

# Maternal and child health and care provision in Palestine: data from the national electronic maternal and child health registry (MCH eRegistry)

Mervett Isbeih, Mahima Venkateswaran, Tamara Awwad, Buthaina Ghanem, Khadija Abu-Khader, Taghreed Hijaz, Mohammad Baniode, Eatimad Abbas, Rand Salman, Asad Ramlawi, Binyam Bogale, J Frederik Frøen

## Abstract

**Background** Good quality data from health systems can benefit several stakeholders, including policy makers, care providers, clients, and researchers. Conventional data collection methods for maternal and child health, such as household surveys, may not be suitable to assess processes of service delivery. The electronic maternal and child health registry (MCH eRegistry) has been implemented in 182 governmental primary care clinics in Palestine. Here we present the data in the MCH eRegistry.

**Methods** We processed the raw data in the MCH eRegistry from the West Bank, and documented validation rules for crude data points (time of entry, values allowed). Definitions and appropriate categorisations were created for core process indicators. Data from the MCH eRegistry and the electronic health information system in governmental hospitals were linked using statistical software.

**Findings** As per the second quarter of 2018, the MCH eRegistry contained raw data on 69 793 antenatal care visits, 27 304 postpartum care visits and 40 264 newborn care visits. From antenatal care, data on core process indicators were available for screening of anaemia (n=48 542), hypertension (n=66 814), diabetes (n=18 013), asymptomatic bacteriuria (n=31 757), as well as antenatal ultrasound (n=55 453). Distributions of raw data on haemoglobin and blood pressures had no extreme outliers. Links had been established between antenatal care and delivery data in governmental hospitals for 51% of births.

**Interpretation** The MCH eRegistry contains data from antenatal to postpartum and newborn care. These data have been successfully linked with delivery data, resulting in a large data set on continuity of care and birth outcomes. Furthermore, the data are accessible, of good quality, and can be used for studies of quality of care and maternal and newborn epidemiology, among others. Researchers are invited to use this resource in working towards improving the health system and the health of Palestinians.

**Funding** European Research Council and Research Council of Norway.

## Contributors

MI formulated the research question, carried out data management and analysis, and wrote the Abstract. MV contributed to analysis, interpreted results and wrote the Abstract. TA carried out data curation. BG supervised the project and revised the Abstract. KAK, TH, MB, and EA supervised data collection as part of the support provided by the MCH eRegistry. RS and AR provided contextual knowledge and administrative support for data management. BB contributed to data analysis. JFF conceptualised data collection from the MCH eRegistry, refined the research question, interpreted data, and revised the Abstract. All authors have seen and approved the final version of the Abstract for publication.

## Declaration of interests

We declare no competing interests.

## Acknowledgments

We would like to express our gratitude to the Palestinian Ministry of Health for their cooperation and support of data management procedures of the MCH eRegistry.

Published Online

March 24, 2019

Palestinian National  
Institute of Public Health,  
WHO, Ramallah, occupied  
Palestinian territory

(M Isbeih MS, T Awwad MS,

B Ghanem PharmD,

K Abu-Khader MS,

M Baniode MS, E Abbas MS,

R Salman MD); Global Health

Cluster, Division for Health

services, Norwegian

Institute of Public Health,

Oslo, Norway

(M Venkateswaran MS,

Binyam Bogale MS,

J F Frøen MD); Center for

Intervention Science in

Maternal and Child Health,

University of Bergen, Bergen,

Norway (M Venkateswaran,

Binyam Bogale, J F Frøen);

Palestinian Ministry of health,

Ramallah, occupied Palestinian

territory (Taghreed Hijaz MS,

Asad Ramlawi MD)

Correspondence to:

Buthaina Ghanem,

Palestinian National Institute of

Public Health, WHO, PO Box

4284, Al-Bireh, West Bank,

occupied Palestinian territory

ghanembu@who.int

Reproduced with permission of copyright owner. Further reproduction prohibited without permission.