COVID-19 threatens to become one of the most challenging tests faced by humanity in modern history. COVID-19 has the potential to take lives, overwhelm health systems, and trigger lasting geopolitical change. The implications of COVID-19 can go far beyond the strain posed on ICUs and Infectious Disease Control departments. In countries around Asia and the Pacific, health systems are likely to be challenged to balance the demands of responding directly to COVID-19, while simultaneously engaging in strategic planning and coordinated action to maintain essential health service delivery, mitigating the risk of system collapse. Many countries are currently implementing transmission control measures like lockdowns and travel bans. The consequent disruption of services on already overstretched health systems and the diversion of resources from essential sexual and reproductive health (SRH) services are expected to increase the risk of maternal and child morbidity and mortality, as shown in past humanitarian crises.

Methodology and assumptions

To estimate the potential impact of the pandemic in Papua New Guinea, we have performed a series of analyses using the Lives Saved Tool (LiST) and FamPlan modules of Spectrum (August 2019 version), a modelling software developed by Avenir Health. This methodology is coherent with the Johns Hopkins University analysis and global standards, only using different assumptions. For example, because we are looking at the longer-term impacts of COVID-19, we have reflected in these analyses the effect of a reduction in access to contraception on maternal mortality. Baseline data for key input variables were taken from the PNG Demographic Health Survey 2016-18.
We have modelled 2 scenarios to estimate the impact of COVID-19 on Maternal health and Family planning:

- The **Best case scenario** looked at a − 25% drop in coverage for skilled birth attendance, deliveries in health facilities and users of short term methods of contraception (condoms, pills and injectables) during 2020;
- The **Worst case scenario** modelled a - 50% drop in coverage for those three key services in 2020.

These scenarios of the impact of COVID-19 were modelled against a ‘Full coverage’ scenario, where instead all key health services continued to increase gradually between 2020 and 2030, as before the pandemic, to reach full coverage by 2030 (in line with the SDG agenda targets for 2030).

The results of these analyses are modelled estimates based on preliminary assumptions of the impact of COVID-19 and therefore are intended as indicative of the potential effect of COVID-19 on SRH services. The assumptions of the models were defined to be in line with other available studies (e.g. JHU). As more data becomes available, these assumptions and estimates could be refined.

**The Impact of COVID-19 on Maternal Health and Family Planning in PNG**

COVID-19 could have a considerable impact on Maternal Mortality Ratios (MMR) in Papua New Guinea: from a starting point of 171 deaths per 100,000 live births as baseline in 2019, the pandemic could make MMR spike to 196/100,000 in the best scenario, or to 217/100,000 in the worst case scenario.

These increases would represent, respectively, a 22% or 36% increase in MMR in 2020, compared to the 2020 expected baseline of MMR pre-pandemic (160/100,000, as shown in graph below).
Even when considering the impact of COVID-19 during 2020 only, the effects on increased risk of maternal deaths could be very serious: lockdowns and fear of contracting the virus might make more women deliver at home instead of in the hospitals, and many of these women might deliver without the help of skilled birth attendants.

As a result, the number of maternal deaths in 2020 could increase dramatically. From a projected number of around 420 maternal deaths estimated in 2020 in Papua New Guinea before the pandemic, we could see an increase of additional 178 deaths in the best case scenario, or almost 300 additional deaths in the worst case.

### PNG Maternal Deaths, 2020, COVID-19 Impact

![Diagram showing maternal deaths in two scenarios: best case with 598 deaths of which 178 are additional due to COVID-19; worst case with 713 deaths of which 293 are additional due to COVID-19.]

### Family Planning: key estimates

Several factors could have an impact on the ability of women and couples to access family planning methods during this time. These include: strict lockdown measures; fear of contracting the virus when going out to a pharmacy or other health providers to get contraceptives; disruptions in production and supply chains, and last but not least the cost of getting contraceptives, especially when many people might have lost sources of income during the pandemic.

The effects of these factors combined could mean that Unmet Need for Family Planning might also spike in Papua New Guinea starting in 2020, potentially increasing to **26.8%** or **27%** of married women of reproductive age in the best and worst case scenarios respectively.

The effects on unmet need for family planning would be felt even longer than 2020: the spike in unmet need for family planning in 2020 means that there will be a longer delay and gap in the curve of decrease of unmet need for family planning even beyond 2020, as illustrated in the graph below.
Conclusion and Key Policy Recommendations

Countries around the world, including Papua New Guinea, must ensure that they continue to prioritise sexual, maternal and reproductive health services. They should ensure that:

- Essential health personnel like midwives are not diverted away from their task of assisting mothers and newborns;
- Telemedicine and other alternative methods of providing care are explored¹, where possible and safe;
- Universal health coverage includes pregnant women, adolescents and other marginalised groups, so that no one suffers from the burden of catastrophic health expenditures.

UNFPA, WHO, and UNICEF adapted a regional practical guide for Asia and Pacific Region “Continuing essential Sexual, Reproductive, Maternal, Neonatal, Child and Adolescent Health services during COVID 19 pandemic”². The guideline provides practical actions for the policymakers at the country level to review and adapt the actions to the local context to ensure continuity of essential RMNCAH services during the COVID-19 pandemic.
