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Original article

Checklists to manage Pain Induced by Exercise and Mobilization (PIEM) during physical therapy programs: PIEM checklists for practitioners and physiotherapists



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ABSTRACT

Objectives: Identify key informational and educational items ("messages") to provide to physicians (general practitioners and specialists) and physiotherapists for the management of pain induced by exercise and mobilization (PIEM). Develop checklists to improve this management in daily practice. *Material and methods*: The Delphi method for consensus-building was used to identify informational and educational messages for health professionals who deal with PIEM. Informed by the results of an extensive qualitative study, a panel of experts from 5 medical and paramedical disciplines concerned with PIEM and a representative of a patients' association were interviewed individually and iteratively in order to obtain a single, convergent opinion.

Results: Delphi consultation helped to determine 9 areas corresponding to 54 key messages of information and education for doctors and physiotherapists who deal with PIEM. These messages relate to: defining, characterizing, identifying, and evaluating PIEM; identifying factors that may cause or increase this pain; informing the patient in order to avoid misinterpretation of PIEM; preventing and treating PIEM; and dealing with it during physical therapy sessions. The method also enabled us to develop 2 synthetic instruments (checklists) — 1 for physicians and 1 for physiotherapists — to help with the management of this pain.

Conclusion: Consulting a panel of experts comprising different categories of actors dealing with PIEM on the basis of a thorough qualitative diagnosis in order to identify messages for a training program makes it possible to harmonize programs with the expectations of patients and the problems encountered by professionals. The formulation of this program and the institutionalization of two checklists should enable health professionals to identify, qualify, and deal more effectively with PIEM.

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1. Introduction

1.1. Pain management, a major focus of public health policy

Since the 1994 report by Senator Neuwirth [1] on postoperative pain in France, pain management has become a priority in efforts to improve the quality of care. Pain was in fact recognized by the Law on patients' rights and quality of the health system of 4 March 2002 [2] and established as a priority in Law No. 2004-810 of 13 August 2004 on health insurance. Four national action plans

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against pain - 1998–2000 [3], 2002–2005 [4], 2006–2010 [5] and 2013–2017 1 — have been adopted, with the second and the fourth plans according specific consideration to medical care-related pain.

This focus on pain successfully responds to patients' expectations [6], and pain management has been defined as a basic right of healthcare users, assigning health professionals the responsibility of preventing, evaluating, and treating pain [2]. Neglecting to treat pain (physical and mental) may now expose hospitals to liability and legal action, and medico-legal disputes may well lead to convictions of hospitals and compensation for plaintiffs [7,8].

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¹ The 2013–2017 plan has not yet been implemented.

1.2. Care-related pain, a neglected form of pain

Care-related pain, although very common, is still downplayed today [9–13]. Defined as "short-term pain caused by the physician or a therapist in predictable circumstances that may be prevented by appropriate measures" [14], this pain can occur in different circumstances: pain generated by basic care or nursing (toilet, bandages, dressing and undressing, transfers...); by procedures that are most often invasive (punctures, injections, insertion of catheters...); by treatments (surgery, pharmacology, radiotherapy, physiotherapy...); or by medical studies [15,16]. Performed for the patients' "good", the acts or procedures that cause pain may be minimized or disregarded by the caregivers who prescribe or administer them [17], an attitude that underscores the need for recognition and prevention.

1.3. Physical therapy programs, an increasingly widespread therapeutic option

PIEM is one form of pain related to therapeutic actions. It is becoming more significant in that supervised exercise is used more extensively in programs for chronic painful conditions, and in developed countries, the prevalence of chronic diseases continues to increase [18–24].

In France, the 2007-11 Plan for improving the quality of life for people with chronic diseases estimated that "15 million people, nearly 20% of the population, are living with chronic disease". With a longer lifespan, the number of people affected by chronic diseases is constantly increasing. The need for more attention to people with these diseases has been affirmed at both the national [25] and international [26] levels.

Exercise is one of many recommendations for managing chronic pain conditions, but no specific human or therapeutic support for dealing with the pain that may be induced by these treatments is ever mentioned. None of the 25 recommendations of the Osteoarthritis Research Society International relating to the management of hip and knee osteoarthritis [27,28] mentions PIEM when patients are encouraged to perform regular joint mobilization exercises. Similarly, the recommendations of the European League Against Rheumatism (EULAR) for managing hip osteoarthritis [29], those relating to non-pharmacological treatments for hip and knee osteoarthritis [30], and those for spondyloarthritis by the French Rheumatology Society [31] call for non-pharmacological treatment based on physical exercises and mobilization but do not mention the painful implications of these physical therapy programs.

1.4. Pain induced by physical therapy programs, detrimental for patients

In addition to ethical and regulatory considerations, induced pain can indeed be harmful for patients. Painful treatments and care procedures performed without attention may cause some to abandon their care programs. Not only can neglecting treatment undermine the trust that patients have in their healthcare, it can also lead to non-adherence to treatments and medication [32,33].

1.5. Improving the information and training of health professionals: a path of progress in the management of physical therapy programs

Improving the information and training of health professionals has been shown to be an important part of pain management in the various national plans for combatting pain and in health policy regulation (Handbook of the Ministry of Health and Welfare in association with the French Society for the Study and Treatment of Pain [34]; recommendations by AFSSAP, HAS, and ANAES on

managing chronic headaches [35], migraine [36], postoperative pain in oral and maxillofacial surgery [37], and recommendations by practitioners [38–40]).

In connection with PIEM, a socio-anthropological qualitative study of patients', doctors', and physical therapists' views revealed both prescribers' disregard for PIEM and also differences among patients, doctors, and physiotherapists regarding this specific type of pain and its management [41]. By identifying weak points in therapeutic practices and in caregiver-patient relationships in this area, this study confirmed that some health professionals, including physiotherapists, GPs, and specialists who prescribe physical therapy programs, were in need of information and training. This study also provided the relevant qualitative database to develop a training program that corresponds to patients' expectations and the problems encountered by these professionals.

We therefore designed a new study relying on the results of the qualitative study previously performed [41] in order to identify key information and education items ("messages") to provide to general practitioners, specialists and physiotherapists for the management of PIEM and to develop checklists to improve this management in daily practice.

2. Material and Methods

2.1. Medical ethics

The protocol for this study was submitted to the Ethics Committee (Comité de protection des personnes "Île-de-France I"), which found that it was "an observational study outside the scope of the Public Health Act on the protection of persons participating in biomedical research".

The study was performed in accordance with the Declaration of Helsinki. The patient who was a member of the panel of experts received oral and written information in compliance with current regulations, which do not impose obtaining written consent in this type of study.

2.2. The Delphi method for consensus-reaching

The content of the information and education program was determined using the Delphi method for consensus-reaching [42]. This method provides a procedure of collective decision-making to obtain the opinion of a panel of experts on a specific topic. The experts go through successive rounds of questions in order to elicit one single, final, convergent opinion from the group. Because the experts are questioned iteratively and individually, this method guarantees the independence of their responses. The Delphi study process ended with a two-round process, shown in Fig. 1.

2.3. The steering committee and the panel of experts

The steering committee included three experts — two clinicians, both rheumatologists and physical medicine and rehabilitation physicians (S.P., C.P.), and the sociologist (S.A.) who conducted the qualitative investigation on PIEM mentioned above.

The panel of experts included multiple stakeholders concerned with PIEM -8 doctors, 2 physiotherapists, and 1 patient - to reflect the diversity of views on this pain. Doctors were recruited from general medicine (2), patients' first recourse, rheumatology (1), physical medicine and rehabilitation (3), and geriatrics (2). Two private physiotherapists and a patient, a member of an association dealing specifically with pain management, were also selected.

