Reviewer's report

Title: Costs of hospital care for hypertension in an insured population without an outpatient medicines benefit: an observational study in the Philippines

Version: 1 Date: 14 April 2008

Reviewer: Dylan Roby

Reviewer's report:

Major Compulsory Revisions

1) The authors should explain why secondary diagnosis codes were not used in the claims analysis. They mention that one limitation is potential under counting of hospitalizations due to a limited number of ICD-10 codes. However, it would seem that some coders may have placed hypertension-based hospitalizations in the second diagnosis field on a claims entry, and my understanding is that the decision can be rather arbitrary at times, and not necessarily reliable.

2) The authors should explain how denial of claims and claims that exceed the 45 covered inpatient days per year might affect their analysis. Do denied claims show up in the dataset at all (and do physicians submit them), and was there any analysis of the likelihood of hypertension hospitalizations not being paid or counted in this analysis due to the 45 day limit. In the same way, is it possible to track NDC codes for hypertension related medicines delivered in hospitals, and the denial of those claims?

Minor Essential Revisions

3) Table 6 - Is it assumed that the predictors listed in the table with odds ratios were those that were found to be significant in the logistic regression? If so, what variables were in the model that did not end up in the model due to non-significant results?

4) Have the authors considering using a per member per month (PMPM) rate to measure costs, rather than an annual rate. If that is not possible, is the annual spending annualized? For example, do 2 people who were covered for 6 months end up counting together as one year of claims, or is the amount spent by each of them over that 6 month period considered to be their annual spending?

5) On page 3, in the 3rd paragraph of the Background section, there is a sentence reading: "However, as other developing and transitional countries, the Philippines..." I think that "as" should be replaced with "as have" or "similarly to"

Discretionary Revisions

6) How are ordinary, intensive, and catastrophic case severity indicators assigned?
7) The "Costs of Hospitalizations" section is difficult to read. Is the $56 million US 34% of the amount of inpatient billing for all hospitals, or all billing across the board including outpatient, etc. Also, the authors might clarify, when it is stated that "The largest part of the total reimbursement (34%) was spent on medicines", does it mean that 34% of the $56 million US spent on hypertension was spent on inpatient medicines?

8) The 252 days to 321 day re-admission rate range seems rather long. I often see 30 day and 180 day readmission rates, which make this finding difficult to understand. It might be helpful to give some context to this statement by mentioning readmission rates in other settings (private insurance in the US, etc) and the mean number of days to readmission in other settings.

9) Has any thought been put into using a grouper or ICD-10 plus CPT code heirarchy to develop a way in which to identify hypertension cases. That may help to deal with the limitations issues.

10) There is only one policy recommendation furnished by the authors. It seems like other proposals could also work, besides an outpatient medicines benefit. Is there any way that hypertension patients could obtain the necessary drugs without expanding the benefit to all PhilHealth enrollees?

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

**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