# Maternal mortality in 2000-2017

Internationally comparable MMR estimates by the Maternal Mortality Estimation Inter-Agency Group (MMEIG)

WHO, UNICEF, UNFPA, World Bank Group and the United Nations Population Division

## ETHIOPIA

| Year | Maternal mortality ratio (MMR)[a,*] | Maternal deaths[*] | HIV-related indirect maternal deaths[*] | Live births[b] | Proportion of maternal deaths among deaths of female reproductive age (PM, %)[a,*] |
|---|---|---|---|---|---|
| | Per 100 000 live births (lb) | Numbers | Numbers | Thousands | |
| 2000 | 1030 [839-1250][c] | 30000 | 610 | 2901 | 26 |
| 2005 | 865 [726-1030] | 26000 | 650 | 3005 | 23 |
| 2010 | 597 [483-751] | 19000 | 250 | 3155 | 23 |
| 2015 | 446 [339-607] | 15000 | 130 | 3396 | 20 |
| 2017 | 401 [298-573] | 14000 | 100 | 3491 | 19 |

[a] MMR and PM are calculated for women 15-49 years.
[b] Live birth data are from United Nations, Population Division. World Population Prospects 2019. New York: UN Population Division, Department of Economic and Social Affairs, 2019.
[c] The uncertainty intervals (UI) for all estimates refer to the 80% uncertainty intervals (10th and 90th percentiles of the posterior distributions). This was chosen as opposed to the more standard 95% intervals because of the substantial uncertainty inherent in maternal mortality outcomes.
[*] Figures presented in the table are estimates based on national data, such as surveys or administrative records, or other sources, produced by the international agency when country data for some year(s) is not available, when multiple sources exist, or when there are data quality issues.

| Annual rate of reduction based on estimated MMR (%) | |
|---|---|
| 2000-2017 | 5.5 [3.0, 7.4] |
| 2010-2017 | 5.7 [2.4, 8.3] |

# Available data sources

Data from civil registration vital statistics system (CRVS):

** No national level maternal mortality data were identified **

# Available data sources (continued)

**Excluded** data from CRVS:

** Not applicable **

# Available data sources (continued)

Data from other sources:

| Study period | Source | Maternal deaths[n] | Pregnancy-related deaths[o] | Female deaths, 15-49 | Maternal PM[p] | Pregnancy-related PM[q] | Reported MMR per 100,000 lb | Adjusted MMR per 100,000 lb | F+[r,u] | F-[s,u] | U+[t,u] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1993-2000 | DHS 2000 | | | | | 23.9 | | 804 | | | |
| 1998-2005 | DHS 2005 | | | | | 19.7 | | 710 | | | |
| 2004-2011 | DHS 2011 | | | | | 28.2 | | 861 | | | |
| 2006-2007 | Census | | | | | 36.0 | | 1184 | | | |
| 2009-2016 | DHS 2016 | | | | | 24.1 | | 557 | | | |

[n] Maternal deaths defined according to the ICD-10.
[o] Pregnancy-related deaths defined according to ICD-10.
[p] Maternal PM is calculated when deaths are defined as "maternal".
[q] Pregnancy-related PM is calculated when reported deaths are defined as pregnancy related deaths.
[r] False positive: true non-maternal death which may be incorrectly labeled as a maternal death.
[s] False negative: maternal death which may be incorrectly classified as a non-maternal death.
[t] Maternal deaths not registered in the CRVS.
[u] Calculated/derived from studies which undertake specialized analyses of routine reporting of maternal deaths.

# Available data sources (continued)

Data from studies **excluded** in regression:

