



Institute for Health Metrics and Evaluation

Data Release Information Sheet

Data Summary

Dataset name: Sub-Saharan Africa Male Circumcision Geospatial Estimates 2000-2017

Date of release: July 7, 2020

Summary:

Annual estimates were produced for adult male circumcision (MC) prevalence and the number of circumcised and uncircumcised males ages 15-49 at the 5x5 km-level for 38 countries in sub-Saharan Africa between 2000 and 2017. These estimates were produced using a geo-positioned dataset created from 109 household surveys. Survey sources used include the Demographic and Health Survey (DHS), AIDS Indicator Survey (AIS), Multiple Indicator Cluster Survey (MICS), Core Welfare Indicators Questionnaire Survey (CWIQ), Population-based HIV Impact Assessment Survey (PHIA), and other country-specific surveys.

This dataset includes the following:

- GeoTIFF raster files for pixel-level estimates of male circumcision (MC) prevalence and the number of circumcised and uncircumcised males ages 15-49
- CSV files of aggregated circumcision estimates for each country at zero, first and second administrative divisions
- Code files used to generate the estimates

Relevant publications and visualizations:

- Cork MA, Wilson KF, Perkins S, Collison ML, Deshpande A, Eaton JW, et al. Mapping male circumcision for HIV prevention efforts in sub-Saharan Africa. *BMC Medicine*. 7 Jul 2020.

Acknowledgements

Contributing organizations:

- Institute for Health Metrics and Evaluation (IHME)

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- Bill and Melinda Gates Foundation (BMGF)

Suggested Citation:

Institute for Health Metrics and Evaluation (IHME). Sub-Saharan Africa Male Circumcision Geospatial Estimates 2000-2017. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2020.

Data Files Information

CSV files of Aggregated Estimates of Adult Male Circumcision

Stored in files named <MEASURE>_<METRIC>_<LEVEL_OF_AGGREGATION>.CSV

(Example: IHME_AFRICA_MC_HIV_2000_2017_CIRCUMCISED_COUNTS_ADMIN_1_Y2020M06D01.CSV)

- **Measure:** Male circumcision prevalence, Number of circumcised men, Number of uncircumcised men
- **Level of aggregation:** admin0, admin1, or admin2, corresponding to first and second administrative level areas as defined in the Database of Global Administrative Areas (GADM) 2020_02_20 shapefiles, with adjustments made in some countries. Each row in each table is unique by administrative unit and year

Variable	Variable Label	Variable Definition
ADM0_CODE	GADM Admin 0 Code	GADM code identifying the administrative unit
ADM0_NAME	Admin 0 Name	Zero level administrative unit (Country) name as found in the GADM shapefile
ADM1_CODE	GADM Admin 1 Code	GADM code identifying the administrative unit (Only in the admin1 files)
ADM1_NAME	Admin 1 Name	First level administrative unit name as found in the GADM shapefile
ADM2_CODE	GADM Admin 2 Code	GADM code identifying the administrative unit (Only in the admin2 files)
ADM2_NAME	Admin 2 Name	Second level administrative unit name as found in the GADM shapefile (Only in the admin2 files)
year	Year	Time period of estimate. Possible values: years in the range 2000-2017
age_group_id	Age Group ID	Unique numeric identifier for the age group generated and stored in an IHME database of data dimensions. Possible values: 24
age_group_name	Age Group Name	Age group estimated. Possible values: 15-49 years
sex_id	Sex ID	Unique numeric identifier for the sex generated and stored in an IHME database of data dimensions. Possible values: 1
sex	Sex	Sex estimated: Possible values: Males
measure	Measure	The measure (indicator) estimated. Possible values: <ul style="list-style-type: none"> • Male circumcision prevalence • Number of circumcised men • Number of uncircumcised men
metric	Metric	Metric/unit of measure for the estimate. Values: Counts, Percent
mean	Mean	Mean posterior population-weighted estimate for the administrative unit

Variable	Variable Label	Variable Definition
upper	Upper Confidence Interval	97.5% population-weighted posterior quantile estimate for the administrative unit
lower	Lower Confidence Interval	2.5% population-weighted posterior quantile estimate for the administrative unit

Codebooks

Variable names, labels, and value encoding for admin 0 files can be found in the machine-actionable codebook file [IHME_AFRICA_MC_HIV_2000_2017_CODEBOOK_ADMIN_0_Y2020M06D01.CSV](#)

Variable names, labels, and value encoding for admin 1 files can be found in the machine-actionable codebook file [IHME_AFRICA_MC_HIV_2000_2017_CODEBOOK_ADMIN_1_Y2020M06D01.CSV](#)

Variable names, labels, and value encoding for admin 2 files can be found in the machine-actionable [IHME_AFRICA_MC_HIV_2000_2017_CODEBOOK_ADMIN_2_Y2020M06D01.CSV](#)

GeoTIFF Raster Files for Pixel-level Estimates of Adult Male Circumcision

Stored in files named <MEASURE>_<STAT>_<YEAR>.TIF

(Example: IHME_AFRICA_MC_HIV_2000_2017_ [MC_PREVALENCE_MEAN_2010](#) _Y2020M06D01.TIF)

- **Measure:** Male circumcision prevalence, Number of circumcised men, Number of uncircumcised men
- **Metric:** Counts, Percent
- **Stat:** mean, upper, or lower summary statistics from the predictive posterior distribution at each pixel. Lower and upper correspond to 2.5% and 97.5% quantiles
- **Year:** From 2000 to 2017, corresponding to the time period of the estimate

Note that rasters mask (i.e., have NA values) for lakes and areas with low population (10 people per 1km and classified as barren/sparsely vegetated).

Data Input Sources

This file contains relevant metadata about the input sources as suggested in the [Guidelines for Accurate and Transparent Health Estimates Reporting \(GATHER\)](#), a statement that promotes best practices in reporting health estimates.

[IHME_AFRICA_MC_HIV_2000_2017_DATA_INPUT_SOURCES_Y2020M06D01.XLSX](#)

Additional Information

Terms and Conditions

<http://www.healthdata.org/about/terms-and-conditions>

Contact information

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These files may be updated periodically, so we appreciate hearing feedback or additional information about how these data are being used.