

PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	What are the challenges in the Vaccination of Migrants in Norway from Healthcare Provider Perspectives? A qualitative, phenomenological study
AUTHORS	Socha, Anna; Klein, Jörn

VERSION 1 – REVIEW

REVIEWER	Morten Sodemann Center for global and migrant health, Clinical Institute, University of Southern Denmark
REVIEW RETURNED	26-Jun-2020

GENERAL COMMENTS	<p>A study that's impaired by the lack of public data on immunization and ethnicity and lack of indication of a risk problem in Norway. The informants may not be the most informative and there is a lack of migrant informants.</p> <p>Methods "... interviews with seven HCPs specialization in infectious diseases or migrant health" – I'm not very familiar with the Norwegian health care system but I find it likely that the majority of immunizations take place in family practices. Are the selected specialists representative of health workers that have first hand knowledge of barriers? – the selection should be justified and it should be explained why they offer better information than family doctors.</p> <p>"challenges faced by migrants" – that would be challenges as perceived by health workers, as migrants were not included as informants.</p> <p>Results Gaps in hepatitis screening of pregnant women not mentioned by informants. It is a wellknown migrant health issue</p> <p>Discussion The study is somehow impaired by lack of data clearly indicating a risk problem in Norway and by a lack of migrant informants. Immunization rates by ethnicity can be instrumental in targeted interventions. Immunization rates for polio and measles seem to be fairly high among refugees (see suggested papers) What is the real risk vs. perceived risk in Norway? Why is tuberculosis more important than measles or hepatitis? Tracking of hepatitis among pregnant women and vaccination of family contacts to migrants with chronic hepatitis B (and treatment of hepatitis C) is not discussed.</p>
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	<p>The authors may want to consult these papers:</p> <p>Giambi, Cristina, et al. "Immunisation of migrants in EU/EEA countries: Policies and practices." <i>Vaccine</i> 37.36 (2019): 5439-5451.</p> <p>Hertzum-Larsen, Rasmus, et al. "Human papillomavirus vaccination in immigrants and descendants of immigrants in Denmark." <i>European Journal of Cancer Prevention</i> 29.2 (2020): 149-156.</p> <p>Gamlund, Espen, et al. "Mandatory childhood vaccination: Should Norway follow?." <i>Etikk i praksis-Nordic Journal of Applied Ethics</i> 1 (2020): 7-27.</p> <p>Prymula, Roman, et al. "Vaccination in newly arrived immigrants to the European Union." <i>Vaccine</i> 36.36 (2018): 5385-5390.</p> <p>Hvass, Anne Mette Fløe, et al. "Are refugees arriving in Denmark an under-immunised group for measles? A cross-sectional serology study." <i>Vaccine</i> 38.13 (2020): 2788-2794.</p> <p>Leong, Wei-Yee, and Annika Beate Wilder-Smith. "Measles resurgence in Europe: migrants and travellers are not the main drivers." <i>Journal of Epidemiology and Global Health</i> 9.4 (2019): 294-299.</p> <p>A Hvass, C Wejse, 6.5-O8 High coverage of the polio immunization program in refugees resettling in Denmark, <i>European Journal of Public Health</i>, Volume 28, Issue suppl_1, May 2018, cky047.230, https://doi.org/10.1093/eurpub/cky047.230</p>
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REVIEWER	Klaudia Bielecki NHS Lothian, UK
REVIEW RETURNED	14-Jul-2020

GENERAL COMMENTS	<p>Thank you for the opportunity to review the manuscript titled "Challenges in the Vaccination of Migrants in Norway: Healthcare Provider Perspectives". I found it to be timely and of interest to the BMJ readership. The paper is well-written and very clear to read. There are very minimal points that I would like to offer to strengthen the manuscript:</p> <ul style="list-style-type: none"> - It would be informative for readers to be provided with the context of Norway's vaccination uptake rates in the introduction section – what is the general uptake of vaccinations, are there any changes in the uptake rates? - It would be informative to provide the number of healthcare providers asked to participate in the study in the methods section – this is mentioned in the discussion as a limitation but would be useful in methods - It would be useful for future researchers, if wanting to replicate the study, if the interview guide was provided as a supplementary material - The results section can be strengthened by inserting more direct participant quotes that showcase themes discussed – if interviews were recorded and transcribed, why did authors not choose to use more participant quotes?
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VERSION 1 – AUTHOR RESPONSE

Response to referee Professor Sondemann:

A study that's impaired by the lack of public data on immunization and ethnicity and lack of indication of a risk problem in Norway. The informants may not be the most informative and there is a lack of migrant informants.

We agree that the involvement of migrants would strengthen the study. However, we decided to focus on system- and provider-related challenges with delivering vaccination programs to migrants in Norway as this is also an area necessitating research and an important component to an effective vaccination program; for example, if policies exist, but are not in use, that is important to know. Further, migrant informants were not interviewed due to practical reasons (e.g. the first author had only a short research stay in Norway and during the summer months).

Methods

"... interviews with seven HCPs specialization in infectious diseases or migrant health" – I'm not very familiar with the Norwegian health care system but I find it likely that the majority of immunizations take place in family practices. Are the selected specialists representative of health workers that have first hand knowledge of barriers? – the selection should be justified and it should be explained why they offer better information than family doctors.

Thank you very much for this comment. It is a good question and has allowed us to see how our original methods was not overly descriptive or clear. We have addressed this by writing a more detailed selection of participants, which we believe explains why the respondents were able to discuss first hand knowledge of the barriers in vaccinating migrants:

"Purposive sampling was used to select interview participants. Throughout June 2019, the researchers invited 23 HCPs working at different health stations ("helsestasjon" in Norwegian) or clinics, to be interviewed. In Norway, vaccination is primarily provided in these so called "health stations". Health stations are under municipal jurisdiction and are responsible for preventative health services, including national vaccination programs. However, the organization of the municipal health system varies based on community needs wherein some municipalities have health stations specialized for certain populations or issues, such migrants and Norwegians who return to the country from travel. Therefore, the researchers reached out to clinics and a policy and research institute in the region that were involved in vaccination work, which included general practitioner clinics, public health/infectious disease/travel clinics, a public health institute, and migrant health stations. HCPs were contacted via email and asked about their willingness to be interviewed for the study. All HCPs who agreed to participate were interviewed. As such, seven HCPs working at different health stations were interviewed; this included nurses and physicians from public health/infectious diseases/travel clinics, a public health and infectious disease institute, a migrant health clinic, and a general practitioner clinic."

"challenges faced by migrants" – that would be challenges as perceived by health workers, as migrants were not included as informants.

Dear reviewer, thank you. We have changed this according to your suggestions to "As such, HCPs were hesitant when discussing challenges faced by migrants as perceived by health workers in accessing vaccinations."

Results

Gaps in hepatitis screening of pregnant women not mentioned by informants. It is a well known migrant health issue

Dear reviewer, we believe that this may be due to a lack of awareness by HCPs. Until 2018, Norway was among the few countries in Europe that did not test all pregnant women for chronic hepatitis B infection. We added your point both in the result and discussion section.

Discussion

The study is somehow impaired by lack of data clearly indicating a risk problem in Norway and by a lack of migrant informants.

Immunization rates by ethnicity can be instrumental in targeted interventions. Immunization rates for polio and measles seem to be fairly high among refugees (see suggested papers)

What is the real risk vs. perceived risk in Norway?

Why is tuberculosis more important than measles or hepatitis?

Tracking of hepatitis among pregnant women and vaccination of family contacts to migrants with chronic hepatitis B (and treatment of hepatitis C) is not discussed.

Dear reviewer, thank you for your insightful and thought-provoking comments! In terms of the focus on TB, we believe this is due to a clear focus on TB by the Norwegian Public Health Institute in terms of strong policies and mandated protocols. This focus on TB may be due to the idea that TB is highly infectious. However, as this reasoning is still highly speculative and not mentioned in respondents' answers, we are choosing to present the theme that TB has stronger policies and procedures, but not go beyond that in why TB is more important as we don't have that answer. This research project was quite broad, but we hope it can still identify areas necessitating further research, such as the question you are posing.

Regarding immunization by ethnicity, we have included that and it is one of our main points.

There is no discussion by the informants of the other challenges you raised; this may be due to a lack of awareness of the issue, but we cannot say as it was not a result of this work.

- It would be informative for readers to be provided with the context of Norway's vaccination uptake rates in the introduction section – what is the general uptake of vaccinations, are there any changes in the uptake rates?

Dear reviewer, thank you for your feedback. we added the following sentence: "In general, vaccination rates among the Norwegian population are high²⁵, but not all migrants are included in such figures, which may have led to the negligence of migrant-specific challenges." This is our source: [https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria\[country\]=NOR](https://apps.who.int/immunization_monitoring/globalsummary/countries?countrycriteria[country]=NOR). It shows how vaccination rates are above 95% for all vaccines.

- It would be informative to provide the number of healthcare providers asked to participate in the study in the methods section – this is mentioned in the discussion as a limitation but would be useful in methods

Dear reviewer, we added the following sentence to the method section: "Throughout June 2019, the researchers invited 23 HCPs working at different health stations ("helsestasjon" in Norwegian) or clinics, to be interviewed."

- It would be useful for future researchers, if wanting to replicate the study, if the interview guide was provided as a supplementary material

Thank you for your suggestion. This will be provided.

- The results section can be strengthened by inserting more direct participant quotes that showcase themes discussed – if interviews were recorded and transcribed, why did authors not choose to use more participant quotes?

Dear reviewer, this is an issue we grappled with as well. Given the word limit of many journals, quotes did not fit in our manuscript. As the reader may see, this research study spanned numerous topics. To include quotes would require much more space. We also considered that increasing word count reduces readership... Thus, for the time being, we have omitted direct participant quotes. Perhaps a supplementary document in the future with selected participant quotes would be an option to address this challenge. Many thanks for this comment and question.

VERSION 2 – REVIEW

REVIEWER	Klaudia Bielecki NHS Lothian, United Kingdom
REVIEW RETURNED	10-Sep-2020
GENERAL COMMENTS	Thank you for your revision