Author's response to reviews

Title: Tuberculosis screening and follow-up of asylum seekers in Norway. A cohort study.

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Author's response to reviews:

Dear Madam/Sir

First of all we like to thank you for your review of our manuscript “Tuberculosis screening and follow-up of asylum seekers in Norway. A cohort study.” in BMC Public Health, and for the opportunity to submit a revised version of it. We are grateful for the valuable critical remarks and believe these have helped us to improve the quality of the manuscript substantially.

Many of the comments in the review were of quite a general character. Thus, to make the manuscript more clear and understandable, it has been considerably changed in form if not in content. The language revision added to this. This has made it difficult to specify which words and/or sentences we have changed in the revised version.

Informed consent from the participants was impossible to ask for because at least half of the asylum seekers we studied, had left the country by the study onset. Further we did not know the addresses of those persons who were still living in Norway. Because of this we asked permission to perform the study without informed consent and got all the official permissions deemed necessary (cf. “Study ethics”).

We have enclosed a point to point response to the reviewers’ detailed comments and queries.

We now hope that the paper is acceptable for publication.

Response to review

Reviewer Connie Erkens

Major compulsory revisions:

1: Expected underdiagnosis of active TB: 38% of the asylum seekers with positive x-rays were not examined, but we do not know how many had left the
country or, if so, when they left. Therefore, we can neither rule it out nor assess the magnitude of any underdiagnosis. We have added a sentence on this on page 14.

Probably some were lost initially, but may have been picked up later? In another paper we will do a more recent match with the TB-register and make new comparisons with cases found with the initial screening results.

2: The overall structure of the paper has been revised according to the comments and recommendations. By mistake the headline “Methods” was missing from the submitted manuscript which has been corrected.

3: The general content of the study forms has been described in the revised version under “Data collection”, and the headline changed from the previous “follow-up registration”.

4: Norwegian policy for screening: the policy is general for all immigrants from high incidence countries and several parts of the regulations/guidelines do not herald any specifications for asylum seekers. To find out how the screening of asylum seekers is normally done, was part of the study. It might therefore both be presented in the methods part or as part of the results. The national policy for screening has been moved to the “Background” section.

5: Definitions of asylum seekers/refugees have been presented in a new table 1.

6: The sections “recommended screening and management of TB” and “flow of asylum seekers” have been revised in the paragraph “Recommended screening and management”.

7: “Inclusion into cohort” has been revised in the “Methods part” and because of this the “Results: follow-up study group” has also been changed.

8: The “study endpoint” part has been revised. Hopefully the message is now more clear. Figure 1 has been changed and figure 2 has been removed. Study endpoints will be the sum of those seen at different levels described in figure 1.

9: Table 2 has been removed.

10: Table 3 has been removed.

11: Relevance of “Diagnostic methods”: most of the paragraph has been removed except the final two sentences that have been moved to “Study endpoints discussion”. Reasons for non-compliance to policy about preventive treatment are based on comments and questions from the specialists. This issue will be presented and discussed in a later publication.

12: Were the participating internists part of national program? The Central TB Clinic is a specialised clinic for TB, the rest of the follow-up was done in ordinary health care. Patients are referred from PHC to public hospitals with internists that are part of the national health care. See the last paragraph before “Recommended screening”: No change has been made here.
13: How was implementation of the policy recommendations? The guidelines were issued by national health authorities to all health care personnel engaged in TB management and care.

Please refer to page 5, paragraph 2 for clarification of the issue, where a sentence is added.

14: Consequences of this study for policy recommendations: This point has been removed from “Conclusions” in the former version and rewritten in a new paragraph called “consequences for policy” in the revised version.

15: “Information flow and data ascertainment”: The complexity of the study is documented in figure1. The reply on many forms included “no information” or “person unknown”. More details will be given in a forthcoming paper, including documentation of lack of compliance at both care levels. This paragraph has been cut down and parts of it in the previous version has been moved to “Limitations of the study”.

16: Limitations of the study: Centres that were closed down and the complex logistics can explain why follow-up was not done. Both may limit the access to study information. A separate paragraph on limitations of the study has been added in the revised version. Effects on the results of the study are discussed in the same paragraph. Because of this change, other parts of the discussion had to be changed, too.

Discretionary revisions:

17: The revised and rewritten version of the “Methods- study population” and “Results- the follow-up study group” will hopefully clarify that the inclusion criteria was “inclusion for follow-up” and that information about the screening results of the whole cohort was also part of the study.

18: Stratified analysis of follow-up of subgroups was intentionally left out because we plan to go in depth on those questions in a later paper. In the “Study endpoints” part we have commented how many of those with a Mantoux of 15mm or above or a positive x-ray were seen by specialist. A comparison of these subgroups between those seen and not seen, as well as those with Mantoux 6-14 have been added in the “Results - Study endpoints” revised version. Because of this, description of the statistical methods was added to the “Data handling and analysis” paragraph. A discussion of these findings was added to the “Discussion - Study endpoints”.

19: Descriptive characteristics of the identified TB cases: This is planned for a future paper.

20: Comparison with other countries about TB incidence in asylum seekers: In the second last paragraph of “Discussion-Study endpoints”, the revised version has included a comment that more information about the refugee populations is necessary to compare results of screening between different countries. Because of this the first sentence of the conclusion (abstract and main manuscript) has
also been changed.

Reviewer: Alberto Matelli:

21: We agree with the comment that the follow-up is meant to be follow-up of screening results, not to detect incident cases (cf Background “the study aimed to…..” no change made, really)

Major revisions:

22: see point 11.

23: Table 1: We suggest keeping the table as an aid to understand the follow-up of TB-screening results. The table gives a description of the different institutions that handle asylum seekers. They provide both for TB- and general health care. “Table 1” has changed heading to “Table 2”.

24: Table 2: see point 9 above

25: table 3: see point 10.

26: see point 8 above.

Minor revisions:

Abstract:

27: Numbers assessed by PHC: 673 (30%) asylum seekers were physically seen by a primary health care provider, but overall 758 were assessed to some degree. Thus, 85 persons were directly referred from PHC to specialist or to x-rays without being physically seen by a doctor or nurse. We suggest keeping the numbers 758 in the abstract but in the main paper this will be explained in the end points section. Percents have been added.

28: Personnel at The Central TB Clinic mainly focus on ruling out active TB on arrival and all with positive x-rays on primary screening should be examined there. Other specialists should see all those referred from PHC, either in case of suspect active TB or to assess them for treatment of latent TB. In the abstract these two categories have been merged, but throughout the rest of the paper we have kept them separately.

The overall denominator for all who needed referral were all with positive x-rays, all with Mantoux of 15mm or above and all those with specific risk factors found as a result of the examination in PHC. Still we do not know how many there are in this group who should have been referred to specialist care. We have reported separate results for the group with Mantoux of 15mm or above and for the group with positive x-rays because they are well defined. Ideally, all persons with Mantoux 6-14 should have been seen in the PHC. Percents of those who were seen in this group have been added in the revised version of the manuscript in the “Results - end point”. The whole study group (n=2237) should have been seen either in PHC and/or by specialist. We will go into more details about this in a later paper.
29: See point 28: Some changes have been made in the revised manuscript where the numbers we have confirmed are added in the results part, still we cannot give a complete answer to this question because we neither know how many persons should have been referred nor who should have been treated. In the conclusion we offer some principal comments about the follow-up of screening results instead of repeating the numbers from the results part.

Background

30: We have tried to clarify that we refer to screening methods and not diagnostic methods as follows: “diagnosed by chest x-ray” have been changed to “detected by chest x-ray”. Diagnosis is also based on microbiological methods.

31: The nature and role of follow-up of latent TB: All immigrants from high incidence countries go through screening according to the same guidelines, but only asylum seekers are screened at the National Reception Centre. The Norwegian born population is screened if they are part of a particular risk group, when they start working in health care or with children after a visit to high incidence countries, or as part of contact tracing. The Norwegian born are first screened with a tuberculin test, and if this is positive with a chest x-ray. They are referred to specialist for follow-up if the screening results are positive. In general, all groups should be followed for 3 years (after being infected or detected) unless treatment for latent TB is started. A sentence has been added in the second paragraph, p5: “and others with high risk”.

32: Recommended screening and management: see also point 6. This section has been revised in the manuscript to make it more clearly.

To clarify the different roles: The National Reception Centre performs the Mantoux test and the chest x-ray. Everyone with a positive x-ray should be seen at the Central TB Clinic. After moving to a municipality, those with a positive Mantoux # 15mm should be referred directly from PHC to a specialist. Those with a Mantoux 6-14mm should be examined in PHC and referred to specialist if other risk factors are found.

Results:

33: Country of origin: This characteristic has been revised. Henceforth only information about the five most frequent countries in the total cohort and those included into the follow-up study are reported. Because the composition of the asylum seekers is so different in different countries, we think this is important.

34: Inclusion: see also point 7. This paragraph has been rewritten in the revised version.

35: The 56 subjects were not included in the follow-up study because they left the National Reception Centre without a forward address, left the country altogether, were deported, or died before leaving the centre. In the revised version this has been more clearly stated. The 2237 were included in the follow-up study and the first forms were sent to the municipality they moved to
(with a response rate = 73%).

36: see point 8, point 18, 28 and 29. “Results - endpoints” have been revised. Details about what happened to subgroups will be analysed in a later paper. Some subgroup analyses have nevertheless been included (see also point 18).

37: Information about those who started treatment for latent TB: this information is available and will be reported in detail in a later paper. We have done a new match with the TB Register in May 2008 and identified some more cases. All eleven cases had a Mantoux test above 10 mm and this has been reported in the revised version in the “results - endpoints”.

Discussion:

38: Discussion: study endpoints: 794 is the number of included asylum seekers that were seen in PHC and/or by specialist (internist), 673 were physically seen in PHC. Several were seen by specialist at the Central TB Clinic without being seen in PHC later. We have clarified this in the revised version.