Reviewer's report

Title: "Preventing the preventable through effective surveillance: the case of diphtheria in a rural district of Maharashtra, India."

Version: 3 Date: 12 July 2012

Reviewer: Arun Humne

Reviewer's report:

Major Compulsory Revisions

1. There are discrepancies in the number of positive cases and attack rate reported in Table 1. For example, correct number of total positive cases in the age group 6-10 years should be 2 (1 male + 1 female positive case) instead of 1. Similarly correct attack rate for this age group should be 0.9 instead of 0.4.

2. (n) should be inserted below the column headings in Table 1 so that denominators for calculating percent attack rates among male, female and total population are self evident; for example Males (n), Females (n) and total population (n).

3. In the abstract, justify in the background why Dhule district has been specifically chosen for the study purpose.

4. The results section mainly includes only the coincidental findings or findings on secondary outcomes. It would have been more relevant if the findings specifically related to the assessment and response to the outbreak of diphtheria instituted by the District Surveillance Team had been mentioned first in the results section and later on discussed in discussion section as this appeared to be the primary objective of the study.

5. As per results presented in Table 1 the total population denominator was 3,359 i.e. total population of the village. Further, it has also been stated on page no. 9 that the screened population in two waves was 560+2100 = 2,660. This discrepancy in denominator needs clarification.

6. Page 10 – Bacteriology section – clarity is needed in calculation of percentages like 81.8% (9/11) + 27.2% (3/11) = 109%? It is not clear whether the numerator used is 2 or 3 for culture? Should the case which was both smear- and culture- positive be included twice i.e. both in smear positive and culture positivity rates?

Minor Essential Revisions

1. What is the Research Question …is not clear.

2. Aims are mentioned at more than one place, but mentioning specific
objectives…primary or secondary… would have aptly justified the need and purpose of the study.

3. In the methods, elaborating on standard IDSP methodology used for data collection (Syndromic, Presumptive or Confirmative surveillance.) could have been more useful for understanding of readers who do not have detailed knowledge on surveillance techniques used for epidemic investigation under IDSP.

4. In data processing and analysis 1 or 2 sentences could be inserted to enhance clarity. For example..Secondary data “regarding outbreak investigation and response was collected from….., but the clinical data were extracted from the hospital records”. At the end of the paragraph, a sentence “Frequency distributions showing number and percentages were generated for each identified clinical and non-clinical variables” can also be inserted.

5. Some typos and spelling mistakes need to be rectified in the edited version like

Page 6 : 1990’s = Nineties
Page 10, add comma after age. Vaccination status: 2nd line DPT 1 and 2, add DPT 2 in place of 2.
Page 12: Para 1, line 8- Vaccine coverage = Vaccination coverage
Page 13: Para 2, line 1 instated = instituted; para 3, line 3 levels of antitoxin = level of antibodies
Page 14: first line: in India = India; 2nd line: plays = play. Para 1, line 3: School entry leaving= School leaving
Page 16, 2nd line: sulpha ethax azol = sulphamethaxazol

Discretionary Revisions

1. Page 7– Study area may be mentioned as Peshte village in place of Peshte.
2. Page 9, last para, line 2- death case = index death case
3. There is some lack of coherence in discussion of the study findings…for example paragraphs on age shift, then immunization and again ending paragraph on age shift?…these could be rearranged in proper order. For example; Page 13, para 2 discussion regarding age shift would be more appropriate if shifted to page 12 after para 2.
4. Page 17, para 2 – Surveillance is the key - First two sentences are totally uncalled for.
5. Limitations of secondary data analyses could have been specifically highlighted in the context of generalizing this study’s findings to the other district populations which are similar or not similar to Dhule district.

6. Some conclusions are not based on the study findings. There is a tendency to generalize the findings totally out of the box. For example, conclusions A) “Faltering …revitalized” is not at all based on this study findings and B) “Introducing adolescent…on others” is altogether based on findings of the other study.

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

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.