Reviewer’s report

Title: Shoulder diagnoses in secondary care, a one year cohort.

Version: 1 Date: 7 November 2013

Reviewer: Birgit Juul-Kristensen

Reviewer’s report:

- Minor Essential Revisions

For example, missing labels on figures, the wrong use of a term, spelling mistakes.

Abstract:
1) Since the literature review is included in the methods it should also be included in the background. Please insert.

2) I lack results from the literature review in the results section. Please describe.

3) “Adhesive capsulitis” is reported as the second most frequent diagnosis along with “subacromial pain”, although “shoulder myalgia” is reported to have a larger percentage in table 2. In the result section the right order is written. Please change.

Background, aim:
4) Please be consistent in aim in the introduction and the abstract.

5) Since the literature review is included in the aim+results it should also be included in the background. Please insert.

Patient selection
6) Since there are data on sick leave from the different diseases, it is interesting to know the differences here......otherwise, do not mention this type of data...

Clinical examination and diagnostic criteria
7) It remains unclear how many patients have got an image diagnostic examination. (bottom of p. 4) Whether all have got it, some have got it from their general practitioner, some from this department, and whether some did not get it. A flow diagram of the patients’ examination through the health care system would be nice to clear up this problem.

At page 5 it is written: “Some of the diagnoses were supported by supplementary investigations such as MRI, MRI arthrography or ultrasound. However, most were not and were based on the patient’s medical history and a combination of clinical tests.”

It seems as if it is not standard to perform these examinations at all patients, meaning that those who have an MR scanning on a compact disc could end up getting another diagnosis based on this result, independent of the results from
the clinical tests.

A sensitivity analysis of these patients is recommended, taking into account why patients actually got this scanning…. This is likely to have influenced the results since they may have a higher frequency of e.g. labrum injuries, based on a primary anticipation by the general practitioner.

At page 9 “Methodological aspects” there is a short description of this. At page 11 it is written that everyone have had MRI – but is it those with a diagnosed rotator cuff rupture?

8) 1 of 5 medical doctors was undergoing specialty training. This could have influenced the results, since “There was no quality assessments….and no intra- and interexaminer reliability measures…” (page 9). A comparison of the results from this single doctor versus the other four doctors results is recommended.

Literature Search

9) I miss a description of the literature search methodology in the methods section. Please describe.

Statistics

10) Calculations on relative proportions in age groups for each diagnosis were performed, and this should be described here.

11) Why was only 20% of all cases shown in figure 2? Please explain.

Results

12) Please move the sentence concerning calculation of gender and age distributions to the statistics section, as described above.

13) Usually, data from other studies do not belong to results section, but in the discussion section.

However, if they belong to results section, the systematic review should be described more in detail, meaning search terms, searching databases, number of hits, exclusion criteria etc.

14) P. 7, “Data from other studies” – I wonder why the study by Walker-Bone is so extensively described while the two other studies are only shortly mentioned. I do not see the rational behind this section? I suggest using more energy on the current data, e.g. in relation to the sensitivity analyses and a more detailed extension of the secondary diagnoses.

Discussion

15) Please explain why the observer could not be biased, and how this could have influenced the data.

16) Although reliability was not tested, reliability of the used tests for diagnosis should be described.

17) The fact that only main diagnoses are reported should be described more in detail in methods section.

18) I lack a more detailed discussion of the differences between the 2 sectors and
the influence on the different diagnoses

19) P. 9, ‘Methodological aspects’ it is written that ‘17 patients were not given a precise code, but afterwards the code was based on the journal information’. This increases the risk of coding the diagnoses incorrectly. Please explain.

20) Generally, the section “Methodological aspects” is primarily a list of all the weaknesses of the study, which is fine. However, I lack a description of how the authors anticipate that these weaknesses may have influenced the data. Please describe.

Conclusion

21) I lack a more critical description of the differences in diagnostic frequency, diagnostic criteria, different populations etc.

Figure legends

22) The symbols in figure 1+2 are actually in red and blue.

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

**Quality of written English:** Acceptable

**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’