Quality appraisal of clinical practice guidelines on the use of physiotherapy in rheumatoid arthritis: a systematic review

Emalie J. Hurkmans1, Anamaria Jones2,3,4, Linda C. Li2,3 and Theodora P. M. Vliet Vlieland1,5

Abstract

Objective. To assess the quality of guidelines published in peer-reviewed literature concerning the role of physiotherapy in the management of patients with RA.

Methods. A systematic literature search for clinical practice guidelines that included physiotherapy interventions was performed in four electronic databases. We assessed the quality of the selected guidelines using the appraisal of guidelines for research and evaluation (AGREE) instrument. In addition, the recommendations of guidelines with the highest quality scores were summarized.

Results. Eight clinical practice guidelines fulfilled the inclusion criteria. Scope/purpose was the most often adequately addressed AGREE domain (in seven of the eight guidelines) and applicability the least (in two of the eight guidelines). Based on the AGREE domain scores, six guidelines could be recommended or strongly recommended for clinical use. Five out of these six (strongly) recommended guidelines included a recommendation on exercise therapy and/or patient education, with these interventions being recommended in every case. Transcutaneous electrical nerve stimulation and thermotherapy were recommended in four of these six guidelines. US, thermotherapy, low-level laser therapy, massage, passive mobilization and balneotherapy were addressed in one or two of these six guidelines.

Conclusion. Six of eight clinical practice guidelines addressing physiotherapy interventions were recommended or strongly recommended according to the AGREE instrument. In general, guideline recommendations on physiotherapy intervention, from both the recommended guidelines as well as from the not recommended guidelines, lacked detail concerning mode of delivery, intensity, frequency and duration.

Key words: Guidelines, Physiotherapy, RA, Quality appraisal.

Introduction

Physiotherapeutic management has an important role in the care of patients with RA [1]. Interventions that are usually applied by physiotherapists in the management of RA include exercise, physical modalities, massage, manual therapy (e.g. passive mobilizations), balneotherapy and education [2]. In the past decades, evidence with regard to the effectiveness and safety of these interventions in patients with RA has evolved [3–15]. To improve the quality of the management of RA (decision-making process), several evidence-based clinical practice guidelines that include one or more of these interventions have been developed [8–10]. These guidelines are either specifically developed for physiotherapists [10] or are concerned with overall RA management [8, 9].

In general, with the rapid increase in clinical practice guidelines production, concerns about their quality have risen [11, 12]. For example, research has found deficiencies in the methods used in the process of guideline development as well as their presentation [11, 12]. In an effort to establish a standard instrument for assessing the
quality of clinical practice guidelines, the appraisal of guidelines for research and evaluation (AGREE) project was initiated in 1998. The AGREE collaboration developed a validated, generic instrument that might be used for the evaluation of clinical practice guidelines in any area of disease [13]. The AGREE instrument focuses on the methods used for developing guidelines and the quality of guideline reporting, implementation and monitoring rather than the clinical content or the quality of supporting evidence. The instrument has been acknowledged as an accredited standard in guideline development by the World Health Organization [14]. The AGREE tool has been widely applied in 52 critical appraisals, among which are multiple critical appraisals of guidelines on the management of arthritis [15–19], where differences in the quality of guidelines were found. So far the quality of guidelines on the physiotherapy management of RA have not been evaluated.

The purpose of this study was to systematically review all clinical practice guidelines comprising recommendations on physiotherapy interventions in patients with RA and assess their quality using the AGREE instrument. Moreover, we summarize and compare the content of recommended or strongly recommended guidelines.

Method

Guidelines searching

To identify guidelines relevant to the physiotherapeutic management of patients with RA, we conducted a literature search using MEDLINE, EMBASE, Pedro and CINAHL for the period 1998–2009. MeSH terms and text words for RA and guidelines were entered within the MEDLINE database (Table 1). The same search strategy was made applicable for the other databases. In the MEDLINE and CINAHL search, we limited the publication types to the following categories: guideline, consensus development conference (for MEDLINE ONLY) and practice guideline (for CINAHL AND MEDLINE).

