Reviewer’s report

Title: Mapping private sector pharmacies and their characteristics in Ujjain district, Central India.

Version: 1 Date: 18 August 2011

Reviewer: Judith Fisher

Reviewer’s report:

Major Compulsory revisions
1. In either the Background or Methods section, the authors should define ‘private sector pharmacies’ and differentiate these from ‘public sector’ pharmacies (that were excluded from the study).
   a. In conjunction with this clarification, a discussion and/or details regarding the regulations regarding pharmacy ownership in India should be included, in particular for international readers. For example, in some jurisdictions, all pharmacies must be owned by qualified and licensed pharmacists.
   b. Details regarding the regulations governing pharmacy practice in India are necessary in order to interpret the findings regarding staffing of pharmacies. The discussion and conclusions mention the need for better implementation of pharmacy regulations; however, it is difficult to interpret this statement without knowing what the regulations are. The authors do allude to some of these regulations, in particular in the paragraph immediately preceding the ‘Methodological considerations’; however, a more detailed description of the legal requirements governing pharmacies and pharmacists would be helpful.

2. In general, the authors provide an adequate description of the methodology for the geographic mapping.
   a. However, they should justify their choice of the ‘buffers’.
   b. Also, the statement in the Methods section (final paragraph before ‘Ethical approval’) that, ‘this helped subsequent geo referencing of the pharmacies’ requires clarification.

3. In contrast to the details provided for the mapping component, the description of the survey process is inadequate. The following information is needed in order to understand the findings and interpret the results.
   a. Who were the surveyors? Did they have any pharmacy – or other health care-training? Were these paid positions?
   b. Detailed information on the specific questions included in the survey is needed. If possible, the actual questionnaire should be included as an appendix or supplementary file.
   c. Specify the ‘tracer’ medicines in the Methods section, and justify their choice.
   d. Describe how the ‘reported average number of customers’ was determined.
The authors state that this information was self-reported (by the respondents); however more details regarding this process are necessary. How was the average calculated?

e. Describe how the ‘proportions of customers without prescriptions’ was determined.

f. Clarify the type of medications that are dispensed without prescriptions. For example, would this include medications such as paracetamol and cough/cold preparations for the management of minor conditions? Or, would this include medications that normally require a prescription, such as opioid analgesics, antibiotics and cardiovascular medications? Is it possible to report the relative proportion of these types of medications that are provided without a prescription?

i. In conjunction with this question, please clarify what is meant by ‘client request’ and how this was determined.

g. The authors report that the surveyors interviewed whoever was available in the pharmacy at the time of the contact and note that there ‘could be other persons on other days whose details are not reflected in the results’. It should also be noted that the information that was gathered regarding the provision of medications might also differ depending on the individual with whom the surveyor interacted.

4. The conclusions state that the study provides ‘information on the location preference of private sector pharmacies’. This statement, in particular ‘preference’, does not seem to follow from the reported findings and discussion. While the study mapped the locations and situated these locations with reference to provider locations. However, nothing in the study addressed issues of ‘preference’.

Minor Essential Revisions:
The paper would benefit from careful editing and some minor revisions, primarily related to spelling, missing words, incorrect word choice and grammar. For example;

1. Background section:
a. Paragraph 2, last sentence:
   i. Missing word: of (between ‘study’ and ‘a’)
   ii. Change ‘quarter’ to ‘quarters’

b. Paragraph 3,
   i. first sentence, missing ‘and’ before final phrase
   ii. Second sentence, change ‘enlist’ to ‘list’
   iii. Third sentence,
   1. Either change ‘these’ to ‘them’, or add ‘pharmacies, or locations’
   2. Add punctuation or another means of distinction between ‘rural’ and ‘urban’

2. Methods section:
a. Paragraph 1,
   i. first sentence: replace ‘done’ with ‘conducted’
   ii. sentence 3, missing word after ‘such’ for clarification, e.g. district
   iii. sentence 5, change ‘disadvantages’ to disadvantaged’
   iv. sentence 6, ‘infant’ should not be capitalized
   v. final sentence, add ‘the’ before ‘administrative’ and change ‘headquarter’ to ‘headquarters’

b. Paragraph 3,
   i. The final sentence in this paragraph does not make sense as written.

c. Paragraph 4, first sentence, change ‘there’ to ‘they’

d. ‘Mapping of pharmacies onto a GIS’ section
   i. Sentences 3 & 4 in this section are not complete and correct sentences as written. The authors should either construct this series as numbered phrases using the correct punctuation, or change the wording to create two complete and grammatically correct sentences.
   ii. Please clarify the following: Auto CAD Software; CartoSAT2; and MS Access.
      1. In addition: is ‘Map info software’ a proprietary name? if not, change ‘info’ to ‘information’
   iii. Paragraph 2 in this section
      1. First sentence: Add ‘the’ before ‘collection’ and ‘city’

3. Results:
   a. Distribution of pharmacies section
      i. First sentence, change ‘three-quarter’ to ‘three-quarters’
      ii. Sentence 3, capitalize ‘table’
      iii. Paragraph 3, sentence 1 (and throughout document)
         1. Change ‘Fig’ to ‘Figure’
      iv. Final two sentences are grammatically incorrect
   b. This section contains a number of very short paragraphs, which is somewhat distracting.

4. Discussion:
   a. Paragraph 2, sentence 2
      i. Change ‘between’ to ‘among’
   b. Paragraph 4,
      i. sentence 2
         1. Please clarify the comparison, i.e. does comparison refer to ‘attached’ vs. ‘stand-alone’ pharmacies in rural areas, OR ‘attached’ pharmacies in rural vs. urban areas?
ii. Sentence 3:
1. Add 'of' between 'half' and 'all'

iii. Final sentence in paragraph
1. Please clarify the meaning of ‘institutional prescriptions’

c. Paragraph 5
i. Sentence 2
1. The wording is somewhat confusing.

ii. Sentence 3
1. Change ‘was’ to ‘were’
2. Change ‘there’ to ‘these’
3. This sentence is somewhat confusing. The authors should consider re-writing as multiple sentences.

iii. The next to last sentence in this paragraph does not make sense as written.
Please edit for clarification.

Discretionary revisions:
1. The authors provide some background regarding the region; some additional information might be helpful to contextualize the region for international readers. These items are addressed below:

a. In the Methods section: The authors note that 25% of the region’s population belong to the secluded caste – and are among the most socially disadvantaged groups in India. Clarification of what they mean by ‘socially disadvantaged’ would be helpful.

b. In the Methods section: Similarly, the authors provide details regarding the literacy rate and infant mortality rate of the region. This is information, but would be more useful if the authors also provided details for another region and for India overall as a comparison.

2. It is somewhat difficult to see the details on the two maps that are provided. Is it possible to enlarge these maps?

3. Is it possible to report the percentage of pharmacies with refrigerators by rural vs. urban location?

4. In general, the paper would benefit from careful editing to make the wording more concise.

Level of interest: An article of importance in its field

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

Statistical review: No, the manuscript does not need to be seen by a statistician.
Declaration of competing interests:

I have an interest in the topic of this study. Specifically, I am currently involved in a project that maps pharmacy locations in the Canadian province of Nova Scotia, and examines the issue of rural/urban access to pharmacies in Canada. Two of my co-authors have published a paper on geographic access to pharmacies in another Canadian province, Ontario.