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## Impact 2, version 6 (August 2023)

Impact 2 has been updated with the latest demographic and health statistics.

When using the latest version of the tool, be aware that **impact results will not be comparable with results from previous versions of Impact 2**, due to changes made to the underlying demographic data.

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### Summary of changes

- **Unintended pregnancy rate (global)** – This is calculated by Guttmacher Institute (Adding It Up Report, 2019) which estimates the non-user pregnancy rate, i.e. the number of unintended pregnancies among women with an unmet need for family planning. The rate was previously estimated to be 41% (Impact 2.5). Based on new data incorporated into Adding It Up (2019 Report), the median estimate for this rate is 44%. This change has also been harmonized with other models in the wider sector.
- **Proportion of unintended pregnancies ending in abortion (country specific and regional)** – New country specific estimates of unintended pregnancies ending in abortion for 150 countries have been released by Bearak et al. 2022<sup>1</sup>. These are the first country specific estimates for many countries; a Bayesian model was developed which jointly estimated unintended pregnancy and abortion rates using the latest available information on contraceptive needs and use, contraceptive method mix, birth rates, the proportion of births from unintended pregnancies and abortion incidence data. Where country specific data was not available regional estimates released by Bearak, et al. 2020<sup>2</sup> were used; these estimates come from a recalculation of the Bayesian model using more up-to-date data. Impact 2.5 was based on the findings from Bearak, et al. 2018 and were all regional estimates.
- **Abortion ratio (per 100 live births) (country specific and regional) and % abortions that are unsafe (country specific and regional)** – country specific estimates have been included, previously estimates were regional, in line with results released by Bearak et al. 2022<sup>1</sup>. Where these were not available regional estimates have been updated based on results from Guttmacher Institute’s 2019 Adding It Up Report.
- **Unsafe abortion mortality to MMR ratio** – calculations updated to reflect updated country specific unsafe abortion mortality estimates. Where this data was not available previous regional figures were used.
- **Maternal deaths per 100,000 unsafe abortions** - Previously sub-regional estimates from WHO Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008. Where available this has been updated to Bearak et al. 2022 country-specific estimates of unintended pregnancy and abortion incidence, where not available the previous WHO regional estimates were used.
- **Unmet need (country specific)** – Country level (all women of reproductive age) estimates of the proportion of the population with an unmet need for modern contraception using the annual, model based United Nations Family Planning results from 2022<sup>3</sup>. Previously unmet need was sourced from the UN 2015 Revision Model-Based Estimates and Projections for FP Indicators

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<sup>1</sup> Bearak JM, Popinchalk A, Beavin C, et al. Country-specific estimates of unintended pregnancy and abortion incidence: a global comparative analysis of levels in 2015–2019 *BMJ Global Health* 2022

<sup>2</sup> Bearak J et al., Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019, *Lancet Global Health*, 2020

<sup>3</sup> United Nations, Department of Economic and Social Affairs, Population Division (2019). *Estimates and Projections of Family Planning Indicators 2022*

- **Women of reproductive age (WRA), female life expectancy and total fertility rate (TFR) (country specific)** – *United Nations Population Prospects: 2022 revision* offers updated modelled estimates up to 2055.<sup>4</sup>
- **Proportion of WRA that are married (country specific)** – United Nations Population Division: 20205, offers updated estimates of the number of women of reproductive age that are married.
- **Stillbirth rate (country specific)** – United Nations Inter-Agency Group for Child Mortality Estimation (IGME): 2021, offers updates estimates of the stillbirth rate per 1,000 live births.
- **Contraceptive Prevalence Rate (CPR) data, all women, (country specific)** – Country level (all women) estimates of the proportion of the population using a method of family planning (CPR) have been updated using the annual, model-based United Nations Family Planning results from 2023. This change in the Impact 2.6 Tool aligns the CPR with method mix from the most recent Demographic Health Surveys and offers the most up-to-date contraceptive prevalence rates and method mix.
- **Maternal Mortality Ratio (MMR) (country specific)** – The World Health Organization released updated MMR estimates in 2023<sup>6</sup> MMR. Previously, Impact 2.5 modelled annual MMR estimates for 2016 and beyond. Impact 2.6 now uses the 2020 MMR from the WHO (2023), and models the annual estimates for 2021 and beyond. The methodology used to estimate the projected MMR has not changed.
- **IUS 5 year updated to IUS 5 & 6 year combined** – in line with updates from USAID in January 2022<sup>7</sup>, the 5-year IUS has been updated to a 5 & 6 year IUS, this also changes the CYP factor from 3.3 to 4.8.
- **Disability Adjusted Life Years (DALY's)** – Maternal and Child DALY estimates have been updated using estimates from the Global Burden Disease 2019 report<sup>8</sup>. Impact 2.5 used estimates from Global Buren of Disease 2016.
- **USD to GBP exchange rate data for direct cost averted impact result** – This was updated using the average 2022 exchange rate between USD and GBP, with inflation since 2011 factored in.

