Estimates of zero maternal and newborn health service utilisation across 34 African countries, version 1.0

This data release provides gridded estimates of Zero Maternal and Newborn Health (ZMNH) service non-utilisation at a spatial resolution of 30 arc-seconds (approximately 1 km grid cells). The project team used data from the Demographic and Health Surveys (DHS) and geospatial covariates to model and predict ZMNH prevalence across 34 countries in sub-Saharan Africa. ZMNH prevalence was defined as the proportion of women who received fewer than four antenatal care visits, had no skilled attendant at birth, and received no postnatal care for either the mother or the baby from a skilled provider within 48 hours of birth. To ensure consistency across countries, a skilled provider for all three services was defined as a doctor, midwife, or nurse. Estimates were generated for each grid cell using a Bayesian geostatistical modelling framework, which enabled quantification of uncertainty in the coverage estimates.

These data were produced by the WorldPop Countdown to 2030 team at the University of Southampton and University College London as part of the Countdown to 2030 Project Gavi Zero-Dose III project, funded by the Bill & Melinda Gates Foundation (INV-042414).

FILE DESCRIPTIONS

The projection for all GIS files is the WGS84 (World Geodetic System 1984) geographic coordinate system.

zmnh_mean_lower- TIF raster layer containing the lower mean predicted ZMNH. The values represent the proportion of women with ZMNH. The values range from 0 (low ZMNH) to 1 (high ZMNH).

zmnh_mean_upper- TIF raster layer containing the upper mean predicted ZMNH. The values represent the proportion of women with ZMNH. The values range from 0 (low ZMNH) to 1 (high ZMNH).

zmnh_mean_std- TIF raster layer containing the standard deviations of the mean predicted ZMNH.

zmnh_mean_unconstrained- TIF raster layer containing the mean predicted ZMNH for all areas in the study area, including uninhabited areas. The values represent the proportion of women with ZMNH. The values range from 0 (low ZMNH) to 1 (high ZMNH).

zmnh_mean_constrained- TIF raster layer containing the mean predicted ZMNH inhabited areas only in the study area. The values represent the proportion of women with ZMNH. The values range from 0 (low ZMNH) to 1 (high ZMNH). The 2025 WorldPop population estimates were used to constrain this layer to inhabited areas.

Recommended citation