Reviewer's report

Title: Overuse of antibiotics for the common cold - attitudes and behaviors among doctors in rural areas of Shandong Province, China

Version: 1 Date: 27 September 2014

Reviewer: Marcia R Weaver

Reviewer's report:

Major compulsory revisions
The authors have clearly demonstrated the gap between knowledge of appropriate prescribing practices and actual practice. I would like to recommend four revisions to strengthen the manuscript.

1. Provide more quantitative details on the sample selection so that readers will have a better understanding of the context. Please see specific comments about the sample below.

2. Some patients have multiple diagnoses such as a common cold and a sinus infection or ear infection. Did the researchers collect data on all diagnoses or just the common cold? If it’s the former, the researchers should report two categories of results: a) patients with a common cold and no bacterial infection, and b) patients with a cold and bacterial infection. Category “a” would be the source of concern. If the authors did not collect data on all diagnoses, they should add a Limitations section and report this important limitation of their research. They should also recommend that future researchers collect data on all diagnoses.

3. It would be interesting to look at the relationship between the doctors’ knowledge of prescribing practices and their actual prescriptions. The prescription data does not appear to include the name of the prescribing doctor. Again, the authors should report this limitation and recommend that future researchers collect these data.

4. Concerning the ethics statement, what about informed consent of patients? The prescription data were not anonymous.

Specific comments about the sample

a. How many counties are in Shandong province? i.e. Please report “3 of X counties were purposively selected.”

b. The text says that 18 villages were selected as study sites, but I counted 39 facilities total: 3 hospitals, 18 township health centers, and 18 village clinics.
Please state the total number of facilities included in the sample.

c. Provide quantitative details on the sample of facilities, as above.

How many hospitals were there in the 3 selected counties? i.e. Please report “3 of X hospitals in the selected counties.”

How many township health centers were there in the 9 selected administrative units? i.e. Please report “18 of X township hospitals in the selected administrative units.”

How many village clinics were there in the 18 selected villages?, i.e Please report “18 of X village clinics in the selected villages.”

d. How many worked in each type of facility? What was the response rate for the doctors? i.e. How many were asked to complete the questionnaire, and how many completed it?

e. What is a “pragmatic random sample”? Is it a convenience sample?

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

**Quality of written English:** Acceptable

**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.