Reviewer's report

Title: Indications for conservative management of scoliosis (guidelines)

Version: 1 Date: 9 January 2006

Reviewer: Marian H. Wade

Reviewer's report:

General

1. The language of the article, while understandable, does not read well and would benefit greatly from professional proofreading and editing.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1. In Figure 1, the formula as stated is ambiguous, as it was in the original Lonstein and Carlson article. To be clear, parentheses are needed around the "3 x Risser sign" value, to differentiate it from the possible misinterpretation of subtracting the number 3 from the Cobb angle first, before multiplying that value by the Risser sign.

2. Figure 1, complete with number of cases that each data point is based on, requires a reference to the original Lonstein and Carlson article if it is to be used. There is also no note of the small number of cases on which the upper margins of the graph are based.

3. The authors do not mention Lonstein and Carlson's specification that the progression estimation formula was found to work only for curves between 20 and 29 degrees.

4. Since this article is designed to be read by people outside of SOSORT, it is important that the acronym SOSORT be defined early at the beginning of the article, with an explanation of who the members of the committee are, and how they were chosen for the task of formulating guidelines. Also, it should be explicitly stated that the guidelines are intended to be for the CONSERVATIVE treatment of scoliosis, and conservative treatment should be defined not only in terms of the three modes of treatment described within the article, but also as an alternative approach to surgical treatments, which are not mentioned except in passing in the course of the article. In addition, at the end of the article when reasons for "exceptions" are listed, it should be stated directly whether or not the authors feel that surgery may be warranted in such cases, and, if not, then to what other alternative treatments are the authors alluding? Likewise, it might make sense to add the avoidance of surgery as another important aim of conservative management, because in reality, this is why many patients seek out conservative methods, and the avoidance of surgery has also been used as a measure of effectiveness of conservative methods. Additionally, there should be at least one sentence added (perhaps under the definition of scoliosis) that gives readers an idea of the possible severity of progressive scoliosis with its concomitant deleterious health effects. Somewhere in the course of the article, it should be acknowledged that for some patients, surgery is indicated for a variety of reasons, which can be listed (perhaps in a revised "exceptions" section).

5. All definitions of terms should be placed either before or immediately following a term within the text of the article. For example, Scoliosis and AIS need to be defined first before Epidemiology is
discussed incorporating these terms. SOSORT, SIR, outpatient physical therapy and progression risk estimation are other examples of terms that need immediate definitions rather than definitions sometime later after the terms have been employed. It should also be acknowledged earlier that SIR is currently foreign to most of the world, and is currently only available in Germany and Spain, to the authors' knowledge.

6. A description of the need for these guidelines should be inserted in the beginning of the article, citing the confusion of professionals and patients alike in dealing with this multifaceted and highly variable disorder.

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

1. The authors use the term "module" incorrectly to mean "mode".
2. The authors misspell the word "colleagues" on the second page of the article.
3. In Figure 1, the number points in the diagram are not explained, as they are in the original Lonstein and Carlson article. They need to be labelled as the number of curves that the data point is based on.
4. Following the references, the heading Figures should read Figure, and it should read Fig. 1 instead of Fig. 6.

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Discretionary Revisions (which the author can choose to ignore)

1. The authors make no mention of Lonstein and Carlson's finding that different curvature patterns impact significantly on risk of progression, although they allude to this relationship with respect to Moe's definitions and indicate that recent studies have found such relationships to be unreliable. It would be helpful to expand on this topic to explain Lonstein's original findings with respect to progression risk in different curve patterns, and how they may have been disputed in more recent studies.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests.