Reviewer’s report

Title: Prevalence of diagnosis and direct treatment costs of back disorders in 644,773 children and youths in Germany

Version: 1 Date: 31 May 2010

Reviewer: Paul Beattie

Reviewer’s report:

The authors have investigated an interesting and important area. I have some concerns however with this report in its present form:

Major Compulsory Revisions

1. Deforming dorsopathies (M40-43), spondylopathies (M45-49), and other dorsopathies (M50-54) represent a very wide array of clinical manifestations with substantial differences in etiology, prognosis and likely economic impact. Combining them for analysis under the common heading of “back disorders” greatly limits the utility of the data. For example, dorsopathies (especially scoliosis) are typically not associated with pain-the presence of pain with adolescent scoliosis usually indicates a serious medical problem. Spondylopathies are primarily chronic, inflammatory disorders with multiple system involvement, while painful dorsopathies in the young and adolescent population are often believed to be associated with trauma or congenital disorders such as stenosis or genetic disc problems. Conditions requiring hospital admission are likely to be much different than those which do not. Considering this heterogeneity it would make sense to have a much greater emphasis toward presenting these disorders separately. This is illustrated by the wide range in prevalence rates that were observed. When reviewing this paper it seemed that “back pain” was an overarching construct (see lines 2-3 in the abstract) and it was not clear that many of the codes studied were not likely to be associated with pain.

2. The use of ICD codes is probably the best available approach for this question; however there are many limitations inherent to the validity of these codes. The authors have briefly mentioned this but a broader discussion of the limitations of ICD codes should be presented.

3. The estimation of cost based upon assumption could potentially lead to mis-inference. A stronger argument for using this approach, and a better discussion of its limitations, should be included.

Minor Essential Revisions

1. A clear purpose statement and/or specific research questions that were investigated would be helpful.

2. These data were derived from a secondary analysis, this should be clarified.

3. The authors conclude that treatment costs were “high” (line 6, page 3). This
term should be justified.

**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