Reviewer’s report

Title: Doctor-shopping in Taiwan: A Socio-cultural Factor in the Spread of Emerging Infectious Diseases?

Version: 1 Date: 27 December 2005

Reviewer: Gabriel Leung

Reviewer’s report:

General

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

1. Title and Introduction – I am unclear as to the relevance of infectious disease spread in relation to the primary objective of describing the pattern of health care utilization (especially the phenomenon of doctor shopping) based on a national health insurance claims database. If this is simply to provide a topical raison d’être for the manuscript, I suggest it may distract more than help. Studying the “ecology” of health care seeking and consumption is a worthy research goal per se without needing to resort to a secondary justification.

2. Methods – I strongly suggest prosecuting the dataset to the fullest possible extent, given the unique and large resource. Given the unique (albeit scrambled) identifier, I suggest 2 additional layers of analysis:-
   a. Adding a temporal (longitudinal) component to the analysis to distinguish between very poor health/catastrophic illness within a single year leading to multiple episodes of care and seeking bona fide second opinions masquerading as doctor shopping vs more discretionary (even frivolous) use patterns due to moral hazard.
   b. Characterising those who are high vs low utilisers and those who doctor shop vs those who do not, etc by personal characteristics (demographics, geography, and socioeconomics if available and so on).
   Currently the analysis is on the ecologic level which is prone to the ecologic fallacy and does not allow readers and fellow researchers to properly and deeply understand health care utilisation patterns in Taiwan.

3. Methods – is the diagnosis code available in the claims database? If so, this could help in better defining doctor shopping and reducing misclassification bias.

4. Are the authors are passing normative judgement on “one-stop shopping” events? Surely, if all the different specialty visits were medically necessary, it would be better to arrange for the patient to visit different clinics on the same day.

5. Given the way “specialties” are defined, medically appropriate need (by whatever objective normative criteria) would typically involve at least 3 different such specialties, eg GP, Chinese medicine and dentistry, perhaps plus 1 or 2 others for bona fide referrals by the GP for a consult. This point should be clarified and emphasised, in fact, in the Discussion.

6. Discussion – I would have preferred more in-depth dissection and explicit linking of the economic behaviour (ie health care seeking) of the population and the financial incentives/disincentives of NHRI reimbursement rules. This would then allow the authors to draw lessons that can and should be learnt by other countries who are thinking about using the fruits of development to launch a social insurance scheme for universal and comprehensive coverage. Lastly, it would be useful to directly compare the patterns observed in Taiwan to other western social insurance systems, Canada and the Bismarckian European systems, in addition to Japan and Korea as regional neighbours sharing
also strong socio-cultural/historical ties.

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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. The Abstract is very long – suggest some aggressive pruning and tightening.
2. Introduction – it would be enormously helpful to international readers if the authors could add a couple of paragraphs summarising the Taiwanese health care system as contextual information.
3. How were the 200,000 “randomly” selected from the total claims database? Are they geographically representative, as well as on other basic sociodemographics, of the general Taiwanese population?
4. Since NHRI just celebrated it 10th anniversary in 2005, and there were several major adjustments (eg premiums) along the way. I wonder if the choice of reference year (2002 in the current set of analyses) would make a difference in the results? In addition, if the authors agree with my comment #1 under “major compulsory revisions”, perhaps they should consider updating the analysis to 2004.
5. p.7 – please elaborate on the definition of the denominator.
6. Results, p.8 and Table 1 – why the very high utilisation proportion for ENT? Is the definition of this specialty similar to western standards?
7. A related comment leads me to Parkinson’s Law – perhaps it would be helpful to add a column showing the supply side figures in terms of no of doctors in different specialties per 100,000 population.
8. Table 2 – add a footnote to explain why the column totals exceed 100% for the “no. of patients” for easy comprehension.
9. Table 3 – what does the column “aggregate visits” refer to?
10. The authors may wish to benchmark and compare some of their findings to a recently published paper on the ecology of health care utilisation in another Asian tiger economy, Hong Kong – Leung et al. Soc Sci Med. 2005;61:577-90.

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Discretionary Revisions (which the author can choose to ignore)

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

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.