Reviewer's report

Title: Measles transmission from an anthroposophic community to the general population, Germany 2008 Effect of early intervention on size and duration of measles clusters in school and kindergarten settings

Version: 2 Date: 6 January 2011

Reviewer: Hana Orlikova

Reviewer's report:

Overview:
Authors point out several important public health messages:

• An easy spread of measles from an anthroposophic community with very low vaccination coverage to the general population with low vaccination coverage. In the general population a large number cases occurred, most of them unvaccinated.
• Reasons for previous non-vaccination reflect lack of education and a need of proper information targeted not only to public but also to the health professionals
• An early isolation of susceptible contacts during an outbreak of measles can contribute to the reduction of size and duration of clusters

Comments:

General comments:

1. For comparison of the two interventions A and B preferably relative numbers should be used. TABLE 4: *note + DISCUSSION: Last sentence: Authors mention, that attack rates couldn’t be calculated, since number of susceptible contacts was not sufficiently available. Attack rates could be calculated, but exposed persons should be determined (class or school…. ?), therefore a definition of a contact should be established. Attack rate is defined as number of exposed persons infected with the disease divided by the total number of exposed persons.

2. Additionally, number and proportion of the susceptible population could be compared for each cluster. An insufficient information on susceptible population at risk is mentioned, however number of non-immune persons excluded in each cluster (according to intervention A or B) might be available. It would be useful to know, if all non-immune contacts fulfilled the requirement of the intervention A or B in sense of 14 days isolation, (and if it was based on recommendation or as a kind of mandatory command).

3. Moreover, an important information about postexposure vaccination (or application of immunoglobulin) of susceptible contacts would be needed. We know, from RESULTS: Effect of differently applied control measures in schools and kindergartens: 2 paragraph, that ,“The county using intervention B informed
as early as the occurrence of the first incident measles in a kindergarten or school all contact persons about……and the necessity of protection by vaccination.“ Early vaccination or application of immunoglobulin is a specific and basic control measure, which could influence results of this study. Therefore it should be taken into consideration.

4. CONCLUSIONS: 2 paragraph: “Moreover, health professional have to be convinced that immediate notification of suspected measles cases to the health authorities is important for timely infection control measures.” This is very important information and it is also mentioned in discussion. Anyhow, was there some evidence of late reporting during the outbreak?

MINOR ESSENTIAL REVISIONS

5. METHODS: Data collection and descriptive analysis: 2 paragraph: “……………… resident of the four affected Bavarian counties.” In order to specify place, the names of the four counties should be written.

6. METHODS: Laboratory analysis: “Laboratory confirmation using serology…..“ …..the serological test could be specified.

7. METHODS: Clusters: Please, write concrete incubation period, which you used in your definition (...1-18 days)

8. RESULTS: Outbreak description: 1 paragraph, 3 sentence: ..........................
   . Use incidence rate...... instead of incidence

9. RESULTS: Outbreak description: 3 paragraph, 2 sentence: ...... In case of incidence rate ........use (170 cases/ 100,000 person-years)..........................
   or in case of age specific incidence use (170 cases/ 100,000 population)

10. RESULTS: Laboratory analysis: ....“In total, 54 (25%) cases were lab confirmed.“ … by which lab method ?

11. RESULTS: Effect of differently applied control measures in schools and kindergartens: The content of the 1st and 3rd paragraphs describes more methods than results. However, current sequence of these paragraphs is easy to follow.

12. TABLE 3: A column “number of cases per cluster- ranged“ could be added.

DISCRETIONARY REVISIONS

13. ABSTRACT: Background: 3 sentence – “In spring 2008, four…“..... change to “From March to mid-April 2008, four…..“

14. ABSTRACT: Results: 3 sentence – please add number of cases who suffered complications

15. ABSTRACT: Results: I recommend to change the order of sentences. Concretely the two sentences regarding vaccination should straight follow each other. “In total, 156 (97%) of 161 cases with known vaccination status were not vaccinated. The main reason for non-vaccination was …..“ The sentence about complications shouldn’t be between these two describing vaccination.

16. BACKGROUND: Outbreak background: 2 paragraph: “Until
mid-April…..“……. I recommend to add year “Until mid-April 2008…..“.

17. RESULTS: Outbreak description: 6 paragraph, 1 sentence: “Twenty-nine cases (18%)……...“ add “Twenty-nine cases (18%) of 161 ……“

18. RESULTS: Outbreak description: 7 paragraph, 4 sentence: How was the vaccination of two cases laboratory confirmed ?

19. RESULTS: Outbreak description: 8 paragraph: All reasons for not being vaccinated against measles are in the table 2. However, reasons “doctor advised against vaccination“ and “vaccination not offered“ might be mentioned in text, because they are very important and reflect failure of health care.

20. RESULTS: Laboratory analysis: Complete ....“In total, 54 (25%) of 217 cases were lab confirmed.“

21. TABLE 3: Add in heading % (of clusters)

22. FIGURE 2: Title of the axis x could be “Week of disease onset“

23. FIGURE 1 and FIGURE 3: Consider, if “Measles incidence rate (cases per 100,000 person-time)…“ would be more suitable in a given time period.

MINOR ISSUES NOT FOR PUBLICATION

24. BACKGROUD: 1 paragraph: The period of infectiousness (contagiousness) could be mentioned too.

**Level of interest:** An article of importance in its field

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests