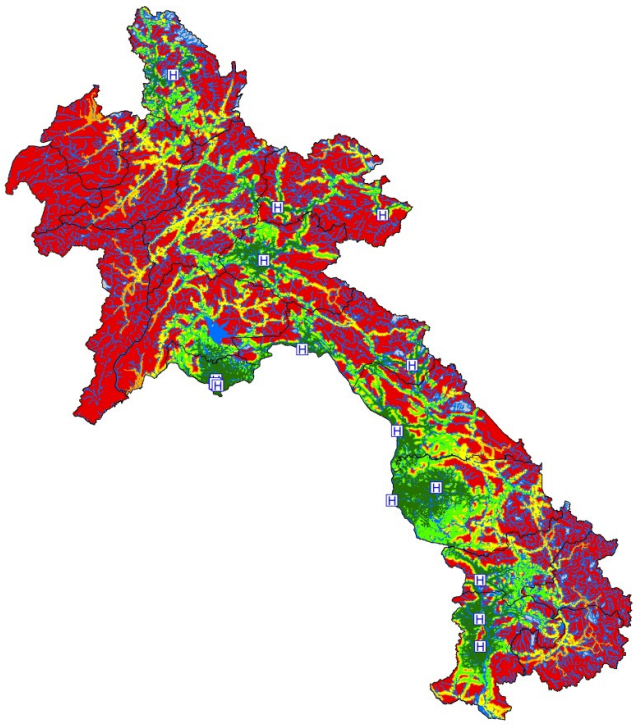
World Health Organization

Investing the Marginal Dollar for Maternal and Newborn Health: Geographic Accessibility Analysis for Emergency Obstetric Care services in Lao People's Democratic Republic



Steeve Ebener, PhD [1] and Karin Stenberg, MSc [2]

[1] *Consultant, Gaia GeoSystems, The Philippines*

[2] *Technical Officer, Department of Health Systems Governance and Financing, World Health Organization, Geneva, Switzerland*

WHO/HIS/HGF/GIS/2016.4

Table of Contents

Acknowledgements

The authors wish to express our gratitude to staff at the Ministry of Health of the Lao People's Democratic Republic for their time, inputs and the health statistics they have provided to inform the analysis presented in this report.

We also would like to take this opportunity to thank Ms Eunyoung Ko and Ms Boram Koh from the WHO Country Office of the Lao People's Democratic Republic for their valuable insights and support throughout the undertaking of the study.

Our gratitude also goes to Ms Noune Phommixai (National Geographic Department, NGD), Ms Siriphone Sakulku (UNFPA) and Dr Michael Epprecht (University of Bern) for the data and inputs they provided.

We acknowledge the financial support provided to this project by the Government of Norway.

For comments, please contact Karin Stenberg (stenbergk@who.int) or Steeve Ebener (steeve.ebener@gaia-geosystems.org).

Executive summary

Objective

Progress on MDG5a to reduce maternal mortality is lagging behind in many countries and a key constraint is access to skilled care at birth including emergency obstetric care (EmOC) services. In order to expand coverage, good-quality essential services must be integrated into strong health systems.

The World Health Report 2005 proposed a "close to client" approach with back up services at referral level. While the first level should be able to provide most of the Basic Emergency Obstetric Care (BEmOC) signal functions, there is also a universal need for access to comprehensive Emergency Obstetric Care (CEmOC) referral services, in case the need arises.

In recognition of the key impact that EmOC services can have on maternal mortality and safe birth outcomes, the World Health Organization (WHO) is supporting the use of Geographic Information Systems (GIS) to analyse physical accessibility to facilities providing EmOC in four selected countries, namely (by alphabetical order):Burkina Faso, Cambodia, Lao People's Democratic Republic and Malawi.[1]

Essentially, from a normative perspective every woman should be able to easily access a health facility that provides BEmOC. This is not currently the case in most low-income countries. Strategic decisions need to be made by policy makers and health planners with regards to what investments are feasible given limited resources and competing priorities.

The broader project aims to inform policy discussions on how to optimize or target the spending of the marginal dollar for maternal health at country level; in particular to examine the infrastructure requirements for scaling up coverage of institutional delivery with skilled attendance. The research undertaken as part of this project and presented here aims to investigate the current accessibility to EmOC and potential implications for future global and national level policy recommendations and norms.

Methodology

The analysis first assesses accessibility coverage[2]. It then combines the results with data on the availability of human resources in the facilities providing the concerned health services, in order to obtain a measure combining both the population needs and service availability. This measure is referred to as geographic coverage.

[1] This work has received financial support from the Norwegian Government as part of a work plan to operationalize the UN Secretary General's Global Strategy for women and children's health.

[2] Refers to ensuring that health services are located within reasonable reach of the people who should benefit from it (Tanahashi, 1978)

In the case of the Lao People's Democratic Republic, working in close collaboration with the Ministry of Health through the WHO Country Office, a freely available GIS extension developed by WHO to measure physical accessibility to health care, called AccessMod (See Chapter 4), has been used in combination with statistical data from existing sources (including household surveys, Health Information System, etc..) to perform the following analyses for the country (See Chapter 5 for more details):

1. Accessibility coverage:
    a. The percentage of all births where the household is located within 2 hours of travel time to a BEmOC facility;
    b. The travel time between each BEmOC facility and the nearest CEmOC facility.
2. Geographic coverage:
    a. The percentage of all births where the household is located within 2 hours of travel time to a BEmOC facility with enough capacity to cover all births under the assumption of normal delivery (i.e., with sufficient availability of skilled birth attendants);
    b. The percentage of births with complications requiring blood transfusion/Caesarean-section (C-section) that will reach a CEmOC facility within 2 hours of travel time from BEmOC facilities, and where the CEmOC facility has enough capacity to manage complications (through the availability of EmOC surgical teams).
3. Service utilization: Comparison between the results from the accessibility/geographic coverage analysis with data on actual service utilization (BEmOC coverage compared with the percentage of births delivered in a health facility; sub national level estimated percentage and health facility level number of births referred to CEmOC facilities for complication compared with the corresponding percentage and number of caesarean-sections observed during a recent year).
4. Scaling up: Scenarios developed to reach universal accessibility and geographic coverage through various mechanisms of expanding the EmOC facility network.

The results coming out of these analyzes (Chapter 7) are presented under the form of tables, graphs and maps to be included into the analysis of maternal and new born health