Reviewer's report

Title: Back pain outcomes in primary care following a practice improvement intervention: a prospective cohort study

Version: 1 Date: 13 September 2010

Reviewer: Paolo Pillastrini

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Major Revisions

Background

The Background section should be revised.

We think the authors should provide a better description and report all the studies that evaluated an evidence-based educational intervention for general practitioners regarding low back pain management.

Methods

The Method section is not clear.

Please split the methods section into Population, Interventions and Outcome Measures.

In which period was this study conducted?

A description of recruitment methods is needed.

The number of physicians, practice staff and patients' representatives composing each practice team needs to be specified.

What kind of professionals constitute the practice staff? What degree do they have?

The educational intervention needs to be described in more detail. What kind of information did general practitioners receive (e.g. diagnostic imaging; physical therapy; physical exercises; psychosocial factors; medications; spinal manipulation; advice to stay active; multidisciplinary treatment programs)?

How long did workshops last? What weekly frequency did they have?

I think the randomization method isn't clear, especially when the authors say that "Due to administrative issues, two randomization rounds were performed in the same way...". Please clarify.

In the abstract you say that patient data were analysed eight weeks following the first consultation, but in the Method section you say: "There were two data
collection periods, each of 12-15 months’ duration”. Please clarify.

Who is the “quality improvement facilitator”?

Results

The descriptive statistics of the complete group are not reported in the text. Please add them.

Patient inclusion criteria and data collection: please add more exclusion criteria as: coexistence of diabetes, neoplasia or suspected spinal cord diseases, workers’ compensation patients, known peripheral neuropathy (inflammatory, metabolic, toxic, nutritional, paraneoplastic and hereditary agents) and retroperitoneal pathology.

It is not clear what diagnostic tests were carried out on patients.

Table 1 should be clearer, it is too confusing (e.g.: Mean (SD) should be put in brackets for each variable, percentages are not shown alongside the values they refer to…); in the third column, the p-value is shown, not significance! The asterisks indicate significance, not the type of test used.

Add the level of significance in the Methods section.

Report confidence intervals in Table 2 and centre the table.

P.10: the authors should specify what they mean by “small but statistically significant effects” (Is “Episode duration (/12)” with p=0.106 statistically significant?); where is “mood” in Table 2? Add signs when beta is given. The authors should add a comment about the results obtained for men and women.

In the 4th column in Table 3 and 4, replace "Significance" with “p-value”.

P.13: the sentence: “…adding inter-professional improvement learning and networking to learning about evidence-care for back pain had some positive effect on disability scores in female patients when a prognostic factors were controlled for. The most influential of these were mood, self-rated health, leg pain and episode duration.” is not clear and needs rewriting. Where are men? Where are both sexes?

P.15: the authors still refer to the prognostic factor “mood”, which is not present in Table 2; I can’t understand why they wrote: “episode duration is statistically significant” when p-value is 0.741. Why does the Conclusions section refer to women only, while the results section refers to both sexes?

Minor Revisions

In the Background section, the sentence “In order to test the effects of such a combined inter-professional approach, this study... We could not find no studies in back pain, situated in primary care, which had utilised the Clinical Value Compass to measure the outcomes of an educational intervention” should be
removed and moved to the Methods session.

In the Background, when you first use the acronym “GP”, you have to specify what it stands for.

The state of good condition is cited in the discussion section (ceiling effect) (end of p.12), but you wrote: “The intervention group tended to have a higher median baseline physical functioning (Table 1) and bodily pain score of SF-36” (p.10), and “the domains physical functioning (Table 1) and bodily pain of the SF-36 tended to present worse baseline values in the control group” (pag.13). If the starting point was different, changes have a relative importance. Please clarify.

Use the same number of decimal places.

P.8-9: for forward stepwise manner, we recommend using a significance level of 10%.

P.14: reference no 38 should be written after McIntosh and Shaw.

P.4: delete double full stop in the sixth line from bottom.

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests