Author's response to reviews

Title: Minimum detectable and minimal clinically important changes for pain in patients with nonspecific neck pain

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Version: 4 Date: 9 January 2008

Author's response to reviews: see over
REPLIES TO REVIEWERS’ COMMENTS

This being the last opportunity allowed by the journal for the paper to be published, the authors wish to thank all the reviewers for the valuable comments they have provided throughout the reviewing process, and are happy to note that the current version seems to be acceptable for reviewers 1, 3 and 4. In accordance with the latest review, the authors have addressed the remaining concern from reviewer #1 and have answered the additional comments from reviewer #2.

Reviewer’s report
Title: Minimal clinically detectable and important changes for pain in patients with nonspecific neck pain
Version: 3 Date: 19 November 2007
Reviewer: Julie Fritz
Reviewer’s report:
General
I would like to thank the authors for their efforts in revising this manuscript. Many of my previous concerns have been addressed.

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

My primary concern that remains relates to the terminology related to "MDC" used in this manuscript. In the Introduction section the authors characterize minimum detectable change (MDC) as a method for examining the MCIC that involves determining a cutoff score above which there is a greater than 95% chance that "real change" has occurred. I disagree with the authors characterization that this is a method for examining the MCIC. This analysis is a different construct (statistically detectable change vs. change that is important to the patient). This terminology needs to be clarified and used consistently in the manuscript.

In accordance with the reviewer’s comment, terminology has been clarified throughout the entire manuscript, and its updated version now reads:

Title:

MINIMUM DETECTABLE AND MINIMAL CLINICALLY IMPORTANT CHANGES FOR PAIN IN PATIENTS WITH NONSPECIFIC NECK PAIN.

Abstract, objective:

To estimate the minimal detectable change (MDC) and the minimal clinically important changes (MCIC) for pain severity in subacute and chronic neck pain (NP) patients, to assess if MDC and MCIC values are influenced by baseline values and to explore if they are different in the subset of patients reporting referred pain, and in subacute versus chronic patients.
Abstract, methods:

The minimal detectable change (MDC) was estimated by means of the standard error of measurement in patients who self-assess as unchanged. MCIC were estimated by the mean value of change score in patients who self-assess as improved (mean change score, MCS) and by the optimal cutoff point in receiver operating characteristics curves (ROC). The effect on MDC and MCIC of initial scores, duration of pain, and existence of referred pain were assessed.

Introduction, paragraph 1:

Minimal detectable change (MDC) is defined as the minimal change that falls outside the measurement error in the score of an instrument used to measure a symptom. Minimal clinically important change (MCIC) is defined as the minimal variation in the score that measures a symptom that is meaningful for patients. Different approaches can be used to determine MCIC. One is to estimate the mean change in score in patients who actually report to have improved (referred to as “mean change score”, or MCS). Another approach is to use receiver operating characteristics curves (ROC) to define the cutoff point that best discriminates between patients reporting or denying any improvement. MDC, MCS and ROC reflect different constructs, and the methods for assessing each one of them are also different. These methods are further described in the “Methods” section of this paper, and they lead to different values.

Introduction, last paragraph:

Therefore, the primary objective of this study was to calculate the MDC and MCIC values for neck and referred pain severity in subacute and chronic NP patients treated in routine clinical practice. Additional objectives were: a) to explore if MDC and MCIC values for neck pain were different in the subset of patients who reported referred pain, b) to assess if MDC and MCIC values depended of baseline values, and c) to explore if they were different between subacute and chronic patients.

First five paragraphs under Analysis:

The MDC and MCIC values in the PI-NRS for neck and referred pain were estimated for the follow-up period of 3 months.

The Minimal Detectable Change (MDC) was calculated as $1.96 \times \sqrt{2} \times \text{SEM}$.

The standard error of measurement (SEM) was estimated by taking the square root of the within subject variance (consisting of variance between measures plus the residual variance on a two-way ANOVA random effects model) of patients categorized as “unchanged” by external criterion. The 95% confidence interval was calculated using the chi-square distribution. The MDC can be interpreted as
the magnitude of change below which there is more than a 95% chance that no real change has occurred.

The following methods were used to estimate the MCIC:\textsuperscript{12}

1. Mean Change Score (MCS): Mean change of PI-NRS in patients who scored “2” (“improved”) on the external criterion. The changes of scores PI-NRS were calculated by subtracting the final values from the baseline values, so that positive scores correspond to improvement.

2. Optimal cutoff point (ROC). Considering the PI-NRS change as a diagnostic test for discriminating between improved and not improved patients, and the external criterion as a gold standard, a ROC curve was developed describing the performance of changes in the corresponding scale to detect improvement.\textsuperscript{29} The optimal cutoff point was estimated by the point that maximizes the sum of specificity and sensitivity.

Data from all recruited patients (both with and without referred pain) were included in the main analysis, in which MDC and MCIC values for neck pain were calculated. In a subgroup analysis, only patients with referred pain at baseline were included, and MDC and MCIC values for neck and referred pain were calculated.

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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)

Discretionary Revisions (which the author can choose to ignore)

What next?: Accept after minor essential revisions

Level of interest: An article of limited interest

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
Reviewer's report

Title: Minimal clinically detectable and important changes for pain in patients with nonspecific neck pain

Version: 3  Date: 3 November 2007

Reviewer: Henrica C de Vet

Reviewer's report:

General  Most of remarks are dealt with adequately, but not all.

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

1.1 The authors keep mixing up minimally important change and minimally detectable change. It is wrong to propose to use the same term to indicate both. It is well possible that the MCIC value is smaller than the value that can be detected statistically. Although in De Vet et al. 2007 we propose the 95% limit method as a way to assess MCIC, in the paper De Vet et al, Health Qual Life Outcomes 2006, which was written at a later stage we admit that MDC (95% limit) reflects minimal detectable change rather than minimal important change!

De Vet HC, Terwee CB, Ostelo RW, Beckerman H, Knol DL, Bouter LM

Minimal changes in health status questionnaires: distinction between minimally detectable change and minimally important change. Health Qual Life Outcomes 2006; 4: 54-59 In the definition of MCIC minimal variation should be minimal change. Moreover, the term MCIC and minimal detectable change are different concepts. Please revise the definitions in the abstract and the introduction.

In accordance with the reviewer’s comment, definitions have been revised and the updated version of the manuscript now reads:

Abstract, Objectives:

To estimate the minimal detectable change (MDC) and the minimal clinically important changes (MCIC) for pain severity in subacute and chronic neck pain (NP) patients, to assess if MDC and MCIC values are influenced by baseline values and to explore if they are different in the subset of patients reporting referred pain, and in subacute versus chronic patients.

Abstract, Methods:

The minimal detectable change (MDC) was estimated by means of the standard error of measurement in patients who self-assess as unchanged. MCIC were estimated by the mean value of change score in patients who self-assess as improved (mean change score, MCS) and the optimal cutoff point in receiver operating characteristics curves (ROC). The effect on MDC and MCIC of initial scores, duration of pain, and existence of referred pain were assessed.

Introduction, paragraph 1:
Minimal detectable change (MDC) is defined as the minimal change that falls outside the measurement error in the score of an instrument used to measure a symptom. Minimal clinically important change (MCIC) is defined as the minimal variation in the score that measures a symptom that is meaningful for patients. Different approaches can be used to determine MCIC. One is to estimate the mean change in score in patients who actually report to have improved (referred to as “mean change score”, or MCS). Another approach is to use receiver operating characteristics curves (ROC) to define the cutoff point that best discriminates between patients reporting or denying any improvement. MDC, MCS and ROC reflect different constructs, and the methods for assessing each one of them are also different. These methods are further described in the “Methods” section of this paper, and they lead to different values.

Last paragraph under Introduction:

Therefore, the primary objective of this study was to calculate the MDC and MCIC values for neck and referred pain severity in subacute and chronic NP patients treated in routine clinical practice. Additional objectives were: a) to explore if MDC and MCIC values for neck pain were different in the subset of patients who reported referred pain, b) to assess if MDC and MCIC values depended of baseline values, and c) to explore if they were different between subacute and chronic patients.

First five paragraphs under Analysis:

The MDC and MCIC values in the PI-NRS for neck and referred pain were estimated for the follow-up period of 3 months.

