types of low back pain: nonspecific, with neurological involvement, and with serious pathology (red flags).</li> </ul>
<ul style="list-style-type: none"> <li>Radiographical, MRI, or CT scan examinations are rarely indicated for clients with nonspecific back pain.</li> </ul>
<ul style="list-style-type: none"> <li>The clinician should assess the client’s perceived disability and the probability of a return to usual activities, either in the fourth week if back pain–related disability persists or at the first consultation if the client has a history of long-lasting disability due to back pain.</li> </ul>
<ul style="list-style-type: none"> <li>When the probability of returning to usual activities is deemed to be low, the clinician should seek to identify the barriers preventing the return to usual activities.</li> </ul>
<ul style="list-style-type: none"> <li>If the client’s perceived disability improves little or not at all in the 4 weeks after assessment of this perception, the clinician should reassess the barriers preventing the return to usual activities and revise management.</li> </ul>
Recommendations for the Management of Low Back Pain
<ul style="list-style-type: none"> <li>Reassure the client with back pain by providing essential, coherent, accessible, and valid information about the condition and correcting beliefs.</li> </ul>
<ul style="list-style-type: none"> <li>The clinician should encourage and guide the client to continue or to resume usual activities.</li> </ul>
<ul style="list-style-type: none"> <li>The clinician should give priority to treatments of proven efficacy (tables detailing the efficacy of interventions are provided).</li> </ul>
<ul style="list-style-type: none"> <li>When individual or environmental barriers to the return to usual activities are identified after the acute phase of low back pain, the clinician should reorient treatment toward minimizing those barriers.</li> </ul>
<p><i>CLIP indicates Clinic on Low-back Pain in Interdisciplinary Practice; CT, computed tomographic; MRI, magnetic resonance imaging.</i></p>

were recruited in this study. Because individual interviews were conducted at the location chosen by the participant, and the interviewers were located in the cities of Montreal and Sherbrooke (Canada), only clinicians working in the following 3 administrative regions were included for accessibility purposes: metropolitan regions of Montreal, Monteregie, and Estrie. These 3 regions account for approximately half of the Quebec population, in a range of approximately 200 km from Montreal.

Recruitment was adjusted depending on the context of each professional group. Figure 1 summarizes the recruitment procedure. For OTs and PTs, recruitment was limited to private practice because data from the Workers’ Compensation Board of the province of Quebec indicated that more than 90% of workers experiencing LBP were treated in private clinics (the Quebec Workers’ Compensation Board is responsible for a universal workers’ compensation program that covers all workers employed in the province). The lists of the boards responsible



**Figure 1.** Recruitment procedure of the participants. \*Conventional approach: spinal mobilizations, manual traction, electrotherapy, and physical agents. GPs indicates general practitioners; OTs, occupational therapists; PTs, physiotherapists; ER, emergency room.

for regulating practices of occupational therapy (OT) and physiotherapy (PT) in the province were consulted. In order to maximize the different views and settings of the clinicians, 2 criteria demonstrated in the literature as influencing clinical practice were used to divide the database: years of practice<sup>27</sup> and practice location.<sup>28</sup> For PTs, management approach was added as a third criterion because of its influence on clinical practice and was determined by a questionnaire during recruitment.<sup>29</sup> There were thus 16 categories for PTs and 4 categories for OTs. One PT per category and 2 OTs per category were randomly selected. To be eligible, OTs and PTs had to fulfill the following criteria: (1) regularly involved in the management of LBP (at least 25% of the average caseload) and (2) having treated at least 1 patient receiving worker's compensation because of LBP in the past month. These cutoffs were chosen to ensure that participants had sufficient exposure. The participants were not asked about the exact distribution of clientele.

For GPs, purposive sampling was used because recruitment tends to be more difficult for these professionals. Practice location and years of practice were used as criteria, with the addition of clinical setting. Thus, there were 8 categories for GPs. Researchers and clinicians involved in the guideline development process or this study were asked to help identify 1 GP known to them in each category but uninvolved in the preparation of the guidelines. In order to be eligible, GPs needed to have treated at least 1 patient receiving worker's compensation because of LBP in the past month.

A letter of invitation describing the project and eligibility criteria was sent to the selected participants. If eligible and interested, they were asked to return a form signifying their interest. A telephone follow-up was done 2 to 3 weeks after the initial mailing. The consent form was sent to the eligible and interested participants. Additional participants could be recruited until saturation.

## Data Collection

Individual semistructured interviews with participating clinicians were conducted to assess their perceptions regarding the use of the guidelines. Interviews were accomplished by 2 of the authors, 1 being a PT university professor (SP) and the other being a PT graduate student (AMC). Ajzen's<sup>30</sup> Theory of Planned Behavior was used to develop the guide for the semistructured interviews. This model states that behavior is influenced by attitudes and beliefs (beliefs that performing the behavior will produce a given outcome), behavioral control (perceived ease or difficulty to accomplish the action), and social norms (perceptions of others or society). This model has been validated in various settings, including use of clinical guideline.<sup>31</sup> In addition, a more comprehensive classification of barriers and facilitators based on a systematic review was used to develop the interview guide.<sup>21</sup> Discussions among all authors were continued until there was a consensus that the interview guide was representative of the framework. The guide was pilot-tested with a convenience sample of 6 clinicians (3 PTs, 2 OTs, and 1 GP).

Once the consent form was obtained from the participating therapists, the CLIP guidelines were sent by mail. They were also given a journal in order to note their observations on the barriers and facilitators related to the use of the guidelines. The participants were free to decide how they would use the journal, as this was not required of them. Participants were given 3 weeks to read the guidelines and note any questions they had related to understandability. At the end of this period, individual telephone semistructured interviews were conducted with each participant noting and answering the questions. Participants were then instructed to try to use the guidelines, for a maximum of 6 weeks, with at least the first 2 clients consulting them for the first time because of LBP. Throughout this period, they were asked to note any barriers or facilitators in a journal, whether personal, client-related, or environmental, related to the use of the guidelines, and use it as a memorandum for the interviews. Participants were contacted every 2 weeks to follow up on client recruitment and schedule the final individual face-to-face semistructured interview. Interviews were conducted at times when participants were freely available—these times were identified by the participants themselves. Interviews were held at locations chosen by the participants, which were mostly either at their home or at their workplace. They were asked to provide a meeting room where they could confidentially discuss the guidelines. The interviews with the participants were audio-recorded and transcribed verbatim, with the accuracy of the transcriptions assessed by the interviewer.

## Data Analysis

Content analysis was used to systematically organize data into a structured format. The transcripts of the interviews were analyzed after a thematic content analysis, using a mixed coding chart.<sup>22</sup> The coding chart was developed using the framework mentioned earlier. Themes were identified as facilitators (themes that facilitated guideline use) or barriers (themes that impeded guideline use). Reliability of the coding was assessed

by having 2 of the authors (SP and AMC) code the same pilot interview. Disagreements were resolved by discussing coding results with one of the other authors, an OT university professor (MJD). This procedure was repeated until at least 80% agreement was achieved.

Each transcript was coded line by line by the corresponding interviewer. QSR NVivo V7 (QSR International, Cambridge, MA) qualitative data management software<sup>32</sup> facilitated the coding and retrieval of the interview data. Themes discussed by the participants were identified and classified according to the coding chart. However, as new barriers or facilitators were identified by the participants, the coding chart was adapted accordingly during the analysis process. A cross-case analysis was accomplished within each professional group to identify converging (most of the participants agreeing on a same theme, as being a barrier or a facilitator), diverging (most of the participants reporting a same theme, but disagreeing on its impact on guideline use), and minor themes (themes identified by  $\leq 2$  participants). Cross-group analysis was then performed by identifying converging and diverging themes between the groups. Finally, conclusions were drawn by the authors discussing the results obtained during the process of data collection and analysis. Data collection and analysis took place simultaneously to determine whether saturation was obtained.

## RESULTS

For OTs, a total of 12 invitations were eventually sent to the participants. Of these, 2 did not respond and 2 were not eligible. The mean and median number of years of practice were 8.9 and 10, respectively (range, 1–15 yr). Seven of the 8 OTs were female. For PTs, a total of 141 invitations were eventually sent to the participants. Of these, 50 did not answer, 5 refused to participate, 28 were not eligible, 27 refused during a telephone follow-up, 12 were in categories already filled, 2 dropped out, and 1 failed to recruit patients. The mean and median number of years of practice were 12.7 and 12, respectively (range, 2–27 yr). Twelve of the 16 PTs were female. For GPs, 11 invitations were eventually sent to the participants, with 2 refusing to participate and 1 not responding. The mean and median number of years of practice were 17.5 and 14.5, respectively (range, 9–30 yr). Three of the 8 GPs were female.

Interviews were conducted between April and October 2007, and each interview lasted between 60 and 90 minutes. Saturation seemed to have been obtained in all 3 professional groups, with few new themes mentioned by the participants interviewed later in the process. Identified themes were grouped into 9 categories, with 4 related to the clinician (understandability, agreement, compatibility, and impact), 1 related to the client, and 2 related to the environment (work organization and peers). Minor themes were not reported.

## Clinician

### *Understandability*

Participants in all 3 groups generally had no problem in understanding the guidelines, with only the clarity of interventions

being problematic. Most GPs were unfamiliar with the conservative interventions other than medication, such as cognitive-behavioral therapy, spinal manipulations, and exercises. Some OTs stated that certain interventions were not detailed enough in their application parameters. As for PTs, some did not understand what intervention to use when a yellow flag was identified.

### **Agreement**

Both GPs and PTs agreed to the following elements of the guidelines: triaging, identification of patients with serious pathology (red flags), and encouragement to stay active. All GPs agreed with imaging restriction, although some stated that imaging was necessary when the condition did not improve or when there was suspected neurological involvement such as a hernia. Most PTs agreed on the usefulness to assess the patient's disability with a standardized questionnaire, such as the Oswestry Disability Index. As for OTs, all agreed with the guidelines.

However, most GPs and PTs thought that the guidelines lacked knowledge on the pathophysiology of LBP. Also, most GPs disagreed with the guidelines on opioid use, stating that these were often necessary to effectively manage pain despite the associated adverse effects. There were differences of opinion among GPs and PTs on the psychosocial aspects related to LBP disability, with some agreeing with the importance of identifying and managing these aspects and others not seeing the usefulness of these aspects. Some GPs highlighted the subjectivity of the questionnaires used to assess these psychosocial aspects. GPs and PTs also diverged in opinion regarding reassurance, with some stating that this was a negation of the patient's condition, whereas others considering it as an important aspect.

### **Compatibility**

All GPs stated that the following guideline elements were compatible with their actual practice: red flag identification, imaging restriction, and encouragement to stay active. The assessment of disability prognosis and psychosocial factors, essentially with questionnaires, was new for all GPs and most PTs. Some GPs and PTs discussed psychosocial aspects with some patients with LBP but preferred doing it informally when they thought it was needed. Concerning questionnaires in general, all but 1 GP said that they almost never used them in their practice. All but 1 GP and most PTs thought that the assessment of psychosocial factors was not their role. For GPs, all but 1 said that their role in management of LBP was the identification of the pathophysiological cause and red flags and pain management. Most GPs not only stated that absence from work and return to work authorization was their role but also mentioned that this was often difficult to determine. Most GPs systematically referred to other professionals for disability management, mostly PTs but sometimes OTs. However, most PTs thought that they were not adequately trained to manage psychosocial factors.

All OTs said that the guidelines were compatible with their training and current practice. Two elements were, however,

new to them: systematic assessment of disability prognosis and evaluation of psychosocial factors following a time frame throughout the episode of care.

### **Impact**

Although impact was not extensively discussed by GPs, some stated that the guidelines would have a limited impact on the patient's condition because of the limited efficacy of interventions. Some GPs thought that knowledge of LBP, in general, had a limited impact on the practice of GP because they were overwhelmed by information for the various health problems encountered, with LBP representing only a limited and clinically uninteresting portion of their caseload.

Most PTs thought that the guidelines allowed to better structure the phases of LBP (acute/subacute/persistent), but they also thought that the guidelines would have a limited impact on their practice because of the lack of interventions aimed at the biomechanical/pathophysiological aspect of LBP. There was divergence among PTs on the impact of guidelines on patient's condition, with some stating that identification of yellow flags would determine the need for referral and allow earlier return to activity, and others stating the guidelines would have a limited impact because of the lack of interventions on the biomechanical causes of LBP.

