Reviewer’s report

Title: Pharmacy and injection practices among community pharmacies in Pokhara sub-metropolitan city, western Nepal

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Reviewer: Karin Wiedenmayer

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Review manuscript Gyawali et al

Pharmacy and injection practices among community pharmacies in Pokhara submetropolitan city, western Nepal
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General comments

This is an excellent effort to assess and describe community pharmacy practice in a low income country. There is generally much commenting on poor performance of pharmacies yet little detailed literature on this topic. I congratulate the authors for addressing this important topic of pharmacy services in low income countries! There is an important role that community pharmacies could play as part of a health care system which unfortunately is often not assumed nor supported.

The paper looks at community pharmacy practice in an urban environment describing staffing, various services provided and related educational, regulatory and public health aspects.

The study is very broad and covers numerous components of pharmaceutical activities according to the objectives set: demographics of clients/patients, pattern of medicines use, dispensing, counselling, sources of medical information, injection practice and waste disposal.

All these aspects are critically important regarding their impact on public health and health care. Yet each of them could be a research topic in itself. The paper therefore suffers from being too broad and not specific enough, too wordy and difficult to read. The paper would gain a lot if reduced and condensed in scope and length. For example a focus only on injection practices and waste disposal would offer sufficient material and relevance in the field to attract interest. The manuscript as it stands now reads more like a report on a situation analysis rather than a scientific research paper. Objectives, discussion and conclusions are not well balanced and not always adequately supported by the data. On the other hand, the authors correctly reference and acknowledge publications and work upon which they are building.

Please use “medicine” rather than “drugs” as this is the commonly accepted
terminology proposed by WHO to avoid confusion with illicit drugs.

After reading the paper one is left with an uneasy feeling of “what now”? If the paper was to focus on one topic only, more precise, operational and feasible recommendations for interventions could be made.

Specific comments for major compulsory revisions

Title:
The title is not clear, i.e. does not well reflect the content of the study. Reading it you expect mainly a study on injection practices which is just one of pharmacy practices

Abstract:
Could be improved and better formulated (English and presentation of results) to better convey what has been found.

Introduction:
- Very extensive description of training and educational aspects of various cadres working in pharmacy. Should be summarized as details are not really interesting for a reader of an international paper.
- Well referenced
- The introduction covers only education and injection practice. All other topics set out as objectives in the study (demographics of clients/patients, pattern of medicines use, dispensing, counselling, sources of medical information) are not discussed.
- The objectives at the end of the introduction chapter should guide the research methodology, the presentation of results and the discussion. However these objectives are not adequately reflected nor balanced in the subsequent chapters of the paper. For example, objective No. 1 includes “the study of use patterns of drugs”. This topic cannot be found in the methodology (indicators?) nor results and discussion.

Methods:
- Methodology describes three methods: 1) questionnaire, 2) indepth interview and observation of pharmacy, 3) Investigative interview with waste handlers.
- Only one questionnaire is attached with mainly quantitative questions. They are not coded. Questions and offered options for response are not always conducive to answers that make sense. For instance under dispensing practice, Q2 ii: … “what do you suggest to them?” with 4 possible answers. Responses do not give any idea of correct indication or treatment as responses depend on individual patient. Therefore conclusions may be simply descriptive but not indicative of quality of service.
- The questionnaire does not include all findings discussed in the text. That may mean that some questions were posed randomly and not standardized in a tool. For example CE is mentioned in the text but not on the questionnaire. The
Introductions with garbage men is not standardized either nor are observations in the pharmacies.

- Q3: “how many patients visit your pharmacy……. “. Is this per day, per month, per year? Mean or absolute number?
- Q7: IVF are infusions not injections
- Q9: “how many injections per day?” Mean or absolute number?
- Q10: “how do you check for expired drugs?.” Is this relevant considering the objectives?
- Under disposal, Q1: how is “waste” defined? Needs to be more specific.
- Where are the open questions?

It seems that the qualitative discussions/interviews were done informally and not based on a questionnaire and standardized questions. How was the qualitative study analysed?

- Statistical analysis is done with SPSS and correctly described. Statistical correlation was done in two cases. Both times however, it seems unclear why this was done and does not make much sense. 1) correlation of the numbers of prescription filled with number of patients visiting the pharmacy. 2) correlation of mean number of injections dispensed and number of injections administered.

Results:

- For ease of reading, the results should be stratified according to and consistent with the objectives.
- Some sections under results should be under introduction, for example the description of training for HA and CMA.
- It would help the reader and for better understanding to integrate tables with results in the text.
- The comment that in-charges provide primary health care (PHC) is surprising and unclear. It should be explained what is meant by PHC in this context.
- Under dispensing practice, second paragraph: 55.6% of incharges dispensed full course of medicines….is that with or without prescription?
- Wording and formulation of results is difficult to read. Again a small table would facilitate understanding.
- Counselling rooms: “…these rooms are not very hygienic…”. How is this assessed and defined?
- “…Few pharmacies used to collect needle and sharps in a self-designated….”: what is a few?
- Medical waste and injection related waste should be separated and discussed separately.

Discussion:

- For ease of reading, the discussion should be organized according to and consistent with the objectives and results.
As above it seems that the qualitative discussions/interviews were done informally and not based on a questionnaire and standardized questions.

"poor counselling leads to poor adherence…….”: this is yet another topic and quality of counselling was not assessed. Quality of counselling cannot be based on availability of counselling room.

-2. Paragraph: “…..there is doubt about the service quality…..”: how was this assessed?

-3. Paragraph: annual CPE and regulatory control was not assessed according to questionnaire.

-7. Paragraph: different health care waste (infectious, sharps and pharmaceutical) not assessed according to questionnaire.

-“…..reuse of disposable syringes was not detected…..:how was this statement assessed?

-Not all objectives are discussed sufficiently. For example the sources of drug information: are these sources recent, are they used, what is the conclusion?

-Limitations should be expanded to be more comprehensive.

Conclusions:

-The conclusion is generally acceptable and sound. However some comments such as that the services provided may be driven by financial incentives is not substantiated nor has it been assessed in the study. The photos are impressive and revelatory. Clearly, capacity building, regulations and enforcement for pharmacy services are needed. And underlying causes of these practices might have to be explored. Good luck with revising and finalizing the paper!

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 declare that I have no competing interests