The Minimal Detectable Change (MDC) was calculated as $1.96 \times \sqrt{2} \times \text{SEM}$. The standard error of measurement (SEM) was estimated by taking the square root of the within subject variance (consisting of variance between measures plus the residual variance on a two-way ANOVA random effects model) of patients categorized as “unchanged” by external criterion. The 95% confidence interval was calculated using the chi-square distribution. The MDC can be interpreted as the magnitude of change below which there is more than a 95% chance that no real change has occurred.

The following methods were used to estimate the MCIC:

1. Mean Change Score (MCS): Mean change of PI-NRS in patients who scored “2” (“improved”) on the external criterion. The changes of scores PI-NRS were calculated by subtracting the final values from the baseline values, so that positive scores correspond to improvement.

2. Optimal cutoff point (ROC). Considering the PI-NRS change as a diagnostic test for discriminating between improved and not improved patients, and the external criterion as a gold standard, a ROC curve was developed describing the performance of changes in the corresponding scale to detect improvement.
optimal cutoff point was estimated by the point that maximizes the sum of specificity and sensitivity.

Data from all recruited patients (both with and without referred pain) were included in the main analysis, in which MDC and MCIC values for neck pain were calculated. In a subgroup analysis, only patients with referred pain at baseline were included, and MDC and MCIC values for neck and referred pain were calculated.

1.2 My suspicion with respect to the number remains; in the total population in the lowest tertile of baseline, the specificity is 93%. In that case the value 2.9 should be very close to 1.5. In the subgroup of referred pain (Table 4), the spec is 1.00 for the subgroup of sub-acute patients. In that case the MDC should be smaller than the ROC cut off point. However, this is not the case (3.1 is much larger than 0.5 points!!!).

An explanation may be that there are small numbers. If that is the case, one should not present all these subanalyses. Eg how many persons with referred pain (Table 4) fell in the subgroup of sub acute patients and had reported 'no change' on the GPE?

Please, add the number of patients in the various subgroups presented in Tables 3 and 4.

The cutoff point calculated by the ROC curve must be very close to the MIC calculated as “mean change + 1.645 SDchange”, (de Vet et al., 2007). We have used the MDC calculated as 1.96 * \( \sqrt{2} \) * SEM, which is conceptually similar but not necessarily equal. In order for them to be equal, it is necessary for the variable to have a normal distribution, and in our case it does not. Lastly, as the reviewer points out, the small sample numbers may also explain the differences between the methods.

In accordance with the reviewers’ comment, the number of patients in each subgroup has been added to Tables 3 and 4, and the updated version of the manuscript now reads:

Discussion, paragraph 2:

These results also show that MDC for neck pain is similar to MCS, both in all the patients and in the subset of those complaining from referred pain. MDC does not seem to be influenced by either chronicity or pain intensity, since 95% CI overlap (Tables 3 and 4). However, the low number of patients denying any change in this sample implies that these results should be taken with caution (Tables 2-4).

1.3 I keep having difficulties with chi square distribution. I can image that the text book has a sentence that says that “…X2 is based on a variance” …… . However, all statistical tests are based on variation and variance. X2 is meant to describe and test the distribution of nominal or ordinal variables. Here we are dealing with continuous variables. Therefore X2 distribution is not adequate here.
Calculating confidence intervals for any statistical parameter depends on the sample distribution of the statistic used in the estimation. To estimate variance ($\sigma^2$), sample variance ($S^2$) is used; as $(n-1)S^2/\sigma^2$ is distributed from a chi-squared distribution with $n-1$ degrees freedom, the exact confidence interval for a variance is calculated as (Pérez de Vargas, Abraira, Ref 28, p. 212):

\[
\frac{(n-1)S^2}{\chi^2_{\alpha/2}} \leq \sigma^2 \leq \frac{(n-1)S^2}{\chi^2_{1-\alpha/2}}
\]

The square root of a Chi-squared distribution is approximately normally distributed if degrees of freedom are large. Therefore, if sample size is large enough, the confidence interval of the square root of the variance could be approximate, using the normal distribution (Bland, An introduction to medical statistics, Oxford University Press, Third edition 2000, p. 132), as

\[
S \pm z_{\alpha/2} \frac{S}{\sqrt{2(n-1)}}
\]

However, since the sample size in this study was not large enough to use this commonly used normal approximation, we preferred to use the exact method.

1.4 At the end of the introduction Please mention all aims, also examination of dependency of baseline values and differences between chronicity and sub-acute patients.

