

AB021. Geospatial mapping of two-hour access to timely essential surgery in the Philippines

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Background: Timely access to safe and affordable surgery is essential for universal health coverage. To date, there are no studies evaluating the 2-hour access to Bellwether procedures (Caesarean section, laparotomy, open fracture management) in the Philippines. Thus, the objectives of this study are firstly, to measure the proportion of the population able to reach a Bellwether hospital within 2 hours in the Philippines and secondly, to identify areas in the country with the most surgically underserved populations.

Methods: All Philippines public hospitals with Bellwether capacities were identified from the Ministry of Health website. The service area tool in ArcGIS Pro was used to determine the population within a two-hour drive time of a Bellwether facility. Finally, suitability modelling was done to identify potential future sites for a surgical facility that targets the most underserved regions in the Philippines.

Results: A total of 428 Bellwether capable hospitals were identified. 85.1% of the population lived within 2 hours of

one of these facilities. However, seven regions had less than 80% of its population living within 2 hours of a Bellwether capable facility—Bicol, Eastern Visayas, Zamboanga, Cordillera, Autonomous region of Muslim Mindanao, Caraga and Mimaropa. Suitability analysis identified four regions—Caraga, Mimaropa, Calabarzon and Zamboanga—which are ideal locations to build a new hospital with surgical capacity.

Conclusions: The Philippines is a country which provides good access to essential and emergency surgical services to its population. More than 80% of its population can access Bellwether procedures within 2 hours. However, regional disparities in terms of access still need to be addressed. Surgical capacity needs to be improved in regions which do not meet the Lancet Commission of Global Surgery (LCoGS) indicator target for 2-hour access to essential surgery of at least 80%.

Keywords: Geospatial mapping; access to surgery; Philippines; Bellwether procedures; global surgery

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Footnote

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Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related

to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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