Selection of guidelines

All titles and/or abstracts were screened by two independent reviewers (E.J.H. and A.J.) to determine if they addressed a clinical practice guideline for the management of RA. For citations that met this criterion, the full articles were retrieved and read by the reviewers. The reference lists of all eligible articles were hand searched for other possible guidelines on the (physiotherapy) management of RA. Only those papers describing guidelines that included physiotherapy interventions, and published in English, Dutch, French or German, were included. Disagreements between the two reviewers were resolved by discussion or by a third reviewer (T.P.M.V.V.) if no consensus was reached.

Quality appraisal

The quality of each selected clinical practice guideline was evaluated independently by the two reviewers using the AGREE instrument; differences were resolved through discussions in all instances. The AGREE instrument consists of 23 items organized into six domains (Table 2); the purpose of each domain is to measure a distinct dimension of guideline quality. Each item is rated on a 4-point scale, where 4 indicates ‘strongly agree’ and 1 indicates ‘strongly disagree’. Domain scores are calculated by adding the scores of all items within a domain and transforming that score to a percentage of the maximum possible domain score. This standardized domain score is obtained as follows: (observed score – minimum possible score)/(maximum possible score – minimum possible score) [13]. The kappa statistic was used to assess the inter-rater agreement of all AGREE items after the initial review. Values 0–0.20 are indicated as slight agreement, 0.21–0.40 as fair agreement, 0.41–0.60 as moderate agreement, 0.61–0.80 as substantial agreement and 0.81–1 as almost perfect agreement [20].

Domain scores >60% are considered adequately addressed, a cutoff value used in the AGREE instrument for overall assessment [13]. The guideline is strongly recommended if it rates high on the majority of items and most domain scores are >60%; recommended if it rates high or low on a similar number of items and most domain scores are between 30% and 60%; and not recommended if it rates low on the majority of items and most domain scores are around or below 30% [13].

Selection of recommendations

Recommendations concerning interventions that are usually administered by physiotherapists in the management of RA, i.e. exercise therapy, physical modalities, massage, manual therapy (e.g. passive mobilizations), balneotherapy and education, were selected for this critical appraisal.

Interventions were regarded as recommended if it was stated that:

- they were recommended; or
- they could or might be applied; or
### Table 2: Recommendations from the RA guidelines

<table>
<thead>
<tr>
<th>Reference</th>
<th>Exercise therapy (including hydrotherapy)</th>
<th>Education</th>
<th>US</th>
<th>Electrical stimulation (e.g., TENS)</th>
<th>Low-level laser therapy</th>
<th>Thermotherapy</th>
<th>Massage</th>
<th>Passive mobilization</th>
<th>Balneotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>General management of RA</td>
<td>Regular participation in dynamic and even aerobic conditioning exercise programmes improves joint mobility, muscle strength, aerobic fitness and function, and psychological well-being without increasing fatigue or joint symptoms</td>
<td>Instruction in joint protection, conservation of energy and a home programme of joint range of motion and strengthening exercises are important in achieving the treatment goal of maintaining joint function.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[8]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aerobic exercise should be encouraged to help combat the adverse effects of rheumatoid disease on muscle strength, endurance and aerobic capacity, without, in the short term, exacerbating disease activity or joint destruction. Hydrotherapy should be accessible to maximize positive effects on pain, function and self-efficacy.</td>
<td>Joint protection, energy conservation and problem-solving skills training should be taught early in the disease course.</td>
<td>-</td>
<td>TENS use in RA patient may be effective in pain relief, but trials lack standardization.</td>
<td>-</td>
<td>Heat and cold applications may provide short-term relief of pain and stiffness.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[21]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic exercises and hydrotherapy can be applied as an adjunct treatment to pharmaceutical interventions in patients with early arthritis.</td>
<td>Education programmes aimed at coping with pain disability and the maintenance of work ability may be employed as adjunct interventions.</td>
<td>-</td>
<td>Laser therapy, TENS, US and thermotherapy should only be applied as an adjunct to pharmaceutical treatment in patients with early arthritis.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>[9]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aerobic exercise should be encouraged to help combat the effects of RA on muscle strength. Hydrotherapy should be accessible to maximize positive effects on pain, function and self-efficacy.</td>
<td>The principles of joint protection, energy conservation and problem-solving skills should be taught very early in the disease course.</td>
<td>-</td>
<td>TENS may be an effective form of pain relief.</td>
<td>-</td>
<td>Heat and cold applications may provide short-term relief of pain and stiffness.</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
| [23] | | | | | | | | | | (continued)
### Table 2 Continued