In accordance with the reviewer’s comment, the updated version of the manuscript now reads (last paragraph under Introduction):

Additional objectives were: a) to explore if MDC and MCIC values for neck pain were different in the subset of patients who reported referred pain, b) to assess if MDC and MCIC values depended of baseline values, and c) to explore if they were different between subacute and chronic patients.

1.5. Page 5, Please delete the sentence: Those methods were planned for estimating MCIC for improvement and worsening. All definitions above were given for improvement. Later on you already state that numbers were too small to assess MCIC for worsening.

In accordance with the reviewer’s comment, the sentence has been deleted and the paragraph now reads (Results, paragraph 2):

Three months later, 210 (31.9%) reported feeling completely recovered, 395 (60.0%) improved, 48 (7.3%) unchanged, and only 5 (0.8%) worse. Table 2 shows neck and referred pain scores at baseline and changes in scores 3 months later, for patients who reported to have “completely recovered”, “improved”, “not changed” or “worsened”.
1.6 Page 6, The last paragraph of the results and the first of the discussion. If MCIC values range from 0.5 to 6.2, it is not very informative to say that they are consistent with other publications. If the range is large they will easily overlap with values found in other publications. This consistency is also mentioned on page 7 at the end of the first paragraph.

In accordance with the reviewer’s comment, the updated version of the manuscript now reads:

Last three paragraphs under Results:

As seen in those tables, MDC for neck pain is 4.0 PI-NRS points in the entire sample and it is 4.2 for patients who also complained from referred pain, and MDC for referred pain is 6.2 PI-NRS points. These values are not influenced by baseline pain severity or duration.

MCS for neck pain is 4.1 PI-NRS points, both in the entire sample and in patients who also had referred pain, and it is also 4.1 PI-NRS for referred pain. MCS remains constant across subacute and chronic patients, but it is higher for patients with more severe baseline pain. Depending on baseline severity, MCS values range from 2.5 to 4.9 PI-NRS points for neck pain, and from 2.4 to 5.3 for referred pain (Tables 3 and 4).

ROC for neck pain is 1.5 PI-NRS points, ranging from 1.5 to 2.5 depending on baseline pain severity, and from 0.5 in subacute patients to 1.5 in chronic ones. Those values for neck pain are identical in the entire sample and in patients who also had referred pain, and they are also identical for neck and referred pain (Tables 3 and 4).

Discussion, paragraph 1:

Results from this study show that MCIC values are similar for neck and referred pain, and that MCIC for neck pain are also similar in subacute and chronic patients seen in routine clinical practice and in the subset of those subjects also reporting referred pain. In addition, these results suggest that improvement in pain below 1.5 PI-NRS could be seen as irrelevant, and that the cutoff point considering change as “clinically relevant” above that value depends on the method used to estimate MCIC and baseline severity of symptoms (Tables 3 and 4). All of those findings are consistent with those from previous studies on low back pain (LBP) patients. It has been suggested that the MCS being larger in patients with a higher baseline pain severity is due to a smaller change potential in patients with lower baseline scores or to patients with more severe pain needing to experience a greater improvement in order to feel that it is relevant.

Discussion, paragraph 3:

The size of MDC, MCS and ROC values in this study is similar to those found in LBP patients across studies performed with different samples in different cultural
and geographical settings. In the current study, participants’ age and baseline pain severity for both local and referred pain were similar to those in previous studies with LBP patients, but 9% more women were included, the proportion of chronic patients was 8% less, and mean duration of the current pain episode was 153 days shorter (Table 1). However, their results are consistent. In the current study, MDC values are 4.0 PI-NRS for neck pain and 6.2 for referred pain (Tables 3 and 4), while corresponding values in low back pain patients are 3.5 and 5.4. In this study, MCS and ROC values for neck pain are 4.1 and 1.5 PI-NRS points (Table 3), while corresponding values in low back pain patients were 4.4 and 1.5 PI-NRS. Similarly, in this study MCS and ROC values for referred pain are 4.1 and 1.5 PI-NRS points (Table 4), while corresponding values for referred pain in low back pain patients are 4.3 and 2.5 PI-NRS points. Range of MCS values depending on baseline pain severity are also consistent with those found in low back pain patients (Tables 3 and 4). In general, these results are also consistent with those from studies conducted on other painful conditions. The consistency of those findings could be interpreted as contributing to the validity of the MDC and MCIC values deriving from the current study.