All OTs thought that using the guidelines would allow to prevent persistent disability and favor earlier return to activity by identifying and managing yellow flags.

### **Clientele**

All 3 groups mentioned that identifying and managing yellow flags could present conflicts with patient's expectations. They thought that most patients expected to be managed using a biomedical and not a biopsychosocial approach, as the one found in the guidelines. Most PTs stated that the guidelines were more appropriate for patients with multiple yellow flags, at risk of or with long-term disability. They thought that the guidelines were less appropriate, with patients financing the treatment privately.

Additional patient barriers were mentioned by GPs. Some stated that there were pressures from patients or stakeholders for imaging. Some highlighted possible patient literacy issues with questionnaires. Most thought that the LBP phases applied less to their management, because patients were often seen with acute symptoms such as intense pain, even if in the later phases.

As for OTs, some highlighted their limited capacity to manage severe psychosocial factors such as major depression. They also mentioned that some psychosocial factors were difficult to modify, such as motivation, financial incentives, job satisfaction, and litigation.

### **Environment**

#### **Work Organization**

Most GPs mentioned that short treatment sessions, limited frequency and long intervals in follow-up sessions, and changes in attending GP restricted the capacity to assess and manage

yellow flags. Questionnaires were particularly difficult to use for these reasons. For OTs, some mentioned that their work organization, mostly composed of group therapy, limited their capacity to address yellow flags during one-on-one sessions, thought to be sometimes necessary. Some OTs also mentioned the resistance of employers to grant access to the workplace for rehabilitation purposes. Work organization issues were rarely addressed by PTs.

### Peers

Issues with peers were mostly discussed by OTs, focusing their comments on GPs and PTs because they were almost always involved with them during LBP management. Most OTs stated that GPs and PTs focused their management too much on the pathophysiology of LBP, neglecting the psychosocial factors of disability because of a lack of knowledge. This pathophysiological focus reinforced patient's expectation, causing contradictions with OT management and sometimes conflicts with patients and peers. Most OTs stated that support of other professionals was important to modulate patient expectations but was doubted because of the pathophysiological focus. Most of them thought that there were delays or under-referrals to OT because of a lack of knowledge of contribution of OT to the management of LBP disability. The guidelines were seen by most OTs as a way to support management of yellow flags for patients and peers.

All 3 groups mentioned that the guidelines could be useful to help coordinate management and teamwork between professionals. However, most GPs stated that collaboration was difficult because health care professionals involved were situated in geographically separate clinics and were different for each patient.

## DISCUSSION

Several studies have demonstrated the lack of uptake of LBP guidelines by health care professionals.<sup>3-8</sup> This study helps to better understand this lack of uptake. Barriers to use of LBP guidelines seem quite different between the studied groups of health care professionals. GPs seem to exhibit the greatest barriers and OTs the lowest, with PT barriers tending to be similar to those of GPs but with more divergence among participants. It seems that the pathophysiological model employed by GPs and PTs limits the uptake of guidelines, with the biopsychosocial model espoused by OTs favoring guideline use. Work organization of GPs, such as short management sessions and long intervals between sessions, seems to further limit guideline uptake.

Although hypothetical barriers to use were discussed during the development process of guidelines through exchanges with key informants, identified barriers seem to be quite substantial for GPs and PTs when actually using the guidelines. Key informants were recruited using purposive and snowball sampling and were essentially composed of decision makers, opinion leaders, expert clinicians, and academic researchers. Although clinicians were included as key informants, results demonstrated that they tended to be OTs knowledgeable in this field and not representative of the general primary care

GP and PT clinician community.<sup>20</sup> Thus, it seems that the development process of guidelines was not sufficient in identifying the barriers with target GP and PT users because they were less included in the process. Results of this study further demonstrate the importance of including all target users during guideline development (item 4 of the AGREE instrument) and of assessing guideline usability with target users (item 7).<sup>25</sup>