<table>
<thead>
<tr>
<th>Reference</th>
<th>Exercise therapy (including hydrotherapy)</th>
<th>Education</th>
<th>US</th>
<th>Electrical stimulation (e.g. TENS)</th>
<th>Low-level laser therapy</th>
<th>Thermotherapy</th>
<th>Massage</th>
<th>Passive mobilization</th>
<th>Balneotherapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>[22]</td>
<td>Physical exercise and sports can be recommended to patients with early RA; muscle strength exercises are advisable. Physicians may decide to provide joint protection education to patients with potentially severe early RA, with the knowledge that structured joint protection programmes have not been found effective.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[25]</td>
<td>All patients with RA should carry out regular aerobic physical activities for cardiopulmonary endurance adapted to their general health and to the condition of their heart and joints. Moderate or high-intensity aerobic activities (60–86% of maximum heart rate), including weight-bearing activities with a moderate impact on the joints, are recommended for patients with stable RA and for patients with active RA. Massage should not be used on its own. Passive mobilization and postural exercises should be used to maintain or restore range of motion. Balneotherapy may be offered as an adjunct to active or passive physiotherapy techniques, in particular when load alleviation is required.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[10]</td>
<td>Physical therapy</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>[24]</td>
<td>The use of therapeutic exercises, especially knee functional strengthening, whole-body functional strengthening, general physical activity, and whole-body, low-intensity exercises is recommended. Good-quality evidence exists to recommend and support the use of LLLT, US, thermotherapy, and TENS for the management of RA.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

LLLT, low-level laser therapy; TENS, transcutaneous electrical nerve stimulation.
they were considered effective; or
their effectiveness was demonstrated in the literature.
Interventions were considered not to be recommended if it was stated that:
they were not recommended; or
they should not be applied; or
they were not considered effective; or
their effectiveness was not supported by the literature.

Results
The systematic literature search yielded 2020 citations. Of 3959 citations, we eliminated 1938 duplicates, leaving 2021 citations for title and abstract review. Based on the title and abstract, 1995 citations were subsequently excluded because they did not address a clinical practice guideline concerning the management of RA. Based on the full-length articles of the 26 citations remaining, 17 articles were excluded because the guidelines did not include the physiotherapy management of RA. A total of nine articles, documenting eight RA guidelines, were finally included for a full review and quality appraisal [8–10, 21–25] (Fig. 1). All eligible guidelines were published in or after 2002.

Type of guidelines
The eight guidelines could be divided into three categories: general management of RA [8, 9, 21, 23], non-pharmacological management of RA [22, 25] and physical therapy in RA [10, 24]. All recommendations from these three types of guidelines that are relevant for physical therapists are presented in Table 2.

General management of RA
The ACR guideline [8] included 52 recommendations in total, pertaining to the initial evaluation, assessment of disease activity, non-pharmacological treatments, pharmacological treatments, surgical treatments, responsibilities of primary and specialty care physicians and cost considerations regarding the management of RA. The European Spondylarthropathy Study Group guideline [9] included 12 recommendations on early referral, diagnosis of early synovitis, minimum diagnostic procedures, prediction of persistent and erosive arthritis, early treatment start, patient information, NSAIDs, systemic and IA glucocorticoids, MTX, treatment strategies with DMARDs, non-pharmacological interventions and regular monitoring of RA. The British Society of Rheumatism (BSR) guideline [21] and the guideline developed by Hennell et al. [23] included 23 and 24 recommendations, respectively, concerning the assessment/planning phase and the delivery, stabilization and monitoring of care with regard to pharmacological and non-pharmacological treatments.

