**Opportunities to Reduce Maternal Mortality through Improving Access to Sexual and Reproductive Health Care in Low- and Middle-Income Countries (LMICs)**

**Executive Summary**

Despite global improvements in reproductive health care service access and outcomes over the past few decades, low- and middle-income countries (LMICs) still struggle with high unmet care needs, resulting in poor health and social outcomes for girls and women. For example, access to reproductive health care is a strong predictor of perinatal and child health outcomes such as maternal and infant death rates. Luckily, modest per capita investments are needed to fill gaps in health care systems and meet the care needs of girls and women.

This review analyzed data from the Adding it Up (2019) project, which allows for comparison of important demographic and reproductive health characteristics of LMICs and for generation of estimates of the cost and value of reproductive health care services.[[1]](#endnote-1) The data is focused on contraceptive services, pregnancy-related and newborn care, and the treatment of curable STIs for women ages 15 through 49. Cost estimates of the dollar amount per capita that a country would need to invest on top of current spending to ensure all women and girls could access the ideal level of sexual and reproductive health care services were generated. Similarly, estimates were calculated that demonstrate how much a country’s maternal mortality rate could be reduced if all care needs for women and girls were met.

The findings demonstrated that if all sexual and reproductive health care needs were met for girls and women ages 15 through 49, most LMICs would see substantial reductions in maternal mortality rates per 100,000 live births. The largest reductions in MMR would be yielded in Latin America and the Caribbean, and Oceania, with median MMR reductions of 33 and 30 percent respectively. To achieve the scenario in which all care needs are met, most countries would require a less than $10 per capita investment in sexual and reproductive health care service access. Policy recommendations included to target investments to countries in which low-cost (per capita) reproductive health interventions would result in high maternal mortality rate reductions, to prioritize investments in nations in which maternal mortality rates are highest, and to promote the adoption of universal health coverage policies that ensure all individuals can afford needed health care services.

**Current Context**

Sexual and reproductive health services are critical to ensuring healthy and safe pregnancies, deliveries, babies, and other sexual and reproductive health outcomes. These services are an important aspect of the spectrum of the health needs of women, girls, and other individuals, which is often lacking due to systemic gender inequity and efforts to undermine the reproductive autonomy of girls and women. Access to these health care services promotes positive health outcomes and allows individuals to exercise their sexual and reproductive rights. These factors should be important to policymakers given the relationship between sexual and reproductive health and women’s socioeconomic status, health, and wellbeing. Sexual and reproductive health service access strongly impacts maternal mortality rates (MMR) and other reproductive health outcomes, educational attainment, economic status and mobility, and gender equity. In addition, reproductive health autonomy and outcomes are highly related to women’s participation in workforce, which directly impacts a country’s productivity and economy.[[2]](#endnote-2),[[3]](#endnote-3),[[4]](#endnote-4)

Women who live in poverty are disproportionately impacted by the lack of access to sexual and reproductive health services.[[5]](#endnote-5) Estimates from 2019 demonstrated that 218,000 women ages 15 through 49 in LMICs had an unmet need for modern contraception (i.e., they did not want to become pregnant but did not access to a modern contraceptive method).[[6]](#endnote-6) Almost half of pregnancies were unintended in LMICs (111 million annually) and tens of millions of pregnant people did not receive sufficient or any pregnancy-related and newborn health care services.[[7]](#endnote-7) Current estimates indicate that there are 299,000 pregnancy related deaths and 2.5 million newborn deaths annually, which are mostly preventable.[[8]](#endnote-8) For example, in 2019, it was estimated that sixteen million women and 13 million newborns did not receive the care that they needed for major complications in pregnancy and child birth.[[9]](#endnote-9) Policymakers have the power to significantly improve perinatal health outcomes globally through targeted investments in sexual and reproductive health care services. If all pregnancy, newborn care, contraceptive, and STI service needs were met, it is estimated that the unintended pregnancy rate could be reduced by 68 percent and that the maternal death rate could be reduced by 62 percent in LMICs.[[10]](#endnote-10)

**Description of Analysis**

The Adding It Up program synthesizes data from nationally representative surveys such as Demographic and Health Surveys, UNICEF Multiple Indicator Cluster Surveys, U.S. Centers for Disease Control and Prevention Reproductive Health Surveys, and Performance Monitoring Action Surveys for low- and middle-income countries.[[11]](#endnote-11) The project generates estimates from the survey data of the need for reproductive health care services and the costs associated with providing those services in 132 low- and middle-income countries (LMICs). A country’s income status is determined using 2018 gross national income per capita values. Low-income corresponds to a per capita income of $1,035 or less, lower middle income to $1,026-$3,995, and upper middle income to $3,996 through $12,375.

