

Comments on “The Physicians’ Knowledge, Attitude and Practice of Generic Substitution in China: a Cross-sectional Online Survey” (IJERPH# 1233615)

The manuscript investigated the knowledge, attitudes, and practice of physicians towards generic medicines substitution in China. A sample of 1225 physicians was selected, and their responses to 24 closed questions and two open questions were analyzed using the ordered logistic regression models. The study recommends that the physicians be educated on the relevant policies and an incentive system be established.

Main Comments:

1. The authors used a snowball sampling strategy via a social media app to solicit participants. Given that the target population is clear (the physicians who speak Chinese and work at a secondary or a tertiary hospital for at least a year), I am not sure the snowball sampling via a social media app is appropriate. Who responded to the survey? How did those who responded recruit the other participants (i.e., the snowball effect)? I am concerned with the resulting sample because it is hard to believe that a person without a post-baccalaureate degree can be a physician in China. See Table 2, where it shows 694 + 48 respondents with bachelor’s degrees or no college degrees.

2. The data collected and described in Sections 2 and 3 can be rephrased for clearer understanding. Take the “knowledge” variable as an example:

- ? • “This part was assessed using a three-point scale: ‘Yes’, ‘No’ or ‘Uncertain’ (page 2, last line).
- ? • “1 point was given for each correct answer and 0 for each mistake or unsure response” (Section 2.4, Line 2)
- ? • “We designed the scores to evaluate the knowledges to range from 0 to 6.” (Section 3.1, Line 1)

It is confusing how the authors went from ‘Yes/No’ to “0 to 6” and why. It may make sense if the questionnaire has been included.

3. The interpretation of the results from the ordered logistic regression can be improved. The estimated coefficient is an odds ratio, not the difference in quantity. For example, “female physicians were found to prescribing less generic medicines than males (OR = 0.728; 95%CI: 0.586-0.904; $p < 0.001$)” (page 8, 1st paragraph, lines 5-6). The value 0.728 is an odds ratio, and its significance implies that a female physician is less likely to prescribe generic medicines than her male counterpart. That is, a male physician is 2 times more likely to prescribe than his female counterpart (i.e., $\text{Pr}(\text{male prescribes}) / \text{Pr}(\text{female prescribes}) = \text{EXP}(0.728) = 2.07$).

4. Finally, I recommend the study to focus on a few generic substitutions, e.g., blood pressure medications and their alternatives, in order to increase the validity of the study. The discussion on physicians’ attitudes and practices towards the generic ones would shed more light when conditioning on the same generic substitutions.

Minor Comments:

1. How are secondary and tertiary hospitals defined in the Chinese healthcare system?

2. Please proofread the manuscript. For example (this is just a shortlist of examples):

- “ordered logistic regression”, not “order”
- “nagetive” (Section 2.4, End of Line 5)
- ? • “substation” (3rd line from the bottom in Section 2.4)
- ? • Extra space between “level” and “and” (page 4, 4th line)
- ? • “don’t owns a good” (1st line in Section 5)

3. End of the paragraph below Table 1 on page 4. The discussion in this paragraph has nothing to do with Table 3.

4. Table 2. What is the “Statistics” shown? The chi-square statistic?

5. Tables 4 and 5. Please provide pseudo-R² and cutpoints.

6. Footnotes of Tables 4 and 5. “Robust standard errors in parentheses.” Aren’t the values in parentheses the lower and the upper bounds of 95% CI?

7. Are there any interesting findings from the two open questions?