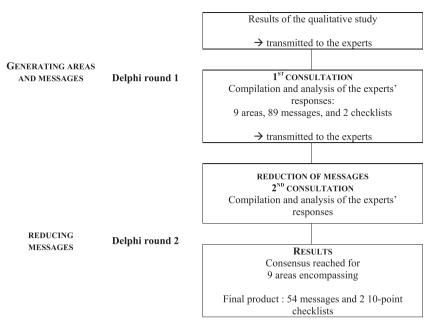


Fig. 1. Steps of the Delphi process.

2.4. The communication process

The experts were able to participate in the study via e-mail, fax, or mail. Ten experts chose e-mail and one chose mail as their means of exchange and communication.

2.5. Producing messages

Area no. 13 Area no. 14

Modes of distribution Area no. 15

The Delphi method was used first to produce "messages" or content items, and then to select the most relevant among them [42].

The Delphi first round served to determine what information was relevant in composing informational and educational materials for caregivers. Two documents were sent to each of the experts: a detailed report of the results of a qualitative study previously conducted on the subject and a brief presentation of the main results of this survey [42]. The experts were asked to use the two documents to help formulate their proposals for the content and format of the training materials. These proposals were designed to reflect the deep convictions of each expert. To help the experts, 15 different areas of thought were proposed (Table 1). These areas were identified by the steering committee on the basis of the

Table 1
Possible areas proposed to the experts during Delphi round 1

Possible areas proposed to the experts during Delphi round 1.		
After reading the docu	ments that you received, what content elements should be included in these materials?	
Physiopathology of pa	in induced by physical therapy programs	
Area no. 1	Educational messages about the pathophysiology of PIEM (information on induced pain, its causes, underlying mechanisms)	
Specific education con	cerning pain induced by physical therapy programs	
Area no. 2	Recognizing PIEM	
Area no. 3	Facilitating patients' articulation of PIEM	
Area no. 4	Presenting techniques used in physical therapy programs that cause pain (program contents, types of exercises likely to be	
	performed and likely to be painful)	
Area no. 5	Presenting scientific recommendations for this area	
Evaluating pain induce	ed by physical therapy programs	
Area no. 6	Assessing PIEM and using assessment instruments (scales, questionnaires)	
Treating pain induced	by physical therapy programs	
Area no. 7	Preventing and treating PIEM using non-pharmacological treatments (drug classes, pharmacokinetics, drug interactions)	
Area no. 8	Preventing and treating PIEM using pharmacological treatments (physiotherapy, massages, relaxation)	
Area no. 9	Dealing with PIEM during physical therapy sessions	
Area no. 10	Optimizing adherence to treatments prescribed in PIEM management	
Area no. 11	Proposing a checklist for the proper management of PIEM	
Based on your own ex	perience, what form(s) should the materials take and how should they be distributed?	
Form(s)		
Area no. 12	These information and education materials for PIEM are intended for prescribers of these programs (GPs and specialists) as well as	
	physiotherapists who carry them out. Should there be one or several forms for this? If more than one, what materials for what	
	audience (brochure, website, application)?	

What is the most important visual content to include in these informational materials?

presentation; varying the media; associated forums...)?

Should self-assessment elements be included for messages in these materials (quiz...)? If so, which ones and how?

How should these materials be presented and advertised (place, time, method of contact with target audiences; contents of the

qualitative study results. The experts were invited to provide proposals both on the content of the training program and on the forms of the materials and their mode of distribution. The experts were then instructed to propose 10 to 20 specific messages for each area listed in the documents. They were also encouraged to make other suggestions that did not fall within any of the suggested areas.

2.6. Selecting the proposed messages

Each message generated was submitted to all the experts for evaluation. They were asked to rate both the relevance of the item (Do you believe that this message should be included in the final checklist?) and its formulation (Do you think that the wording of this message is appropriate?), on two 10-point Likert scales. The proposed messages were independent of each other, precise, and quantifiable. For each proposed area, the experts could add messages that they felt were important but missing.

