



Institute for Health Metrics and Evaluation

Data Release Information Sheet

Data Summary

Dataset name: Africa HIV Prevalence Geospatial Estimates 2000-2017

Date of release: May 15, 2019

Summary:

Estimates were produced for HIV prevalence among adults ages 15-49 and the corresponding number of people living with HIV (PLHIV) at the 5x5 km-level in 47 countries in Africa between 2000-2017. These estimates were produced using data on HIV and geographical locations from seroprevalence surveys and sentinel surveillance of antenatal care clinics.

This dataset includes the following:

- GeoTIFF raster files for pixel-level estimates of HIV prevalence, PLHIV, and eight covariates constructed for the analysis: prevalence of male circumcision, self-reported STI symptoms, marriage or living with a partner as married, one's current partner living elsewhere, condom use at last sexual encounter, reported intercourse among young adults, and multiple partners in the last year for men and for women
- CSV files of aggregated HIV prevalence and PLHIV estimates for each country at the zero, first, and second administrative divisions
- Code files used to generate the estimates

Relevant publications and visualizations:

- Dwyer-Lindgren L, Cork MA, Sligar A, Steuben KM, Wilson KF, Provost NR, et al. Mapping HIV prevalence in sub-Saharan Africa between 2000 and 2017. *Nature*. 15 May 2019.
- [Local Burden of Disease - HIV](#)

Acknowledgements

Contributing organizations:

- Institute for Health Metrics and Evaluation (IHME)

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- Bill and Melinda Gates Foundation (BMGF)
- National Institutes of Health (NIH)

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Institute for Health Metrics and Evaluation (IHME). Africa HIV Prevalence Geospatial Estimates 2000-2017. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2019.

Data Files Information

CSV files of Aggregated Estimates of Educational Attainment

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

(Example: IHME_AFRICA_HIV_2000_2017_HIV_PREV_ADMIN_1_Y2019M03D15.CSV)

- **Measure:** HIV prevalence (HIV_PREV) or People living with HIV (HIV_COUNTS)
- **Level of aggregation:** admin0, admin1, or admin2, corresponding to first and second administrative level areas as defined in the 2014_2015 FAO Global Administrative Unit Layers (GAUL) shapefiles, with minor adjustments made where names were missing in the original shapefile. Each row in each table is unique by administrative unit and year

Variable	Variable Label	Variable Definition
ADM0_CODE	GAUL Admin 0 Code	GAUL code identifying the administrative unit
ADM0_NAME	Admin 0 Name	Zero level administrative unit (Country) name as found in the GAUL shapefile
ADM1_CODE	GAUL Admin 1 Code	GAUL code identifying the administrative unit (Only in the admin1 files)
ADM1_NAME	Admin 1 Name	First level administrative unit name as found in the GAUL shapefile
ADM2_CODE	GAUL Admin 2 Code	GAUL code identifying the administrative unit (Only in the admin2 files)
ADM2_NAME	Admin 2 Name	Second level administrative unit name as found in the GAUL 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: 3
sex	Sex	Sex estimated: Possible values: Both

Variable	Variable Label	Variable Definition
measure	Measure	The measure (indicator) estimated. Possible values: <ul style="list-style-type: none"> • HIV prevalence • People living with HIV
metric	Metric	Metric/unit of measure for the estimate. Values: <ul style="list-style-type: none"> • Percent • Count (Number)
mean	Mean	Mean posterior population-weighted estimate for the administrative unit
lower	Lower Confidence Interval	2.5% population-weighted posterior quantile estimate for the administrative unit
upper	Upper Confidence Interval	97.5% 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_HIV_2000_2017_CODEBOOK_ADMIN_0_Y2019M03D15.CSV](#)

Variable names, labels, and value encoding for admin 1 files can be found in the machine-actionable codebook file [IHME_AFRICA_HIV_2000_2017_CODEBOOK_ADMIN_1_Y2019M03D15.CSV](#)

Variable names, labels, and value encoding for admin 2 files can be found in the machine-actionable [IHME_AFRICA_HIV_2000_2017_CODEBOOK_ADMIN_2_Y2019M03D15.CSV](#)

GeoTIFF Raster Files for Pixel-level Estimates of Years and Disparity

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

(Example: [IHME_AFRICA_HIV_2000_2017_HIV_PREV_MEAN_2015_Y2019M03D15.TIF](#))

- **Indicator:** HIV prevalence, People living with HIV, or one of the 8 HIV covariate measures:
 1. Prevalence of male circumcision (all forms) [[MALE_CIRCUMCISION_PREV_MEAN](#)]
 2. Prevalence of self-reported STI symptoms [[STI_SYMPTOMS_PREV_MEAN](#)]
 3. Prevalence of marriage or living with a partner as married [[IN_UNION_PREV_MEAN](#)]
 4. Prevalence of one's current partner living elsewhere [[PARTNER_AWAY_PREV_MEAN](#)]
 5. Prevalence of condom use at last sexual encounter [[CONDOM_LAST_TIME_PREV_MEAN](#)]
 6. Prevalence of reporting ever had intercourse among young adults [[HAD_INTERCOURSE_PREV_MEAN](#)]
 7. Prevalence of multiple partners in the last year for men [[PARTNERS_YEAR_MN_PREV_MEAN](#)]
 8. Prevalence of multiple partners in the last year for women [[PARTNERS_YEAR_WN_PREV_MEAN](#)]
- **Measure:** Prevalence (%), or counts (people living with HIV)

- **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).

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.