For this memo, data focused on contraceptive services, pregnancy and infant care, STI treatment, and maternal mortality rates from the All of Us project was analyzed. The data was broken out into 1) costs in U.S. dollars to deliver the current state of care to individuals in a given country, 2) estimated costs (in USD) to deliver care in a way that would be accessible and available to all women and girls ages 15 through 49 who need reproductive health care services (from this point on referred to as the “all-care-needs-met scenario”), 3) the maternal mortality rate per 100,000 live births for each country under the current care scenario, and 4) the estimated maternal mortality rate if all women were able to receive the level of care that they needed (under the all-care-needs-met scenario).

For the analysis, costs for the two primary scenarios (current care and all-care-needs-met) were used to calculate the dollar amount per capita that a country would need to invest on top of current spending to ensure all women and girls could access the ideal level of sexual and reproductive health care services. Similarly, current maternal mortality rates and estimated maternal mortality rates under the all-care-needs-met scenario were used to calculate an estimated reduction in the number of maternal deaths and the estimated percent reduction of maternal mortality rate with different levels of investment in sexual and reproductive health care access. Visualizations were produced to demonstrate variation in estimated investments needed and resulting reduction in maternal mortality rates across countries and by global region.

**Key Findings**

The analysis revealed that if all sexual and reproductive health care needs were met for contraception, pregnancy and post-partum care, newborn care, and sexually transmitted infections, most LMICs would see substantial reductions in maternal mortality rates per 100,000 live births. Figure 1 displays the percentage decrease in maternal mortality rate that each LMIC country would experience, aggregated into a regional-level distribution, if sufficient investments were made to ensure all women ages 15 through 49 could access the sexual and reproductive health care that they needed. We can see that the largest reductions in MMR would be yielded in Latin America and the Caribbean, and Oceania, with median MMR reductions of 33 and 30 percent respectively.

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Figure 2 compares the dollar amount per capita increase needed to go from the current care scenario to the all-care-needs-met scenario to the estimated percentage reduction in MMR that the estimated cost increase would yield for each country. For many countries, a relatively smaller per capita investment yields a relatively larger percentage reduction in MMR. For example, most countries in Latin America and the Caribbean require a less than $10 per capita investment in sexual and reproductive health care service access to reduce MMRs by 30 to 50 percent (figure 2).

Figure 3 outlines how many lives could be saved if the all-care-needs-met-scenario was achieved in each country, grouped by region. In most LMICs, all potential reduction in MMR through achieving the all-care-needs-met scenario could be yielded through per capita investments of $10 or less. The exception to this is in Africa, which compared to other regions, is an outlier in terms of its distribution of maternal mortality rates by country and the per capita cost increases required to achieve similar percentage reductions in maternal mortality rate and pure reductions in the number of maternal deaths.

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**Discussion of Recommendations**

Improved outcomes and equality for health, education, and gender are conditional upon full realization of sexual and reproductive health and rights. To achieve this across LMICs, three recommendations are outlined. First, international aid institutions and wealthy nations should prioritize global investments that have the largest return on investment in terms of health outcomes of interest. The findings from this analysis suggest that increased investments could be made in countries where low-cost (per capita) reproductive health interventions are estimated to yield proportionally high maternal mortality rate reductions, indicating a potential high potential of success for the intervention. To ensure allocations are equitable, aid organizations and interested nations should prioritize investments to nations in which maternal mortality rates are highest.

Second, this analysis highlights that African countries experience disproportionately high maternal mortality rates and that estimated costs associated with achieving the all-care-needs-met scenario are high compared to peer LMICs. Research has shown that the higher MMRs in African nations may be due to higher rates of unintended pregnancies in adolescents and higher child marriage rates.[[12]](#endnote-12) Therefore, for Africa specifically, additional investigation should be led at the subregional and country levels to determine what factors are causing the disproportionately high maternal mortality rates. For example, if adolescent unintended pregnancy in a particular country is the primary driver of the maternal mortality rate, it might be more efficient to make investments in interventions that fulfill the contraceptive care needs of individuals under the age of 20, rather than the postpartum care needs of older pregnant people. Such interventions could focus on increasing supplies of modern contraceptive methods in areas in which they are difficult to access, or on improving sexual health education for girls, families, and communities.

The final recommendation is for LMICs to implement universal health coverage systems that ensure all residents have the ability to afford needed health care services. While coverage does not guarantee access to care, affordability is often a primary barrier to care, which universal coverage would greatly reduce.

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9. Sully, E., Biddlecom, A., Darroch, J.E., Riley, T., Ashford, L.S., Lince-Deroche, N., Firestein, L., & Murro, R. (2020). Adding it Up: Investing in sexual and reproductive health 2019. https://www.guttmacher.org/report/adding-it-up-investing-in-sexual-reproductive-health-2019 [↑](#endnote-ref-9)
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