This second round was designed to consolidate the list of messages and to identify which of them the experts found important enough to include in a training document to improve management of the PIEM. The experts could justify their choices, add to the list of proposals under evaluation, and reformulate the proposed messages.

2.7. Analysis of the data

After the Delphi first round, the proposals made by the experts were aggregated and duplicates were removed by the steering committee.

After the second round, statistical analysis of the experts' propositions examined the areas of convergence (median) and the spread of opinions (interquartile range, extreme values).

Based on these two sets of statistical data and on the observations made by the experts in the two rounds, the members of the steering committee eliminated messages with insufficient consensus, aggregated the content of some related messages, and reformulated or developed others.

3. Results

3.1. Delphi round 1: producing messages

The first round was held from 07/12/2012 to 21/01/2013. Members of the steering committee aggregated the experts' proposals by eliminating redundancies. They removed messages

that were too general or that did not fit into the topic of pain induced by physical therapy programs designed for painful conditions. The areas for which no specific proposal was formulated were abandoned, such as the area on "specific recommendations concerning pain induced by physical therapy programs". The wording of some messages was reviewed by the steering committee, and some messages were assigned to a different area from the one suggested by the expert. This first round led to the formulation of 89 messages within 10 different areas, and early versions of two checklists of questions (10 items each) were developed for use as training materials (Table 2).

3.2. Delphi round 2: reducing the list of proposals

The second round was held from 04/03/2013 to 31/03/2013. The messages relevant to managing PIEM were resubmitted to the panel, for assessment. The items dealing only with form and distribution were kept integrally to exploit all the possibilities.

Members of the steering committee analyzed the expert panel's responses quantitatively (statistical indicators) and qualitatively (expert comments). The experts' proposals with a median relevance score greater than or equal to 7.5 were selected (60 messages), which led to the elimination of 29 messages. However, the steering committee decided to reinstate 10 messages with a median score of less than 7.5 for which the panel's positions were not convergent; the steering committee wished to indicate relatively strong positions on these points because they corresponded to major issues highlighted by the qualitative study. Similarly, the steering committee decided to eliminate 10 messages with a high degree of convergence (med. > 7.5) that seemed ineffective or more appropriate for addressing target patients than health professionals. Finally, separate proposals were merged when they contained the same information (11 proposals were aggregated into 5 messages). Ultimately, the Delphi second round produced 54 messages and 2 checklists of questions to be used to work on managing PIEM.

4. Discussion

This work allowed us to propose two synthetic tools — checklists — that would inform and educate but would also help therapists and physicians in caring for patients who are prescribed physical therapy programs. These tools are concise (10 questions), making them easy instruments to administer, and they bring PIEM to the attention to health care professionals. They can be useful

Table 2 Areas evaluated by the experts in Delphi round 2.

Results of Delphi round 1		
Areas	Themes	Messages (number of items)
Area no. 1	Defining PIEM	4
Area no. 2	Recognizing PIEM	5
Area no. 3	Facilitating patients' articulation concerning PIEM	6
Area no. 4	Evaluating PIEM	8
Area no. 5	Identifying factors that may cause or increase PIEM	13
Area no. 6	Informing the patient	11
Area no. 7	Avoiding misinterpretation of PIEM	11
Area no. 8	Preventing and treating PIEM Using pharmacological treatments	21
Area no. 9	Using non-pharmacological treatments Dealing with PIEM during physical therapy sessions	10
Area no. 10	Proposing checklists for the best management of PIEM Checklist for prescribing physicians Checklist for physiotherapists	20

reminders for practitioners who neglect to prevent PIEM as well as learning tools for therapists who might be unaware of the importance of this prevention [41].

The method used is a classic device for building consensus [42]. Backed by a thorough qualitative diagnosis, it makes it possible to take a needs-based approach. It takes into account the diversity of existing professional practices and observable differences among health professionals, and also the differences between health professionals' and patients' views [41]. The use of this method in this particular context offers the advantage of building content that is based not on a limited representation of health professionals' practices but on the specific analysis of their actual practices of prescribing physical therapy programs and their actual approach to prevention and care of PIEM.