Non-pharmacological management of RA
The guideline developed by Gossec et al. [22] included five recommendations with regard to joint protection education, physical exercise/sports, insoles and dietary measures and nutritional supplements. The guideline developed by Forestier et al. [25] included 16 recommendations concerning passive and active physiotherapy interventions, physical activity/exercise, balneotherapy and spa therapy, physical modalities, joint protection education, assistive devices, feet/footwear/orthoses/therapeutic patient education and psychological management and other non-drug interventions.

Physical therapy in RA
One Ottawa guideline [10] included recommendations on LLLT, therapeutic US, thermotherapy and transcutaneous electrical nerve stimulation (TENS), whereas another
included recommendations with regard to exercise therapy [24].

Quality assessment

The results of the quality rating of these eight guidelines are shown in Table 2. The agreement (kappa) between the reviewers was 0.81, indicating a substantial agreement between reviewers. The domain scores varied from <50% for Domain 5 (applicability) in six of the eight included guidelines, to >70% for Domain 1 (scope and purpose) in seven of the eight included guidelines. Based on the overall quality assessment according to the AGREE instrument, four guidelines were to be strongly recommended, two guidelines were to be recommended and two guidelines were not to be recommended for daily use (Table 1).

Conclusions and recommendations derived from (strongly) recommended guidelines

The six guidelines with the highest quality according to the AGREE instrument provide 17 conclusions and/or recommendations on physical therapy interventions based on the existing literature (Table 3).

Exercise therapy

Five of the six (strongly) recommended guidelines, of which one was a mono-disciplinary guideline, included a recommendation on exercise therapy for managing RA [9, 21, 23, 24]. In all five guidelines, exercise therapy was recommended. Regarding the type of exercises, in three guidelines aerobic capacity exercises were recommended [21, 23, 25], in one guideline muscle strength exercises were recommended [24], whereas in one guideline the type of exercises was not further specified [9]. With respect to the intensity of exercises, two guidelines recommended high-intensity (dynamic) exercises [9, 25], one guideline recommended low-intensity exercises [24] and two guidelines did not mention the intensity of the training [21, 23].

Education

Three out of six (strongly) recommended guidelines, all of which were multidisciplinary, included a recommendation on patient education [9, 21, 23]. In all three guidelines education was recommended. With regard to the content of education, two guidelines recommended instructions with regard to joint protection, energy conservation and problem-solving skills [21, 23]. In one guideline, education with regard to coping with pain disability and the maintenance of work ability was recommended [9].

US, electrical stimulation, LLLT and thermotherapy

In four out of six (strongly) recommended guidelines, one of which was a mono-disciplinary guideline, recommendations with regard to the use of TENS and thermotherapy were formulated [9, 10, 18, 20]. Two guidelines recommended TENS be applied for short-term symptomatic relief of symptoms of pain and stiffness [22, 23], one guideline recommended TENS or thermotherapy as an adjunct to pharmaceutical treatment [9] and in one guideline no further specifications regarding the application of TENS or thermotherapy were provided [10].

In two out of six high-quality guidelines, one of which was a mono-disciplinary guideline, US and LLLT were addressed [9, 10]. In one guideline, it was recommended to apply these interventions [10] and in the other guideline it was recommended to apply these interventions only as an adjunct to pharmaceutical treatment [9].

Massage, manual therapy and balneotherapy

One of the six (strongly) recommended guidelines, a multidisciplinary guideline, included recommendations on massage, manual therapy and balneotherapy [25]. In this guideline, massage was not recommended to be used on its own. Passive mobilizations were recommended to be used to maintain or restore range of motion. Balneotherapy was recommended to be used as an adjunct to active or passive physiotherapy interventions, in particular when load alleviation is required.

Discussion

The present review is the first critical appraisal of available guidelines and recommendations for the physiotherapy management of patients with RA. We found that of the eight guidelines that were identified by a systematic review of the literature, six satisfactorily fulfilled the criteria of the AGREE instrument and could therefore be (strongly) recommended. Of these six high-quality guidelines, two were mono-disciplinary. Exercise and education were most frequently recommended.

Using the AGREE tool, we found none of the guidelines adequately addressed all six quality domains. Scope/purpose was the most often effectively addressed domain. Three domains were particularly not well addressed by most of the guidelines: rigour of development, applicability and clarity and presentation. Concerning the rigour of development, adequately performing all steps of guideline development is a complex, time-consuming and expensive process, whereas resources are limited in many cases.

The relatively low number of guidelines with a high score within the domain applicability may be related to a number of factors, including poor choice and definition of the clinical questions addressed in the guideline and poor clarity or presentation. For these factors, sufficient involvement of the intended users of the guideline is essential; it is conceivable that in some cases the intended users were under-represented in the guideline development groups and processes.

Another aspect related to clarity is the lack of transparency regarding the process of weighing evidence and expert opinion. This is particularly important in the development of recommendations on physiotherapy interventions, where evidence from the literature is often limited so that the final recommendation is heavily dependent on expert opinion. Another issue related to the clarity of recommendations may be their overall lack of detail. Almost none of the recommendations we have identified was specific regarding the intensity, dosage, frequency
Table 3: Ratings according to the AGREE instrument of RA guidelines

<table>
<thead>
<tr>
<th>AGREE instrument used for rating</th>
<th>Rating of guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domain</strong></td>
<td>[8]</td>
</tr>
<tr>
<td><strong>Scope and purpose</strong></td>
<td></td>
</tr>
<tr>
<td>1. Overall objective(s)</td>
<td>3</td>
</tr>
<tr>
<td>2. Clinical question(s)</td>
<td>2</td>
</tr>
<tr>
<td>3. Target population</td>
<td>3</td>
</tr>
<tr>
<td>Domain score, %</td>
<td>11</td>
</tr>
<tr>
<td><strong>Stakeholder involvement</strong></td>
<td></td>
</tr>
<tr>
<td>4. Development group representative</td>
<td>6</td>
</tr>
<tr>
<td>5. Patient views and preferences</td>
<td>2</td>
</tr>
<tr>
<td>Domain score, %</td>
<td>33</td>
</tr>
<tr>
<td><strong>Rigour of development</strong></td>
<td></td>
</tr>
<tr>
<td>6. Systematic evidence search</td>
<td>3</td>
</tr>
<tr>
<td>7. Selection of evidence explicit</td>
<td>2</td>
</tr>
<tr>
<td>8. Formulation of recommendations explicit</td>
<td>2</td>
</tr>
<tr>
<td>9. Benefits, side effects, and risks described</td>
<td>2</td>
</tr>
<tr>
<td>10. Explicit link between evidence and recommendations</td>
<td>2</td>
</tr>
<tr>
<td>11. External review</td>
<td>8</td>
</tr>
<tr>
<td>12. Procedure for updating guideline</td>
<td>4</td>
</tr>
<tr>
<td>Domain score, %</td>
<td>14</td>
</tr>
<tr>
<td><strong>Clarity and presentation</strong></td>
<td></td>
</tr>
<tr>
<td>13. Specific and unambiguous recommendations</td>
<td>8</td>
</tr>
<tr>
<td>14. Different treatment options</td>
<td>2</td>
</tr>
<tr>
<td>15. Key recommendations easily identified</td>
<td>4</td>
</tr>
<tr>
<td>Domain score, %</td>
<td>44</td>
</tr>
<tr>
<td><strong>Applicability</strong></td>
<td></td>
</tr>
<tr>
<td>16. End users of guideline stated</td>
<td>7</td>
</tr>
<tr>
<td>17. Barriers to implementation are discussed</td>
<td>3</td>
</tr>
<tr>
<td>Domain score, %</td>
<td>8</td>
</tr>
</tbody>
</table>

(continued)
and/or duration. Editorial independence and stakeholder involvement was not well addressed in three of the eight guidelines we identified. It is unknown whether there were actually conflicts of interest or the editorial independence/stakeholder involvement was just not mentioned in the guideline.

Concerning the interventions addressed in the recommendations, exercise therapy was included and recommended in five of six (strongly) recommended guidelines on the management of RA. The level of detail varied among guidelines, with the most important notion, to keep active. Education was also relatively frequently recommended, with some of its elements being quite well described (joint protection, energy conservation and problem-solving skills). Recommendations on TENS and thermotherapy were less frequent and lacked detail regarding their provision, whereas only one or two guidelines included US, LLLT, massage, balneotherapy and manual therapy. This observation could probably be explained by the fact that the evidence with regard to these interventions is in general of low quality and in part conflicting [4–7]. In addition, recommendations are not only based on the available evidence, but also on expert opinion. In some countries interventions such as US, LLLT, TENS and thermotherapy are common physiotherapy interventions [10], whereas in others the use of electro-physical treatment modalities is discouraged by experts in the field of RA management [26].

Overall, recommendations on physiotherapy interventions in RA, either in multi- or mono-disciplinary guidelines lacked detailed information with regard to the mode of delivery, intensity, frequency and duration. To achieve maximal health benefits for patients and facilitate the application of guideline recommendations, future researchers providing evidence on the effectiveness and safety and future guideline developers should focus on the comprehensive and accurate description of single and complex physiotherapy interventions.

Based on the domain scores, six guidelines were recommended and two guidelines were not recommended. The recommendations in the two guidelines with the lowest quality appraisal scores were in general comparable with the recommendations in the six guidelines with the highest scores. This observation could imply that although the description of the guideline and its development was in some cases insufficient, a similar process of guideline development has indeed been applied. It is also conceivable that the formulation of the final recommendations is not very sensitive to the quality of guideline development because they are formulated in rather broad terms, reflecting already accepted general standards of care. Little variation in the contents of guidelines despite differences in their quality has been observed in other quality appraisals of guidelines as well. A critical appraisal of guidelines for the management of patients with low back pain [27] also found that recommendations were not detailed enough and, in general, comparable between all guidelines (including high- and low-quality guidelines).
This raises the question of whether the AGREE tool or similar guideline quality appraisal instruments should be the only tools to discriminate between high- and low-quality guidelines. Probably the use of the guideline in daily practice or the impact of the use of the guideline on patients’ health status should also be taken into account to judge its quality.

A limitation of this study is that only one instrument to appraise the quality of guidelines was applied, whereas there are more available, for example, the Guidelines Quality Appraisal Assessment Questionnaire (GQAQ) and the Appraisal Instrument for Clinical Guidelines (AICG). As these instruments comprise similar elements as the AGREE instrument, it is unlikely that this would have had a large impact on the results of this study.

Moreover, one of the general limitations of all guideline quality appraisal instruments is that they evaluate only the published versions of the guideline. Therefore the result of the guideline quality evaluation is dependent not only on the quality of the guidelines themselves, but also on the quality of the reporting process in the literature. Another limitation of this study is the fact that the literature search was performed up to December 2009. At the time of submitting this article, an update of the literature search was performed without finding new guidelines, including physiotherapeutic interventions.

In conclusion, six out of eight guidelines on the management of RA that comprised recommendations on physiotherapy interventions satisfactorily fulfilled the criteria of the AGREE instrument and could therefore be (strongly) recommended. Exercise and education were the most often recommended physiotherapy interventions in (strongly) recommended guidelines. Overall, recommendations on physiotherapy interventions lacked detail with respect to their mode of delivery, intensity, frequency and duration. To facilitate implementation in daily practice future guideline developers should focus more on addressing all AGREE domains, in particular the optimal formulation and presentation of the recommendations.

Rheumatology key messages

- Six of eight clinical practice guidelines were (strongly) recommended according to the AGREE instrument.
- Guideline recommendations on physiotherapy intervention lacked detail concerning mode of delivery, intensity, frequency and duration.

Disclosure statement: The authors have declared no conflicts of interest.

References

18. Misso ML, Pitt VJ, Jones KM, Barnes HN, Piterman L, Green SE. Quality and consistency of clinical practice guidelines for diagnosis and management of...