Other studies have found similar barriers to use in GPs and PTs.<sup>10-16</sup> Several trials have been accomplished to assess the capacity to transfer LBP guidelines to GPs and PTs by addressing barriers to use,<sup>33-40</sup> but have been demonstrated to be generally ineffective. Thus, these barriers seem difficult to change. LBP guideline uptake by GPs and PTs would seem to require a change in the model of care, from a pathophysiological to a biopsychosocial model. It is, however, doubtful that this pathophysiological model of care would be easily modifiable because it constitutes the foundation of these professions. In order to address the attitude and competency barriers found in this study with GPs and PTs, teaching of the biopsychosocial model of disability management to medical and physiotherapy students during their initial training could be included, as it has been demonstrated to be lacking.<sup>41,42</sup> However, medical students have shown to be minimally interested in learning such a model.<sup>43</sup> There are also significant challenges in integrating the biopsychosocial model in curriculums of PTs, such as time availability (the majority taken by the prevailing biomedical model) and use of the biomedical model by clinical educators.<sup>44</sup> Also, education would probably be insufficient for medical students because important work organization barriers were also found in this study.

The more divergent opinions among PTs, when compared with the more homogeneous opinions among OTs and GPs, were not unexpected because of the large practice variations among PTs when managing back pain.<sup>29</sup> Reflecting current practices, it seems that some PTs have acknowledged the importance of the biopsychosocial model and others have not. These practice variations could signal a paradigm shift in practices of PTs.<sup>45</sup> As with all paradigm shifts, these tend to implement in the longer term.

To improve implementation of the guideline, the AGREE instrument recommends developing processes of care aimed at barriers to use (item 19 of the AGREE instrument).<sup>25</sup> Considering the type and extent of barriers found in this and other studies and the probable difficulty to modify these barriers, we propose fitting the process of care to the most compatible provider. This would allow to the circumvention of barriers to use, eliminate the need and costs associated with generally ineffective knowledge transfer activities, and ease of implementation by stakeholders. For the *acute phase*, it is proposed that only the GP be involved because of the generally good prognosis of LBP. The tasks of GPs could be limited to pain management through medication, red flag screening, initial authorization of absence from work or light duties, encouragement to stay active, and reassurance. Concerning reassurance, it seems that the GPs need to be reassured themselves on LBP prognosis because there were divergent opinions on this aspect. Therefore, GPs should be educated on the generally

good LBP prognosis. GPs could also continue to be involved during all phases to adjust pain medication. For the *subacute phase*, PTs could be involved early in the phase, with gradual decrease of frequency of involvement. Focus of PTs could be on pain management interventions, general exercise, and encouragement to stay active. PT involvement also seems useful to meet patient expectations. OTs could also be involved at the beginning of the subacute phase, with gradual increase of frequency of involvement. The tasks of OT could be to assess disability prognosis, identify and manage psychosocial yellow flags, and determine return to activity parameters with the collaboration of stakeholders such as employers. For the *persistent phase*, OTs could be involved more intensely, with the additional involvement of secondary line care such as occupational psychologists if needed. Being responsible for the management of yellow flags, OTs would therefore constitute the cornerstone of LBP disability management. Because this role is traditionally given to GPs in many jurisdictions, regulatory and political issues could arise.

As with all qualitative studies, the results are limited to the context in which the participants were recruited, that is, Quebec (Canada). However, purposeful sampling was accomplished to recruit participants of varied characteristics in order to obtain a broad range of views of health care professionals. Also, the homogeneity of responses and the saturation obtained increase confidence in the comprehensiveness of the results. Triangulation also seems to further confirm the present results, because a quantitative survey with health care professionals completed during the development of the guidelines demonstrated similar results, with OTs agreeing significantly more with the guidelines than GPs and PTs in the survey.<sup>20</sup> Because the CLIP guidelines are similar to other LBP guidelines,<sup>26</sup> the identified barriers should be applicable to other LBP guidelines. Still, this study should be replicated in other countries to assess the transferability of the results. The efficacy and efficiency of a process of care fitting tasks to the most compatible providers should also be assessed in a trial.

### ➤ Key Points

- ❑ Barriers to use of LBP guidelines were lesser for OTs and greater for GPs, with divergences among PTs.
- ❑ OTs agreed with the guidelines, found them compatible with their current practice, and thought that using them would prevent persistent disability.
- ❑ GPs and PTs thought that the guidelines did not provide enough information on the pathophysiological management of LBP. GPs thought that it would be difficult to implement the guidelines in everyday practice.
- ❑ All 3 groups thought that management recommendations could conflict with patient expectations.
- ❑ To address identified barriers, a process of care is proposed by fitting tasks to the most compatible providers. The efficacy of this process of care to prevent persistent LBP disability should be assessed in a trial.