In terms of process, the method also offers the advantage of a communication process that avoids peer pressure and leadership dynamics within the groups. It preserves the autonomy of choice of all the experts and the anonymity of their positions. Moreover, the diversity of the panel precludes the dominance of the perspective of any one group of actors (doctors, representatives of a specialty for example) at the expense of another (therapists, patients) [43]. In addition, their diversity was not limited to professional specialization; the panel brought together professionals working solely in a hospital environment, those with private practices, and those with mixed activity, — both women and men. This effort to incorporate different viewpoints is also seen in the composition of the steering committee, which included a sociologist and two clinician methodologists allowing for a cross-analysis of the results of the panel's work. Finally, assigning the panel members the results of the qualitative analysis as a starting point also helped avoid imposing any preconceptions or viewpoints of the steering committee and allowed for other perspectives — those of patients and healthcare professionals in particular - to be taken into account. Logistically, this method is both faster and easier to implement than an approach based on the physical meeting of a group of experts.

The final validation of the two checklists proposed will be based on a clinical trial to test their value in actual use by practitioners and therapists. Their value will also depend on the extent to which they are adopted: whereas information and training that support PIEM management are clearly seen to ensure progress in dealing with patients who take part in physical therapy programs, there is nonetheless still a large number of therapists and physicians who do not always recognize the importance of this issue.

5. Conclusion

We identified key messages for educating health professionals to manage PIEM better. These messages should help develop educational programs for physicians and physiotherapists. These programs can be proposed in initial learning and life-long learning programs for caregivers. We propose two practical, easy-to-use checklists to help physicians and physiotherapists deal with PIEM in daily routine practice. The formulation of these messages and the institutionalization of the checklists should enable health professionals to identify, qualify, and deal more effectively with PIEM.

Formulating messages for a training program by consulting a panel of experts comprising different categories of actors dealing with PIEM (doctor, physiotherapist, patient) on the basis of a thorough qualitative diagnosis allows for a program that is more aligned with the expectations of patients and the problems encountered by professionals.

Disclosure of interest

S.A. Occasional remunerated activities involving research for BMS.

S.P., C.P. BMS honoraria.

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Appendix 1

Messages of informational and educational materials in conjunction with pain induced by physical therapy programs.

AREA NO. 1: DEFINING PAIN INDUCED BY PHYSICAL THERA-PY PROGRAMS

- 1. The pain induced by a physical therapy program may be a new pain or an increase in existing pain.
- 2. The pain induced by a physical therapy program is a pain that has a particular psychological or social component because it occurs during a process intended to speed healing.

AREA NO. 2: RECOGNIZING PAIN INDUCED BY PHYSICAL THERAPY PROGRAMS

- 3. The pain induced by a physical therapy program is different from a persistent pain.
- 4. The pain induced by a physical therapy program is not always predictable.

AREA NO. 3: FACILITATING PATIENTS' ARTICULATION OF PAIN INDUCED BY PHYSICAL THERAPY PROGRAMS

- 5. Doctors and therapists should encourage patients to report pain caused by their physical therapy program.
- 6. Facilitating expression concerning pain induced by a physical therapy program makes it easier to manage.
- 7. When questioning patients, doctors and therapists must enquire about pain induced by physical therapy programs in order to identify patients' fears and beliefs and their history in this matter.
- 8. Doctors and therapists must reassure the patient, explaining that feeling pain is not a sign of weakness.

AREA NO. 4: EVALUATING PAIN INDUCED BY PHYSICAL THERAPY PROGRAMS

- 9. Doctors and therapists need to assess the pain induced by physical therapy programs.
- 10. Pain experienced in physical therapy programs should be re-assessed over time.
- 11. Assessing pain induced by a physical therapy program makes it possible to adapt the treatment to the induced pain.
- 12. Assessments of the pain induced by physical therapy programs should be made in writing (traceability) to make it possible to follow changes in the pain and the effectiveness of actions taken to reduce it.
- 13. What patients' express concerning the pain induced by physical therapy programs is sometimes underestimated by doctors and therapists.
- 14. Explaining to patients the purpose and usefulness of measuring the pain induced by the physical therapy program improves their involvement in the assessment.

