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Migration and perinatal health surveillance: An international Delphi survey

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ABSTRACT

Objective: While the perinatal health of migrants has been identified as a priority by many governments, there is no consensus on indicators for monitoring migration and perinatal health. The Reproductive Outcomes and Migration international research collaboration and the EURO-PERISTAT project convened an expert panel to recommend migration indicators for national and international monitoring of migration and perinatal health.

Study design: A Delphi consensus process involved 38 perinatal clinicians, epidemiologists, and experts in health information systems from 22 countries who completed one or more questionnaires. Panel members ranked migration indicators from a list inventoried from the published literature.

Results: Country of birth was considered 'essential' or 'recommended' for routine collection by 100% of respondents, followed by length of time in country (88%), language fluency (70%), immigration status (67%), and ethnicity as defined by maternal parents' place of birth (55%). Feasibility with 'minor' or 'no modifications' to current data collection systems was highest for country of birth (69%), followed by length of time in country (61%). Other indicators were judged to be less feasible. In respect to migration, the perinatal health indicators considered to be 'essential' by 94% of respondents included fetal, neonatal, and infant mortality. A smaller proportion (73%) considered maternal mortality to be 'essential'.

Conclusions: A strong consensus was achieved for including country of birth in core perinatal health indicator sets. Length of time in country was also recommended as a second indicator for routine data collection. Specific studies should be undertaken to complement routine data collection on: immigration status, language fluency, and ethnicity as defined by maternal parents' place of birth.

1. Introduction

Extensive international migration to industrialized countries [1] has been accompanied by health disparities between migrants and receiving-country nationals [2–5] which make this issue a priority for research and action [6,7]. Examples of differences in perinatal health outcomes and care between migrant and native-born women include: a 50% greater perinatal mortality risk for migrant women living in Sweden compared to their Swedish counterparts [adjusted odds ratio (OR_{adj}) 1.5; 95% CI (1.04, 2.17)] [8] and a near doubling of preterm birth rates for migrants in France [OR_{adj} 1.9; 95% CI (1.18, 3.05)] [9]. However, this portrait of migrant health varies between studies and migrant outcomes are sometimes comparable or better than their receiving counterparts. For instance, migrant women had a 19% lower risk for perinatal mortality than US-born women in one study [OR_{adj} 0.81 (0.72, 0.91)] [10] and equivalent risks of low birth weight were reported in migrants in lower Saxony [OR_{adj} 1.01 (0.92, 1.10)] [11].

One of the difficulties in interpreting the literature on migration and perinatal health is inconsistency in the definition and measurement of migration. Variables used to describe migration include: country of birth/national origin, regional origin, nationality, ethnicity, race, language, skin colour, ethnic majority/minority, parents' country of birth, religion, length of time in country, and generation immigrant (i.e., 1st, 2nd, etc.). Contradictory study findings may result from differences in migrant definitions or in migrant groups themselves, which cannot be distinguished given the labels used. For instance, 'foreign-born' could include individuals from many world regions who arrived months or years ago. Heterogeneity in the definition of migrant groups has limited attempts to synthesize results from the many studies that have been carried out on this subject.

In order to reduce this heterogeneity, international consensus on migrant definitions is needed.

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The Reproductive Outcomes and Migration (ROAM) international research collaboration was created to study the relationship between migration and reproductive health outcomes, with an initial objective to obtain consensus on migration indicators to be used internationally for perinatal indicator sets and routine population-based perinatal surveys. Toward this end, and in collaboration with the EURO-PERISTAT project [12], an international Delphi consensus process was conducted.

2. Materials and methods

We began by undertaking a review of 10 years of literature on migration and perinatal health, resulting in a database of 133 published studies [13]. One purpose was to inventory the definitions of 'migrant' that had been used, and to form an exhaustive list of potential migration indicators.

To achieve consensus on indicators of migration, a modified Delphi process was used. Delphi is a formalised consensus method whereby participants respond to a successive series of questionnaires with the aim of achieving a consensus on key principles or proposals [14,15]. Participants rank items by priority or importance and may provide comments. The benefits of this approach are anonymity, iteration (allowing participants to change their opinions), feedback in which participants are provided with the distribution of the group's previous responses, and the derivation of summary measures of agreement [16]. Moreover, in an international context, where language ability in a common language varies, the Delphi process provides respondents additional time to read and respond.

The panel for the Delphi was established by asking members of the EURO-PERISTAT Scientific Committee, ROAM, and experts referred by ROAM to participate. The EURO-PERISTAT Scientific Committee members are clinicians or epidemiologists/statisticians who have experience working with national perinatal health information systems and in selecting indicators for perinatal health surveillance in the European Union [17,18]. ROAM members are clinicians, epidemiologists/statisticians, and social scientists with expertise in questions related to the reproductive health and care of migrant women. Respondents were asked to provide their individual perspectives about the countries in which they worked.

The Delphi process was carried out in three rounds between April and August 2007. Results of each round were summarized and used to develop the questionnaire for the next round. Questionnaires were pilot tested for readability and formatting. The initial questionnaire was developed using the list of migration definitions found in the literature review. It asked participants to:

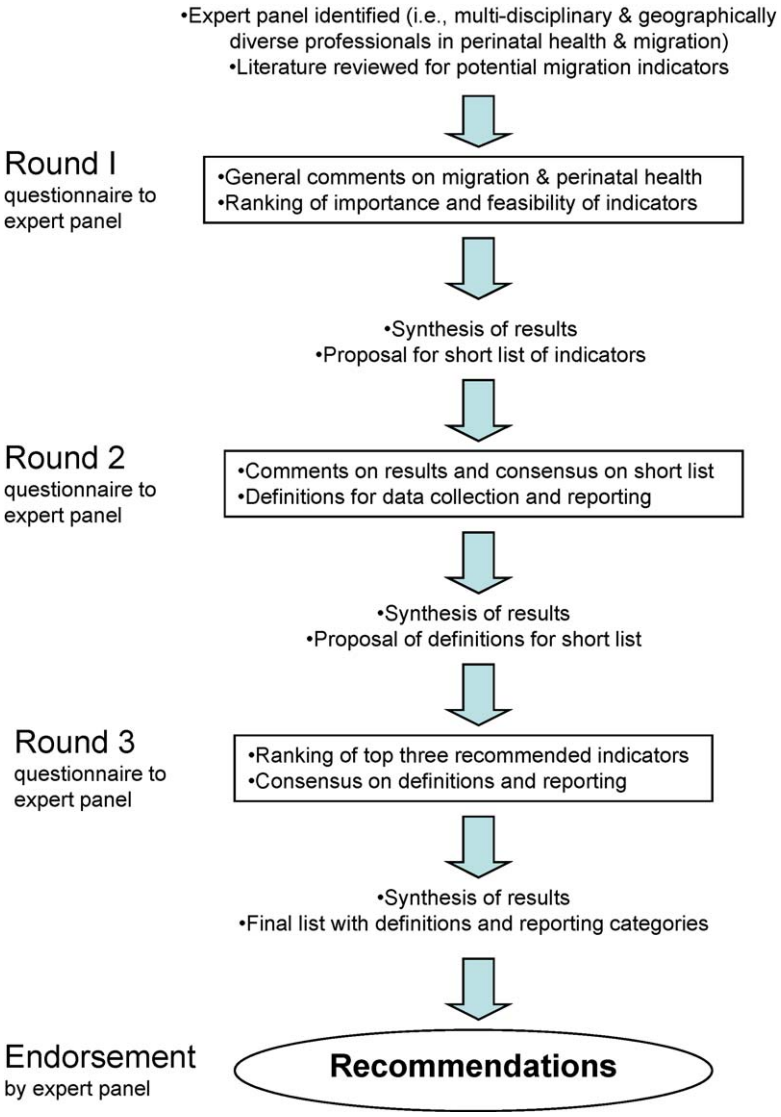

Fig. 1. The Delphi process for consensus on migration indicators.