1.7 It is more important to discuss how these values (with this large range) will help us in power calculations and for the use by clinicians as you mention in the introduction.

In accordance with the reviewer’s comment, the updated version of the manuscript now reads (Discussion, paragraph 4):

MCS and ROC represent different constructs and their values are different, with ROC being consistently smaller than MCS (Tables 3 and 4). Although it is up to researchers or clinicians to decide whether MCS or ROC are more suitable to define MCIC in their specific circumstances, the consistency of ROC and MCS values across studies may help them to use these results in practice (Tables 3 and 4). For instance, some researchers may prefer to anticipate a difference generally corresponding to ROC (e.g. 1.5 PI-NRS points) for sample calculations in clinical trials vs. placebo, since ROC represents “the cut-off point that best discriminates between those patients feeling and not feeling that they have improved” and, since its size is smaller than MCS, it leads to larger samples. On the contrary, some clinicians may prefer to disregard differences smaller than MCS (e.g., 4 PI-NRS points) when they have to select among treatments with different safety profiles or side effects for a given patient, since that value represents “the mean change above which most patients would feel they have improved”.

1.8 The interpretation of the different MCIC values as explained on page 7 at the end of the second paragraph is wrong. A patients does not feel whether a difference is statistically detectable!
In accordance with the reviewer’s comment, that paragraph has been deleted, and the pertinent information is contained in the first paragraph under Discussion, which now reads:

Results from this study show that MCIC values are similar for neck and referred pain, and that MCIC for neck pain are also similar in subacute and chronic patients seen in routine clinical practice and in the subset of those subjects also reporting referred pain. In addition, these results suggest that improvement in pain below 1.5 PI-NRS could be seen as irrelevant, and that the cutoff point considering change as “clinically relevant” above that value depends on the method used to estimate MCIC and baseline severity of symptoms (Tables 3 and 4). All of those findings are consistent with those from previous studies on low back pain (LBP) patients.\textsuperscript{8,9} It has been suggested that the MCS being larger in patients with a higher baseline pain severity is due to a smaller change potential in patients with lower baseline scores,\textsuperscript{8,9} or to patients with more severe pain needing to experience a greater improvement in order to feel that it is relevant.\textsuperscript{9}

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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)

2.1 --In abstract: Change 12 weeks in 3 months

In accordance with the reviewer’s comment, this has now been done (Abstract, Methods):

…. Patients’ own “global perceived effect” over a 3 month period was used as the external criterion…..

2.2 In Introduction:
1st paragraph: a) and b) represent the same argument. The sample size calculation uses the minimal relevant change. Argument c) is still not clearly formulated. MIC is not necessary the select the best treatment, as the treatment with the largest effect should be selected, unless the differences for all treatments are very small, that they all does not exceed the MCIC. This is not clear from the description under c).

In accordance with the reviewer’s comment, the updated version of the manuscript now reads (Introduction, paragraph 2):

It is useful to define MDC and MCIC for three main reasons: a) to calculate the sample size of studies aiming to assess the effectiveness or cost/effectiveness of interventions, b) to interpret the clinical relevance of results in studies on the effectiveness of treatments, and c) to help clinicians select among treatments with slight differences in their size effects, especially if they differ in their safety profiles, by allowing them to anticipate the clinical meaningfulness of the expected differences in their effects.
2.3 Ref 14: please refer to the original paper, which I think is a publication by Stratford.

In accordance with the reviewer’s suggestion, Reference 14 (which is now Reference 15) has been changed to:


2.4 Methods. Page 4, line 2, add ‘about’ to 916,500 inhabitants

In accordance with the reviewer’s comment, this has now been done (Methods, paragraph 1):

...The Ib-Salut covers all of the inhabitants of the Balearic Islands, who were about 916,500 when this study started.....

2.5 Page 4, par 4, line 2: ‘referred’ instead of ‘derived’

In accordance with the reviewer’s comment, "referred" has replaced “derived” (Methods, paragraph 4):

In accordance with the current treatment protocol for neck pain in routine practice in the Ib-Salut, subacute and chronic patients were referred to a specialized Unit,.....