AREA NO. 5: IDENTIFYING FACTORS THAT MAY CAUSE OR INCREASE PAIN INDUCED BY PHYSICAL THERAPY PROGRAMS

- 15. Physical therapy techniques most likely to produce pain include: techniques for recovering range of motion; muscle-building techniques; stretching; deep transverse massage; and repetition of an exercise.
- 16. Although some physical therapy techniques are more conducive to occurrences of induced pain, they should not be excluded from a physical therapy program because they are essential to the program's effectiveness.
- 17. The most frequent painful diseases treated in physical therapy programs are conditions of stiffness (post-traumatic, capsulitis, dystrophy...) or chronic painful conditions (back pain or neck pain).
- 18. Anxiety can increase the pain induced by physical therapy programs.
- 19. Previous experience of pain induced by a physical therapy program may increase the pain experienced during a new physical therapy program.

AREA NO. 6: INFORMING THE PATIENT

- 20. Patients should be informed that the pain caused by their physical therapy program is sometimes unavoidable but it can be reduced.
- 21. Pain induced by a physical therapy program will be easier to accept and tolerate if the patient is informed ahead of time about the possibility that the pain may occur.
- 22. Patients feeling pain caused by their physical therapy program should be aware that this pain is temporary and that it usually disappears quickly.

- 23. Pain induced by a physical therapy program is the equivalent of a medicinal side effect.
- 24. Doctors and therapists should inform patients that pain caused by physical therapy programs may be prevented and treated.
- 25. When physicians and therapists do not attend to an occurrence of pain, it can have a detrimental effect on adherence and patient outcomes.
- 26. Doctors and therapists should explain to patients that preventing and relieving pain caused by physical therapy programs does not delay the healing process.
- 27. Therapists and physicians should give patients advice on what to do after their physical therapy session: they should indicate that it is not necessary to rest after a physical therapy session, which could be painful.

AREA NO. 7: AVOIDING MISINTERPRETING PAIN INDUCED BY PHYSICAL THERAPY PROGRAM

- 28. When pain occurs during the course of a physical therapy program, it does not mean that the therapist is incompetent or has committed an error.
- 29. A physical therapy program that causes pain does not mean that the program is ineffective or inappropriate. Conversely, the absence of pain does not mean that the program is effective or suitable.
- 30. The occurrence of pain during a physical therapy session does not signify that there is a problem with diagnosis, that the existing injury has worsened, or that a new injury has appeared.
- 31. The occurrence of pain during a physical therapy session does not mean that the physician has the wrong prescription or that the physical therapy is not appropriate.

AREA NO. 8: PREVENTING AND TREATING PAIN INDUCED BY EXERCISE AND MOBILIZATION

- 32. The pain induced by a physical therapy program should not be denied or minimized as it is sometimes unavoidable.
- Pain induced in physical therapy programs may be treated by pharmacological and non-pharmacological means.
- 34. Pain induced by a physical therapy program should be managed separately from persistent pain: its treatment should not be confused with measures taken for persistent pain.
- 35. Preventing induced pain in a physical therapy programs requires the doctor and the therapist to communicate.
- When physicians prevent pain in physical therapy programs, therapists can do their work in better conditions.
- 37. A therapist should inform the patient's doctor when pain occurs in physical therapy.

8. a. With pharmacological treatments

- 38. Physicians should consider drafting a specific prescription for pain caused by a patients' physical therapy programs, informing them that the prescription will not necessarily be used.
- 39. Pain induced by a physical therapy program should be treated with short-acting analgesics, which have a short half-life.
- 40. Physicians should explain to patients that they can manage their own pain relievers.
- 41. Paracetamol should always be the first line analgesic treatment.
- 42. Doctors should give patients the information necessary for them to adjust their own pain relievers, telling them that a dose can be taken before a physical therapy session and explaining to them how to adjust the dose according to the results.
- 43. To prevent pain in a physical therapy program, a doctor may prescribe oral medication to be taken 30 minutes before the physiotherapy session.
- 44. A prescription for fast-acting morphine is possible for specific situations such as the use of mobilization techniques in capsulitis or during post-traumatic stiffness.
- 45. It is possible to resort to MEOPA if you have the necessary human resources to do so.

8. b. With non-pharmacological treatments

- 46. Different non-pharmacological techniques can reduce and prevent pain induced by physical therapy programs: physiotherapy (hot-cold, ultrasound, ionization, acupressure), diversion of attention, warm-up, relaxation, yoga, music therapy, massage, acupuncture, balneotherapy, and hypnosis therapy.
- 47. Some analgesic techniques are as effective as pharmacological treatments.

AREA NO. 9: DEALING WITH PAIN INDUCED BY EXERCISE AND MOBILIZATION DURING PHYSICAL THERAPY SESSIONS

- 48. When pain occurs in a physical therapy session, the therapist may resort to non-painful techniques such as gentle massage or electrotherapy even though they risk not having much effect.
- 49. The occurrence of pain in a physical therapy program may result in loss of confidence, denial, or suspension of treatment.
- 50. The occurrence of pain during a physical therapy session does not mean that the therapist should automatically stop the exercise, the session, or the physical therapy program.
- 51. When induced pain occurs during a physical therapy program, the therapist can offer the patient another exercise that will achieve the same goals.

- 52. When pain occurs during a physical therapy session, the therapist can make take a break and suggest an alternative that has the same goals.
- 53. When pain occurs during a physical therapy session, the therapist can adjust: the pace of the program, the intensity of the exercises, the speed of performing an exercise, or the progression of the session.
- 54. Auto programs may cause pain but they should not be stopped when pain occurs.

Checklist for prescribing physicians for managing pain induced by physical therapy programs.

- 1. Does this patient require a preventive prescription to prevent pain induced by physical therapy?
- 2. Have I told my patient that induced pain may occur during the physical therapy program?
- 3. Have I asked my patient whether his or her physical therapy program caused him or her pain?
- 4. When physical therapy program induces pain, do I evaluate it and write down the assessment?
- 5. Have I instructed my patient about the meaning, consequences, and management of pain induced by physical therapy?
- 6. Have I prescribed medicine or a non-pharmacological remedy for my patient to reduce pain caused by physical therapy?
- 7. Have I asked my patient whether the treatment I prescribed was effective and whether there were no resulting problems?
- 8. Have I asked the patient whether he or she is taking the medicine I prescribed and what he or she thinks?
- 9. Have I adapted treatment based on the answers that my patient gave me about his or her treatment?
- 10. Have I contacted the physiotherapist in order to evaluate the treatment and make any adaptations?

Checklist for physiotherapists for managing pain induced by physical therapy programs.

- 1. Does this patient require a preventive prescription to prevent pain induced by his physical therapy?
- 2. Have I told my patient that pain may be caused by his physical therapy program?
- 3. Have I asked my patient whether his or her physical therapy program caused him or her pain?
- 4. When a physical therapy program induces pain, do I evaluate it and written down the assessment?
- 5. Have I instructed my patient about the meaning, consequences, and management of pain induced by physical therapy?
- 6. Have I used non-pharmacological treatments to reduce pain induced by physical therapy?

- 7. Have I asked the patient whether this treatment is working?
- 8. Have I asked the patient what he or she thinks of the treatment?
- 9. Have I adapted treatment based on the answers that my patient gave me about the treatment?
- 10. Have I informed my patient's doctor of the occurrence of induced pain and/or the need for preventive pharmacological prescription?

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