** No exclusions **

# Predictor variables used in the model

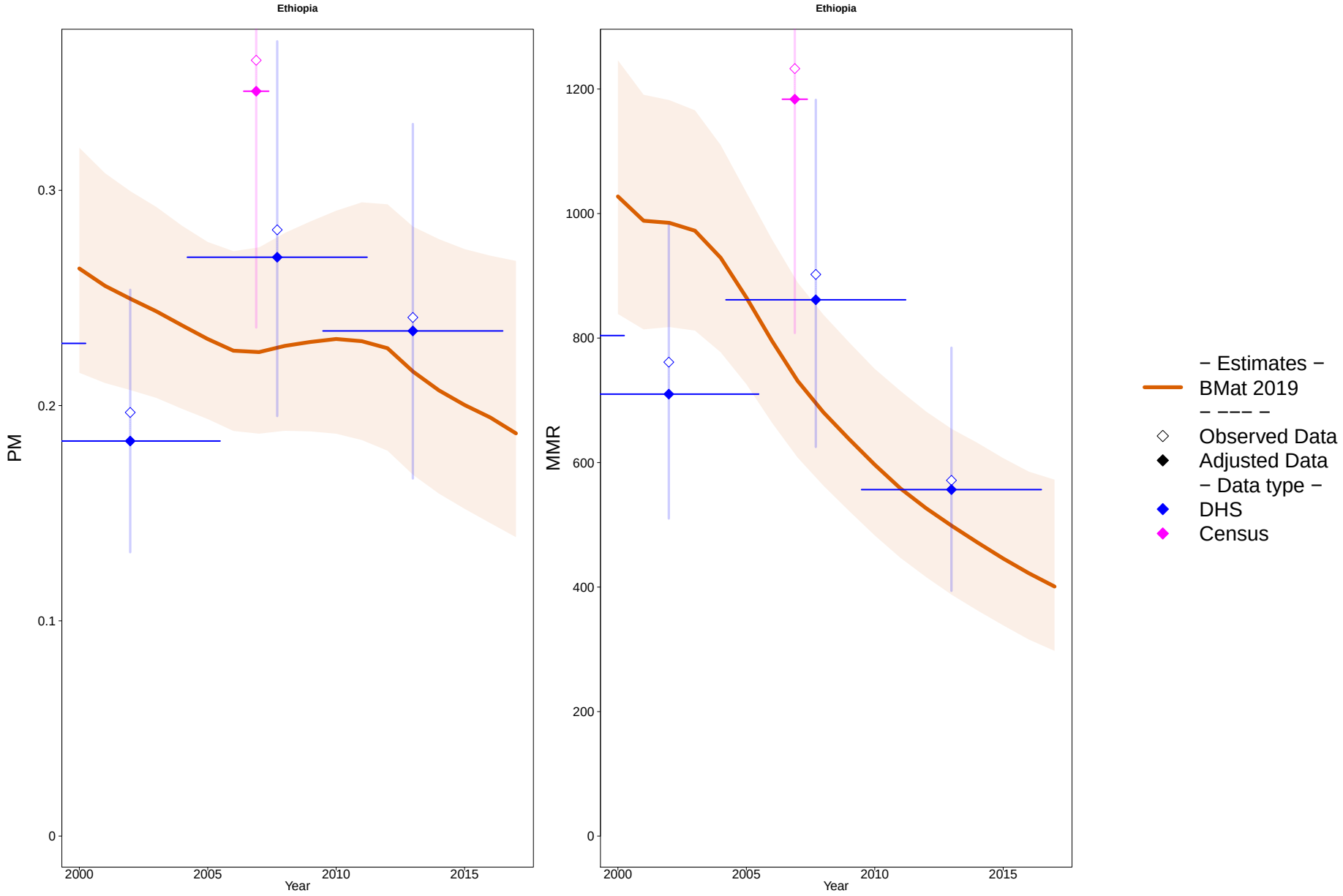
| Year | GDP per capita, PPP (constant 2011 Int $)[v] | General Fertility Rate per 1000 women 15-49 | Skilled Birth Attendant (% of births) |
|---|---|---|---|
| 2000 | 622 | 198 | 6.0 |
| 2005 | 736 | 178 | 10.0 |
| 2010 | 1074 | 159 | 17.0 |
| 2015 | 1519 | 141 | 26.0 |
| 2017 | 1664 | 135 | 31.0 |

[v] A 5-year moving average was calculated.

Gross Domestic Product (GDP) per capita measured in purchasing power parity (PPP) equivalent dollars using 2011 as the baseline year were taken from World Bank Group (World Development Indicators published July 30, 2019) supplemented by other sources (e.g. United Nations, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and MMEIG member's estimates) used to inform trends in instances with missing country-years in the World Bank Group data set.
*Source:* World Bank, International Comparison Program Database. July 30, 2019.

General fertility rate
*Source:* World Population Prospects 2019. New York: UN Population Division, Department of Economic and Social Affairs, 2019.

Percentage of births attended by skilled health personnel (doctors, nurses or midwives).
*Source:* WHO, UNICEF. WHO and UNICEF Joint Skilled Birth Attendant (SBA) database. Geneva: WHO; 2019.


Ethiopia
PM
0
0.1
0.2
0.3
2000
2005
2010
2015
Year
Ethiopia
MMR
0
200
400
600
800
1000
1200
2000
2005
2010
2015
Year
− Estimates −
BMat 2019
Observed Data
Adjusted Data
− Data type −
DHS
Census