Reviewer’s report

Title: Subgrouping patients on the basis of their individual course of low back pain over a six month period

Version: 1 Date: 4 February 2011

Reviewer: Julie Fritz

Reviewer’s report:

The authors of this manuscript present the results of a prospective observational study of patients with LBP. Patients with non-specific LBP were studied over a 6-month period. The evaluation of course of outcomes over time using multiple measurement points yields important information that may influence management. This study used a rather novel approach to measurement with text messaging. There are several concerns with the manuscript however, including the bias of the large number of excluded noncompliant patients, the lack of consideration of confounding factors, and the analytic strategy used.

• Major Compulsory Revisions

The statement on page 6 that the external validity of the sample has been validated is difficult to interpret, particularly since the reference for this statement is not in press. Does this statement indicate that the sample is representative of Swedish individuals with back pain? Or perhaps Swedish individuals with back pain in chiropractic clinics? Please clarify.

Please provide additional detail on the measures collected at initial evaluation (page 7). In particular please indicate how self-reported sick leave was collected (number of days? yes/no? etc.) and how self-rated health was evaluated. The details of these measurement procedures cannot be accessed from the reference provided.

It appears these data would be best suited to growth modeling procedures used to identify latent classes, or a hierarchical mixed model approach. Can the authors provide further justification for the appropriateness of their data analysis strategy?

The exclusion of participants who were not compliant with at least 80% of their text messages may be a substantial source of bias in the results considering that 27% of the sample was excluded on this basis. The analytic strategies suggest in the previous point are robust to missing values, and the ability to include a higher proportion of subjects as well as those with a constant response, may represent additional arguments for an alternative approach to the analysis.

The baseline characteristics of excluded subjects should be compared to included subjects.
The potential confounding of the amount of treatment received is not reported on. How many subjects were continuing in treatment beyond the 4th visit? Did this differ among the clusters?

The comparison of groups for the variable of total number of bothersomeness days does not seem to be appropriate considering that the number of bothersomeness days (the dependent variable) was also used to form the independent variable (ie, the clustered grouping).

The limitations in the study should be acknowledged in the discussion section. In particular, the exclusion of a large number of subjects for either noncompliance or the pattern of their data, the small sample size which created rather small clusters, and the lack of consideration of the influence of treatment.

- Minor Essential Revisions

Page 6, I believe I understand the distinction, but the statement on page 6 that subjects were ineligible if they had chiropractic care in the past 6 months seems at odds with recruiting subjects currently receiving chiropractic care. This statement may be more clear if the authors indicated that the exclusionary criterion was no chiropractic care in the 3 months prior to the current episode (presuming my assumption is correct).

Page 7, please move the data on the time to the 4th visit (69% within 14 days) to the results section. In the methods just describe when this follow-up was designed to be obtained (on the 4th visit).

Page 12, please move the basic descriptive information for subjects to the beginning of the results section.

The figures seemed to be mis-numbered. Figure 5 is referred to first in the text of the manuscript.

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:

I declare that I have no competing interests