A spatial analysis of the effects of the integrated health systems strengthening programme on maternal and child health coverage changes in sub-Saharan Africa

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A number of initiatives aimed at strengthening health systems for maternal and child health (MCH) outcomes have been put in place in sub-Saharan Africa and Asia. One such initiative is the UNICEF supported Integrated Health Systems Strengthening (IHSS) program in six African countries: Ethiopia, Ghana, Malawi, Mali, Mozambique and Niger between 2007 and 2013. The IHSS aimed at increasing coverage of a number of MCH indicators through targeted interventions including training community health workers to deliver integrated community case management.

IHSS intervention effects may vary by geographical area due to a number of unobserved and latent factors, not measured by the survey data. This study examined changes in the coverage rates as well as a wide range of geographical correlates of MCH outcomes in the six sub-Saharan African countries. Bayesian spatial and temporal models were used to analyse publicly available data from demographic and health surveys to map changes in uptake of MCH interventions, accounting for household and community level factors in the respective six IHSS program countries. This methodology was useful for the identification of geographical regions where positive changes in MCH intervention coverage had taken place. The produced maps provided a graphic utility to identify where targeted policies and resources would be most needed to have the greatest effect on improving MCH outcomes

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