2.6 Page 4, par 5, line 3, ‘referred pain’ instead of ‘AP’, also on page 6. Please check the whole manuscript.

In accordance with the reviewer’s comment, “referred pain” has replaced “AP” throughout the entire manuscript. For instance:

Methods, paragraph 5:

Inclusion criteria were: seeking health care at any of the primary care centers belonging to the Ib-Salut, for neck pain (NP) lasting 14 or more days, either with or without pain referred to the arm or arms,.....

Results, paragraph 1:

As seen in Table 1, in general they were middle aged working women, with intense NP. 487 (74.0%) also reported referred pain,.....

2.7 Page 5, line 1: ‘3 months’ instead of ’12 weeks’

In accordance with the reviewer’s comment, “3 month” has replaced “12 week” (Methods, paragraph 9):
External criterion. At the 3 month follow-up, patients scored the change in their clinical status.....

2.8 Page 6, highest value 6.2 holds only for the total group. This is not stated here.

All data on different subgroups are shown in the tables. However, in the manuscript we only mention data for the entire sample since, as we state, there are no significant differences between subgroups. Accordingly, in the manuscript MDC figures are given only for all patients (in the case of referred pain, for all patients with referred pain, in whom the result is 6.2).

In accordance with the reviewer’s comment, this has been further clarified in the updated version of the manuscript, which now reads (Results, paragraph 4):

As seen in those tables, MDC for neck pain is 4.0 PI-NRS points in the entire sample and it is 4.2 for patients who also complained from referred pain, and MDC for referred pain is 6.2 PI-NRS points. These values are not influenced by baseline pain severity or duration.

2.9 Page 7 Line 5: ‘less’ instead of ‘inferior’

In accordance with the reviewer’s comment, “less” has replaced “inferior” (Discussion, paragraph 3):

...LBP patients, but 9% more women were included, the proportion of chronic patients was 8% less,.....

2.10 Page 7, line 5 from below: I still don’t understand why MCIC would not be important for acute patients. Moreover this sentence is poorly formulated.

In accordance with the reviewer’s comment, the mention of the relevance of MCIC in acute patients has been deleted and the updated version of the manuscript now reads (Discussion, paragraph 5):

To be included in this study, patients had to be subacute or chronic and their pain had to be ≥3 PI-NRS points. Therefore, it could be argued that this could limit the generalizability of results from the current study to patients having pain for less than 14 days and to those with mild pain, and future studies could estimate MCIC in them.

2.11 Page 8, line 8: No data suggest.... Note that no studies were done, so there is no evidence pro and caon. Here it is suggested that intervention does not influence MCIC.

In accordance with the reviewer’s comment, the updated version of the manuscript has been modified and now reads (Discussion, paragraphs 7 and 8):
Mean duration of pain when patients entered this study was over 540 days (Table 1). During that period, they had all received many forms of treatment and many still received them during the study.\textsuperscript{21} Since data being analyzed in this study derive from post-marketing surveillance of neuroreflexotherapy, all of them received that specific form of treatment.\textsuperscript{21-26} Although no study has assessed the potential influence of any specific form of treatment on MCIC, its calculation relies on patients’ self-assessment of their own evolution and instruments used to assess evolution of symptoms, no matter what treatments are influencing that evolution. In fact, MCIC seem to be consistent even across different chronic pain conditions.\textsuperscript{11} Therefore, this should not affect the generalizability of results from this study.

On the contrary, using post-marketing surveillance methods in a National Health Service to assess MCIC has a number of advantages. It makes it possible to assess MCIC values in routine practice conditions, as opposed to using data from randomized controlled trials in which Hawthorne and other unspecific effects might influence patients’ perception of global improvement and, therefore, the results. In addition, post-marketing surveillance makes it possible to recruit large representative samples and to minimize losses to follow-up, therefore giving a better general picture of what MCIC values are likely to be in “normal” clinical conditions.

Discretionary Revisions (which the author can choose to ignore)

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: 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
Reviewer's report
Title: Minimal clinically detectable and important changes for pain in patients with nonspecific neck pain
Version: 3 Date: 3 November 2007
Reviewer: Cecilie Roe
Reviewer's report:
General

I think that the manuscript has improved substantially, and the revisions demanded are met.

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

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

Discretionary Revisions (which the author can choose to ignore)
What next?: Accept without revision
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.