Reviewer's report

Title: Costs of shoulder pain in primary care: a prospective cohort study

Version: 2 Date: 24 April 2006

Reviewer: Mattias Ekman

Reviewer's report:

General

This is an interesting and well written paper. The purpose was to determine shoulder pain related costs during 6 months after a first consultation in general practice.

The main strength of the paper is that it is based on a prospective bottom-up sample, since top-down studies cannot capture all resource items of relevance in a cost of illness study, or allow for classification of costs according to disease severity etc.

Another good thing with the study is the use of a cost diary, which can help reduce the recall bias that may be a problem in retrospective studies.

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

First, the study does not seem to be naturalistic. The authors state in the methods section that the participating GPs were educated and trained to apply treatment according to the 1999 version of the Dutch guidelines for shoulder disorders issued by the Dutch College of General Practitioners. This has both pros and cons. On the pro side, this means that the treatment is relatively standardized and probably evidence-based. This increases the internal validity of the study. On the con side, this means that the cost of illness study does not necessarily capture treatment as it would actually be performed in Dutch primary care setting. This decreases the external validity of the study, which in turn implies that we cannot be sure that the results can be generalized to GPs who did not participate in the study, and who may not have followed the Dutch guidelines.

It is mentioned in the discussion that the health care costs estimated for shoulder pain in this study were relatively modest, and that this may perhaps be explained by GPs sticking to the relatively inexpensive wait-and-see policy (with pain medication) of the Dutch guidelines. This shows that the authors are aware of the problem, but I would still have liked to see more discussion about the consequences for the generalisability of the results of educating the GPs in using the guidelines.

Second, the role of co-morbidities of these patients is not clear. Cost of illness studies can measure the total health care costs of patients with the disease, or the health care costs of the disease. In the former case the costs for co-morbidities are included, and in the latter case we try to isolate the costs that are due to the condition under study. I suppose that this study tried to estimate the costs of the disease, and consequently only included costs for shoulder pain. Many of these patients had concomitant musculoskeletal complaints, however, such as pain in the neck and in the back. How did you ensure separation in the estimation of resources consumed between, for example, shoulder pain and neck pain? And to what extent is such separation meaningful?

Third, how were shoulder complaints defined at inclusion in the study? Could the relatively modest costs be explained by the inclusion of many patients with only mild symptoms? This seems implausible since a majority of the patients had had a duration of more than 6 weeks prior to inclusion, but some further comments about the definition of shoulder pain used in this study would nevertheless be clarifying.

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. Neither in the title nor in the abstract do you mention that the study concerns the Netherlands. This should be mentioned in the abstract at least.

2. In the third line of the data analysis section you refer to the tables without mentioning the specific table numbers.

3. You claim that this study is the first to evaluate the overall costs of shoulder pain in primary care, but there may have been studies including pain both in the shoulders and in the neck and the back. Did you make any comparisons with those studies?

Discretionary Revisions (which the author can choose to ignore)

4. In the background you quote one-year prevalence rates for shoulder pain between 5% and 47%. To what extent are such prevalence figures meaningful? Luime et al [1] even write: â€œHealth professionals and policymakers who estimate the amount of medical care needed and related costs should be aware of the variations in prevalence rate and the underlying reasons for these differencesâ€€. Almost everybody (as indicated by the upper estimate) has pain in neck or shoulders once in a while, but this does not usually require any medical care (except perhaps rest and self-medication with cheap pain killers). The meaningful prevalence rate in this context is probably the prevalence of people with problems severe enough to require medical care visits and sickness leave. And from an economic viewpoint the chronic and recurrent cases are probably most important.

5. You only present the costs by follow-up period in weeks and by duration of symptoms. Did you also consider presenting the costs by level of pain or disability?

6. There was no estimate of lower productivity at work as a result of shoulder pain. This is also mentioned by the authors in the discussion. It has to be said, however, that it is a matter of dispute to what extent it is possible to measure accurately the costs of lower productivity at work. This could have been discussed in more detail.

7. Maybe you should point out in Table 1 that the direct health care costs are per visit (except hospitalisations) and that direct non-health care costs and indirect costs are measured per hour. This is mentioned in the text, but many readers look first at headings and tables before reading the text.

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

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

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests