Reviewer's report

**Title:** Availability and Use of Essential Medicines in China: Manufacturing, Supply, and Prescribing in Shandong and Gansu Provinces

**Version:** 1  **Date:** 29 March 2010

**Reviewer:** Jane Robertson

**Reviewer's report:**

The authors should be congratulated on a detailed and thorough examination of the medicines situation in China. The manuscript illustrates the strengths of combining quantitative and qualitative methods, substantial samples and the application of rigorous study methodology including random selection of facilities and sites where possible and appropriate. The manuscript also illustrates the consequences of perverse financial incentives that exist in many health care systems.

The paper is well written, easy to follow and the conclusions flow logically from the data presented.

**Minor essential revisions**

1. I think the column heading in Table 4 should be WHO EML rather than WHO ML.

**Discretionary revisions**

1. There is comparatively little discussion of the results of the prescription survey in the paper. Table 3 reports the top 10 medicine products manufactured in the two provinces studied. The reader is struck by the differences between these, with the dominance of traditional Chinese medicines in Gansu province. The data in Table 4 show Gansu had higher levels of availability of NEML Chinese medicines, lower availability of NEML Western medicines and lower availability of WHO EML medicines than in Shandong province. Do the authors think there are any implications for this in trying to implement policies based on EMLs, particularly evidence-based EMLs? The new NEML will have 205 western and 102 traditional Chinese medicines, with facility for local extension and adaptation to meet local needs. However the 2004 NEML had 1260 Chinese and 773 western medicines.

2. Results from Gansu province also show higher numbers of medicines per prescription, higher proportions of antibiotics per prescription and higher proportions of prescriptions with injections particularly in primary health care settings (Table 5). They authors could comment further on these observations and challenges for changing prescribing practices in different settings within China.
3. The discussion refers to retail pharmacies citing primarily economic reasons for purchasing decisions while hospital purchasing was clinically driven. Pharmacy managers reported market demand as the most common reason for purchasing decisions, however market demand could perhaps be considered clinically driven if it reflected what is being prescribed by local medical practitioners.

This is an ambitious program of reform being undertaken in China. If the reforms can achieve the stated objectives, it will provide a model for other health care settings where EMLs exist but procurement and prescribing practices in relation to the EML are suboptimal.

**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.