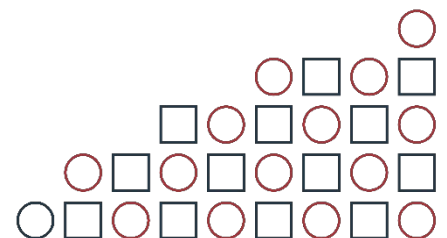


Data Sources for MMS Cost-Benefit Tool

October 2019



This document lists the data sources that were used to generate the pre-loaded reports in the [MMS Cost-Benefit Tool](#). It also serves as a guideline on recommended data sources for each parameter in the tool's *custom interface*. Users are welcome to use the *custom interface* to input information from other preferred data sources. For more information, please contact: MoMs@NutritionIntl.org

Parameter	Data Source
Population (of pregnant women)	The population of pregnant women in the intervention area is calculated by multiplying the (i) <i>Total Population</i> * (ii) the <i>Crude Birth Rate</i>
(i) Total Population (thousands)	United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition.Rev.1. <i>Total population (both sexes combined) by region, subregion and country, annually for 1950-2100</i> . (2018 Estimate). Available from: https://population.un.org/wpp/Download/Standard/Population/ [Accessed 3 rd August 2019].
(ii) Crude Birth Rate (births per 1,000 population)	United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition.Rev.1. <i>Fertility: Crude Birth Rate by region, subregion and country, 1950-2100 (births per 1,000 population)</i> (Selection: 2015-2020). Available from: https://population.un.org/wpp/Download/Standard/Fertility/ [Accessed 3 rd August 2019].
IFA supplement costs (2016 USD)	UNICEF. <i>2018 UNICEF Supply Catalogue</i> . Available from: https://supply.unicef.org/all-materials/pharmaceuticals/minerals-vitamins.html (IFA: Product No. S1550005) [Accessed 7 th September 2019].
MMS supplement costs (2016 USD)	UNICEF. <i>2018 UNICEF Supply Catalogue</i> . Available from: https://supply.unicef.org/all-materials/pharmaceuticals/minerals-vitamins.html (MMS: Product No. S1580101) [Accessed 7 th September 2019].
Source of health effects Keats et al. 2019 (Cochrane)	Keats EC, Haider BA, Tam E, Bhutta ZA. Multiple-micronutrient supplementation for women during pregnancy. <i>Cochrane Database of Systematic Reviews</i> . 2019: Issue 3. Art. No: CD004905. Available from: DOI:10.1002/14651858.CD004905.pub6 . 2009.
Source of health effects Smith et al. 2017 (Lancet)	Smith, ER, Shankar AH, Wu LS-F, Said A, Seth A-A, Hasmot A, Rina A et al. Modifiers of the effect of maternal multiple micronutrient supplementation on stillbirth, birth outcomes, and infant mortality: a meta-analysis of individual patient data from 17 randomised trials in low-income and middle-income countries. <i>Lancet Glob. Health</i> . 2017; 5: e1090–e1100.
Cost effectiveness	Leech AA, Kim DD, Cohen JT, Neumann PJ. Use and Misuse of Cost-Effectiveness Analysis Thresholds in Low- and Middle-Income Countries: Trends in Cost-per-DALY Studies. <i>Tufts Medical Center</i> , 2018; Boston, MA, USA. Available from: doi.org/10.1016/j.jval.2017.12.016 .
Gross Domestic Product (GDP) per capita	The World Bank International Comparisons Database 2019. <i>GDP per capita, PPP (constant 2011 International \$)</i> (Selected Year: 2018). Available from: https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD [Accessed 3 rd August 2019].