### References

1. Pengel LH, Herbert RD, Maher CG, et al. Acute low back pain: systematic review of its prognosis. *BMJ* 2003;327:323.
2. Iles RA, Davidson M, Taylor NF. Psychosocial predictors of failure to return to work in non-chronic non-specific low back pain: a systematic review. *Occup Environ Med* 2008;65:507-17.
3. Swinkels IC, van den Ende CH, van den Bosch W, et al. Physiotherapy management of low back pain: does practice match the Dutch guidelines? *Aust J Physiother* 2005;51:35-41.
4. Overmeer T, Linton SJ, Holmquist L, et al. Do evidence-based guidelines have an impact in primary care? A cross-sectional study of Swedish physicians and physiotherapists. *Spine* 2005;30:146-51.
5. Fritz JM, Cleland JA, Brennan GP. Does adherence to the guideline recommendation for active treatments improve the quality of care for patients with acute low back pain delivered by physical therapists? *Med Care* 2007;45:973-80.
6. Fullen BM, Maher T, Bury G, et al. Adherence of Irish general practitioners to European guidelines for acute low back pain: a prospective pilot study. *Eur J Pain* 2007;11:614-23.
7. Poitras S, Blais R, Swaine B, et al. Management of work-related low back pain: a population-based survey of physical therapists. *Phys Ther* 2005;85:1168-81.
8. Bishop A, Foster NE, Thomas E, et al. How does the self-reported clinical management of patients with low back pain relate to the attitudes and beliefs of health care practitioners? A survey of UK general practitioners and physiotherapists. *Pain* 2008;135:187-95.
9. Grimshaw JM, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care* 2001;39:II2-45.
10. Bekkering GE, Engers AJ, Wensing M, et al. Development of an implementation strategy for physiotherapy guidelines on low back pain. *Aust J Physiother* 2003;49:208-14.
11. Breen A, Austin H, Champion-Smith C, et al. "You feel so hopeless": a qualitative study of GP management of acute back pain. *Eur J Pain* 2007;11:21-9.
12. Crawford C, Ryan K, Shipton E. Exploring general practitioner identification and management of psychosocial yellow flags in acute low back pain. *N Z Med J* 2007;120:U2536.
13. Dahan R, Borkan J, Brown JB, et al. The challenge of using the low back pain guidelines: a qualitative research. *J Eval Clin Pract* 2007;13:616-20.
14. Pincus T, Foster NE, Vogel S, et al. Attitudes to back pain amongst musculoskeletal practitioners: a comparison of professional groups and practice settings using the ABS-mp. *Man Ther* 2007;12:167-75.
15. Schers H, Wensing M, Huijsmans Z, et al. Implementation barriers for general practice guidelines on low back pain: a qualitative study. *Spine* 2001;26:E348-53.
16. Pincus T, Vogel S, Breen A, et al. Persistent back pain—why do physical therapy clinicians continue treatment? A mixed methods study of chiropractors, osteopaths and physiotherapists. *Eur J Pain* 2006;10:67-76.
17. Shaw W, Hong QN, Pransky G, et al. A literature review describing the role of return-to-work coordinators in trial programs and interventions designed to prevent workplace disability. *J Occup Rehabil* 2008;18:2-15.
18. Andersson GB. Epidemiological features of chronic low-back pain. *Lancet* 1999;354:581-5.
19. Mosey AC. An alternative: the biopsychosocial model. *Am J Occup Ther* 1974;28:137-40.
20. Rossignol M, Poitras S, Dionne C, et al. An interdisciplinary guideline development process: the Clinic on Low-back pain in Interdisciplinary Practice (CLIP) low-back pain guidelines. *Implement Sci* 2007;2:36.
21. Saillour-Glenisson F, Michel P. Individual and collective facilitators of and barriers to the use of clinical practice guidelines by physicians: a literature review. *Rev Epidemiol Sante Publique* 2003;51:65-80.
22. Miles MB, Huberman AM. *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed. Thousand Oaks, CA: Sage Publications; 1994.

23. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *Int J Qual Health Care* 2007;19:349–57.
24. Rossignol M, Arsenault B, Dionne C, et al. *Clinic on Low-Back Pain in Interdisciplinary Practice (CLIP) Guidelines*. Montréal: Direction de santé publique, Agence de la santé et des services sociaux de Montréal; 2007.
25. AGREE Collaboration. Development and validation of an international appraisal instrument for assessing the quality of clinical practice guidelines: the AGREE project. *Qual Saf Health Care* 2003;12:18–23.
26. Bouwmeester W, van Enst A, van Tulder M. Quality of low back pain guidelines improved. *Spine (Phila Pa 1976)* 2009;34:2562–7.
27. Choudhry NK, Fletcher RH, Soumerai SB. Systematic review: the relationship between clinical experience and quality of health care. *Ann Intern Med* 2005;142:260–73.
28. Stewart RE, Vroegop S, Kamps GB, et al. Factors influencing adherence to guidelines in general practice. *Int J Technol Assess Health Care* 2003;19:546–54.
29. Poitras S, Blais R, Swaine B, et al. Practice patterns of physiotherapists in the treatment of work-related back pain. *J Eval Clin Pract* 2007;13:412–21.
30. Ajzen I. *Attitudes, Personality and Behavior*. Milton Keynes: Open University Press; 1988.
31. Maue SK, Segal R, Kimberlin CL, et al. Predicting physician guideline compliance: an assessment of motivators and perceived barriers. *Am J Manag Care* 2004;10:383–91.
32. QSR International. NVIVO Version 7. 2006; Cambridge, MA.
33. Bishop PB, Wing PC. Knowledge transfer in family physicians managing patients with acute low back pain: a prospective randomized control trial. *Spine J* 2006;6:282–8.
34. Engers AJ, Wensing M, van Tulder MW, et al. Implementation of the Dutch low back pain guideline for general practitioners: a cluster randomized controlled trial. *Spine* 2005;30:559–600.
35. Dey P, Simpson CW, Collins SI, et al. Implementation of RCGP guidelines for acute low back pain: a cluster randomised controlled trial. *Br J Gen Pract* 2004;54:33–7.
36. Becker A, Leonhardt C, Kochen MM, et al. Effects of two guideline implementation strategies on patient outcomes in primary care: a cluster randomized controlled trial. *Spine* 2008;33:473–80.
37. Gross DP, Lowe A. Evaluation of a knowledge translation initiative for physical therapists treating patients with work disability. *Disabil Rehabil* 2009;31:871–9.
38. Bekkering GE, van Tulder MW, Hendriks EJ, et al. Implementation of clinical guidelines on physical therapy for patients with low back pain: randomized trial comparing patient outcomes after a standard and active implementation strategy. *Phys Ther* 2005;85:544–55.
39. Werner EL, Gross DP, Lie SA, et al. Healthcare provider back pain beliefs unaffected by a media campaign. *Scand J Prim Health Care* 2008;26:50–6.
40. Stevenson K, Lewis M, Hay E. Does physiotherapy management of low back pain change as a result of an evidence-based educational programme? *J Eval Clin Pract* 2006;12:365–75.
41. Ali N, Thomson D. A comparison of the knowledge of chronic pain and its management between final year physiotherapy and medical students. *Eur J Pain* 2009;13:38–50.
42. Briggs EV, Carr EC, Whittaker MS. Survey of undergraduate pain curricula for healthcare professionals in the United Kingdom. *Eur J Pain* 2011;15:789–95.
43. Astin JA, Sierpina VS, Forsy K, et al. Integration of the biopsychosocial model: perspectives of medical students and residents. *Acad Med* 2008;83:20–7.
44. Foster NE, Delitto A. Embedding psychosocial perspectives within clinical management of low back pain: integration of psychosocially informed management principles into physical therapist practice—challenges and opportunities. *Phys Ther* 2011;91:790–803.
45. Gersick CJG. Revolutionary change theories: a multilevel exploration of the punctuated equilibrium paradigm. *Acad Manage Rev* 1991;16:10–36.