Reviewer’s report

Title: Diabetes: Cost of Illness in Norway

Version: 2 Date: 25 November 2009

Reviewer: Ken Redekop

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The aim of this study was to estimate the health care costs attributable to type 1 and 2 diabetes in Norway in 2005. Data from national registers and a patient survey were combined to achieve this. The total costs amounted to €274 million (1.3% of total health care expenditures), of which 203 million were direct costs and €70 million indirect costs. If hospital stays with diabetes as a secondary diagnosis are also included, the total costs increase to €485 million.

This article provides some interesting information regarding the costs incurred by diabetes patients in Norway. Although I would like to see more comparisons (e.g., between countries, or between regions within countries) which might suggest differences in access to care and quality of care, I can see that this type of study provides useful information about where the costs are generally being incurred.

When assessing the work, please consider the following points:

1. Is the question posed by the authors well defined? yes
2. Are the methods appropriate and well described? somewhat
3. Are the data sound? somewhat
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? somewhat
5. Are the discussion and conclusions well balanced and adequately supported by the data? somewhat
6. Are limitations of the work clearly stated? somewhat
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? yes
8. Do the title and abstract accurately convey what has been found? somewhat
9. Is the writing acceptable? yes

GENERAL COMMENTS (MAJOR ESSENTIAL REVISIONS)

Prevalence of diabetes in Norway: The fact sheet published by the Norwegian Institute of Public Health (http://www.fhi.no) refers to 110,000 type 2 diabetes patients who require medical treatment. Interestingly, it is stated that this estimate excludes diagnosed patients requiring only diet and exercise and undiagnosed patients. If only diagnosed diabetes is the focus, I’d like to know
how much the exclusion of the patients requiring diet and exercise results in an underestimate of total costs of illness. Presumably, they still incur some costs such as visits to a GP, dietician, etc.

Inpatient hospital costs: more information is needed about this (p.14). A more detailed description is needed about the relationship between hospitalisations and costs.

Assumptions: more justification is needed for the assumptions made. For example, why assume that one year of treatment with antihypertensive drugs costs €154? Table 3 suggests that survey data were used for this.

Limits to generalisability: The second last paragraph on page 7 refers to problems regarding the extent to which the survey population is representative of the Norwegian diabetes population, especially for type 2 diabetes. Since the results of this survey were used in calculating certain cost components, what implications does this have for the cost estimates from this COI study?

Comparisons with other COI studies: A general and more complete comparison with the COI results from Sweden would be beneficial. Since the Swedish COI study described the situation in 1994, care needs to be taken to distinguish between differences between countries and differences between time periods.

Future research: The authors seem to have an enlightened opinion about COI studies and their limitations. I’d like to know what kinds of studies the authors think should be performed next.

SPECIFIC COMMENTS (MINOR ESSENTIAL REVISIONS)

1) A few errors (e.g., typos) need correction (e.g., p. 7, sent. 2, “productions losses”)

2) Abstract (Results, final sentence): The total costs of €485 million given in this sentence contradict the value given in the first sentence (€274 million). More clarification is needed.

3) The information in the tables can be presented in a more efficient and clearer manner. For example, e-tables 3 and 4 are not really needed and can be included in the text.

4) Table 3: It’s not clear what the total in the final line (A10) means compared to the other A10 values shown higher up in the table. More information is needed in the text.

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

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.