Reviewer’s report

Title: Differences in avoidable mortality between migrants and the native Dutch in the Netherlands

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Reviewer: Oliver Razum

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“Avoidable mortality” refers to deaths that could have been averted by existing preventive or treatment measures; it provides a measure of access to, and quality of, health care services. Avoidable conditions comprise, for example, neonatal and maternal conditions, as well as infectious diseases.

The authors of this paper present, to my knowledge, the first studies comparing avoidable mortality between immigrants from four different countries and a host population, in this case the autochthonous Dutch population. By taking this approach, the authors aim to establish whether there exist opportunities for improving the service quality of specific areas within the Dutch health care system targeted to disadvantaged groups.

The style of the paper is clear and concise. The findings are based on person time data derived from national registries. Data are sound, and quality appears to be good. The methods are well described and are, in principle, appropriate to assess differences in avoidable mortality.

The paper has a conceptual problem, however, that should be given more emphasis: the higher risk of mortality from infection diseases among immigrants could, as the authors themselves state, be the result of a higher exposure to infection in the countries of origin. This alone could explain a higher incidence of these diseases among immigrants, compared to the native Dutch population, and in consequence also a higher mortality. Hence, the explanation for variation in mortality may be due to the variation in incidence, not to problems of quality of, or access to, health care services. In Germany, for example, immigrants have five times the risk of autochthonous Germans to fall ill with tuberculosis. This would have substantial effects also on TB mortality. The authors claim they could have adjusted for the incidence of such diseases – it remains unclear why they have not done so.

There are two other statements in the discussion section that are debatable:

- The lower risk of death from infectious diseases among immigrants who have been staying in the Netherlands for a long time, compared to recent immigrants, may simply be a survivor effect. No deaths before 1995 were registered!

- The authors relate elevated maternal mortality to fertility patterns, especially to a higher parity among immigrants. To my knowledge, maternal mortality is lower with the second to forth child, as compared to the first child.

Finally, the authors state in their conclusions that the role of the health care system remains uncertain and possibly weak. This is in contradiction with the abstract where the authors claim that there are opportunities for quality improvement.

On a more technical side, the authors should redraw figure 1 in 2-D and use shading instead of colours. They should explain why they do not report men and women separately, as there are no space constraints.
Overall, I recommend that this paper should be published. A prerequisite is that the abstract and the discussion section are revised. The discussion should deal more systematically with the question of how useful comparisons of avoidable mortality between immigrants and autochthonous populations actually are (conceptual discussion).

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

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

**Quality of written English:** Acceptable

**Statistical review:** No

**Declaration of competing interests:**

Non-financial competing interests: I do research work on related topics.