Parameter	Data Source
Value of statistical life (2015 USD)	Viscusi WK, and Masterman CJ. Income Elasticities and Global Values of a Statistical Life. <i>Journal of Benefit-Cost Analysis</i> . 2017;8 (2): 226–50. Available from: https://law.vanderbilt.edu/phd/faculty/w-kip-viscusi/355 Income Elasticities and Global VSL.pdf [Accessed 3 rd August 2019]
Life expectancy at birth	United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition. <i>Life Expectancy at birth, both sexes</i> . (Selection: 2015-2020). Available from: https://population.un.org/wpp/Download/Standard/Mortality/ [Accessed 3 rd August 2019].
Life Expectancy at median age of first pregnancy	Requires the (i) <i>median age of first pregnancy</i> for the country of interest, use this estimate as the <i>Age Group</i> for the (ii) <i>Life Tables, Expectation of life at age X</i> (Select: Female, Year:2016).
(i) Median age of first pregnancy	Demographic Health Surveys (DHS). <i>The DHS Program STATcompiler</i> . (Median age at first birth for women). Available from: https://statcompiler.com/en/ [Accessed 3 rd August 2019].
(ii) Expectation of life at age X	World Health Organization (WHO). <i>Global Health Observatory data repository, Life Tables by Country</i> (Updated: 2018). Available from: http://apps.who.int/gho/data/view.main.60550?lang=en [Accessed 3 rd August 2019].
Sex ratio at birth	United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition.Rev.1. <i>Fertility: Sex ratio at birth by region, subregion and country, 1950-2100 (male births per female births)</i> (Selection: 2015-2020). Available from: https://population.un.org/wpp/Download/Standard/Fertility/ [Accessed 3 rd August 2019].
Stillbirth per 1,000 births	Blencowe H, Cousens S, Jassir FB, Say L, Chou D, Mathers C et al. National, regional, and worldwide estimates of stillbirth rates in 2015, with trends from 2000: a systematic analysis. <i>Lancet Glob Health</i> . 2016; Feb;4(2):e98-e108. Available from: doi: 10.1016/S2214-109X(15)00275-2. Epub 2016.
Neonatal mortality (female) per 1,000 live female births	Demographic Health Surveys (DHS). <i>The DHS Program Publications</i> . (Search: neonatal mortality; Child's sex:female). Available from: https://dhsprogram.com/publications/index.cfm .
Neonatal mortality (male) per 1,000 live male births	Demographic Health Surveys (DHS). <i>The DHS Program Publications</i> . (Search: neonatal mortality; Child's sex:male). Available from: https://dhsprogram.com/publications/index.cfm .
Neonatal mortality (total) per 1,000 live births	United Nations Inter-agency Group for Child Mortality Estimation (2019). Neonatal Mortality Rate-Total. (Select: Country, Reference Year: 2018). Available from: https://childmortality.org/data [Accessed: 7 th September 2019].
Infant mortality (total) per 1,000 live births	United Nations Inter-agency Group for Child Mortality Estimation (2019). <i>Infant Mortality Rate-Total</i> . (Select: Country, Reference Year: 2018). Available from: https://childmortality.org/data [Accessed: 7 th September 2019].

Parameter	Data Source
Maternal mortality (maternal deaths per 100,000 live births)	World Health Organization, UNICEF, UNFPA, World Bank Group and UNPD (MMEIG) (2019). <i>Trends in estimates of Maternal Mortality 2000-2017</i> . (Reference year: 2017). Available from: https://data.unicef.org/resources/trends-maternal-mortality-2000-2017/ [Accessed: September 25 th 2019].
Low birth weight (LBW)	UNICEF and World Health Organization (WHO). <i>UNICEF/WHO Low birthweight (LBW) Estimates (2019). Low birthweight data 2000-2015</i> . (Reference year: 2015). Available from: https://data.unicef.org/topic/nutrition/low-birthweight/ . [Accessed: August 3 rd 2019].
Small for gestational age (SGA)	Lee A CC, Katz J, Blencowe H, Cousens S, Kozuki N, Vogel JP et al. National and regional estimates of term and preterm babies born small for gestational age in 138 low-income and middle-income countries in 2010. <i>Lancet Glob. Health</i> . 2013;1:26-36. Available from: https://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(13)70006-8.pdf [Accessed: August 3 rd 2019]
Preterm birth	Chawanpaiboon S, Vogel JP, Moller AB, Lumbiganon P, Petzold M, Hogan D et al. Global, regional, and national estimates of levels of preterm birth in 2014: a systematic review and modelling analysis. <i>Lancet Glob. Health</i> . 2019;7:e37-46. Available from: https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30451-0/fulltext . [Accessed: August 3 rd 2019].
Maternal anaemia (pregnant women)	World Health Organization (WHO). <i>Global Health Observatory data repository, Prevalence of anaemia in pregnant women. Estimates by Country</i> (Updated: 2017-08-30). (Reference year: 2016). Available from: http://apps.who.int/gho/data/view.main.ANAEMIAWOMENPWv?lang=en . [Accessed 3 rd August 2019].