Reviewer's report

Title: Workforce analysis using data mining and linear regression to understand HIV/AIDS prevalence patterns

Version: 1 Date: 5 February 2007
Reviewer: Nonglak Pagaiya

Reviewer's report:

1. Is the question new and well defined?
   Major revision
   The question has not clearly defined. As the main variables of the study are health workforce and HIV/AIDS prevalence, the introduction part has emphasized more in HIV/AIDS and played down the health workforce part. The factors been included into the relationship model, i.e., social, economic, expenditure in health, literacy rate, etc; were not so clearly delineated where these have come from.

   Suggestion: The introduction part should emphasize on HIV/AIDS as well as health workforce, and that variables included in the study should be discussed.

2. Methods appropriate?
   Major revision
   As this study used the secondary data from various sources and years which risk for bias, so more detail of the process how the researchers cope with the problems of data inconsistency or data triangulation approach to reduce the bias should be described. Furthermore, year of which data were used of all variable should be specified and should be the same year in order to reduce the bias.

3. Data sound and well controlled?
   Minor revision
   As suggested above (2).
   Data were from various sources and different years, so triangulation of the data should be discussed more and how to manage with inconsistent data.

4. manuscript adhere to the relevant standard of reporting ande data position?
   Yes

5. Discussion and conclusion
   Major revision
   HIV/AIDS prevalence relate to holistic factors: individual behavior, family, cultural, society, environment, as well as health service system, therefore to focus the discussion only on the medical model of care might mislead the conclusion and suggestion. In relation to the relationship between health workforce factors and HIV/AIDS prevalence, It probably both the health workforce and the health system (i.e., emphasize more in promotion than curative services) have played important roles. However, this has partly discussed on page 11, para 1; and this part should be emphasized more.

   Literacy rate has played significant role in HIV/AIDS prevalence, however, it would contribute as part of the holistic factor (socio-cultural factors) rather than what had discussed in page 9, paragraph 2 (the first 4 sentences).

   Some discussion has not been supported by the evidence, such as:
   - …. Female literacy and high nursing density may not be accidental co-occurrences. Because of the traditional role of women as nurses, countries with higher levels of female literacy may also have a more educated nursing workforce and thus stronger nursing leadership. (page 9, para. 2)

   - The suggestion that …. We suggest that both WHO and non-governmental organizations continue implementing the strategic directions to improve nursing services around the world with particular focus on HIV/AIDS. Investment in the nursing workforce by creating and supporting additional nursing education
program as well as WHO Collaborating centres for nursing and midwifery development …… (page 12, para 1)

6. Title and abstract
   OK

7. Writing acceptable?
   OK

**What next?:** Accept after minor essential revisions

**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.