## How do these changes affect impact results?

Overall, the above changes will result in all the **demographic, health and economic impacts** differing to impacts generated in version 5. Notable changes include:

### Unintended pregnancies averted:

- There will be a 7-11% increase in the estimated number of unintended pregnancies averted. This is due to the increase in the pregnancy rate (from 41% to 44%) and updated to the number of WRA.

### Live births averted

- This will be influenced by changes in abortions ratios (per 100 live births) – live births averted may increase due to the change in UPAs or decrease if the abortion ratio has increased.

### Abortions and unsafe abortions averted:

- There will be a variable change between countries due to changes in the abortion ratio. In general, there has been an increase.
- Unsafe abortions averted will vary between countries given the respective changes increase or decrease in unsafe abortion ratios. In general, there has been an increase.

<sup>4</sup> United Nations, Department of Economic and Social Affairs, Population Division (2022).

<sup>5</sup> United Nations, Department of Economic and Social Affairs, Population Division (2020)

<sup>6</sup> WHO Global Observatory data repository (<https://apps.who.int/gho/data/view.main.1370?lang=en>)

<sup>7</sup> USAID Couple Years of Protection (<https://www.usaid.gov/global-health/health-areas/family-planning/couple-years-protection-cyp>)

<sup>8</sup> Global Burden of Disease (<https://vizhub.healthdata.org/gbd-results/>)

**Maternal deaths averted:**

- Generally, there has been a decrease but change is variable from country to country, mainly driven by the updated: 1) proportion of unintended pregnancies ending in an unsafe abortion (for abortion related causes of mortality); and 2) the updated MMR (for non-abortion related causes of mortality, e.g., childbirth).

**Child deaths averted:**

- Generally, there has been a decrease but change is variable from country to country, driven by the updated stillbirth rates

**DALYs averted:**

- Up-dated DALY coefficients (country level) will result in changes in DALYs averted. If unsafe abortions averted or maternal deaths averted increase, this will result in an increase in Maternal DALYs averted.

**Direct healthcare costs saved:**

- Generally, there has been an increase. Changes vary by country to country, driven by the varying changes in the estimated number of unintended pregnancies, maternal deaths and unsafe abortions averted for each country. The updated USD inflation rate (since 2011) and updated USD to GBP exchange rate will also impact the estimated costs saved in Impact 2.6 compared to Impact 2.5.

**Total FP users and additional users:**

- Generally, there has been a minor decrease in estimated total FP users. This is due to changes in female life expectancy affecting the estimated number of years the FP method 'female sterilisation' protects a user from unintended pregnancy, after the year of receiving the FP method. As a result, there has also been a minor change in the estimated additional users reached. Change is variable from country to country.

**Family planning market share:**

- Change is variable from country to country, depending on the change in the national mCPR and total FP users served.

**Contribution to increasing mCPR:**

- Changes in this estimate are very slight and dependent on the updates/changes in the number of women of reproductive age (WRA) and updated mCPR.

**CYPs:**

- There will be an increase in CYPs related to 5&6-year IUS services provided.

The changes made in Impact 2.6 will not affect any of the following: FP users served.

## Tips

- 1) Due to the large size of the file, it is advised to: run the tool 2 or 3 times to make sure results have not been corrupted; have no other excel files open at the same time when running results; if the format of the tool changes unexpectedly then simply close and re-open the tool.
- 2) If a previous version of the tool was used in a log-frame, ensure that the **same version** is used when finalizing the project.

If you have any questions about this update specifically, or Impact 2 in general, please get in touch with [evidence@msichoice.org](mailto:evidence@msichoice.org) , [Anisa.Berdellima@MSIChoices.org](mailto:Anisa.Berdellima@MSIChoices.org)