

Avoiding indirect effects of COVID-19 on maternal and child health



The coronavirus 2019 (COVID-19) pandemic is challenging the resilience of the most solid health systems in the world. In many low-income and middle-income countries (LMICs), the disease is rapidly spreading amid numerous endemic health problems such as HIV, tuberculosis, malaria, malnutrition, and frequent outbreaks of viral infections with high associated mortality. All this occurs in a context of weak health infrastructures that can barely cope with the aforementioned existing health challenges.¹

WHO is already urging countries to ensure the continuity of health services and programmes, so that even when overwhelmed with the response to COVID-19, the other programmes will be able to continue as effectively as possible. However, fear of the unknown and extensive misinformation are creating a breeding ground that may reverse the progress achieved in basic health indicators such as maternal and child mortality during the past 20 years in many LMICs.

In *The Lancet Global Health*, Timothy Robertson and colleagues report the findings of a modelling study to estimate the indirect effects of the coronavirus pandemic on maternal and child mortality in LMICs.² As previously done for the 2014 Ebola epidemic in Sierra Leone, they use the Lives Saved Tool (LiST) to estimate the additional indirect maternal and under-5 child deaths that could be indirectly attributed to COVID-19 pandemic response strategies.³ They model three possible scenarios of reduction in the coverage of essential maternal and child health services and of an increased prevalence of wasting over 3, 6, and 12 months. They estimate that reductions of around 45% for 6 months would result in 1157000 additional child deaths and 56700 additional maternal deaths.² They estimate that these figures would represent a 9·8–44·7% increase in under-5 deaths per month, and an 8·3–38·6% increase in maternal deaths per month, across the 118 countries included in their analysis.²

Elsewhere, the indirect impact of the COVID-19 pandemic on maternal and newborn health in India, Indonesia, Nigeria, and Pakistan over 12 months was estimated using the same LiST.⁴ However, different assumptions and scenarios were used, yielding an estimate of 766180 additional deaths (31980 maternal deaths, 395440 newborn deaths, and 338760 stillbirths) across

these four countries alone, which would correspond to a 31% increase in mortality.

The comprehensive analysis by Robertson and colleagues provides estimates of maternal and child deaths under three scenarios of differing severity and duration, which may help policy makers to adjust the response to the pandemic.⁵ The authors acknowledge the limitations of their work, among which is the fact that they applied the same assumptions for the 118 countries included in the analysis. The authors also justify the exclusion of HIV infection in their analysis due to the complexity of prevention and treatment delivery systems and to the low contribution of HIV to global child deaths. Nevertheless, since HIV infection is both a leading cause of death in women of reproductive age and responsible for 6–20% of maternal deaths, we think it should be considered when estimating HIV effects on maternal mortality.^{6,7} The geographical overlap with the HIV epidemic is particularly important when analysing data from southern Africa, where up to 30% of pregnant women may be HIV-infected.⁸

This study raises awareness of the potential indirect effects of the pandemic in the most vulnerable populations from the most disadvantaged countries worldwide. The case of antenatal care (ANC) illustrates this problem. In 2016, WHO launched new guidelines recommending at least eight ANC contacts during pregnancy, based on evidence that this increased number of contacts is associated with reduced perinatal mortality.⁹ In the context of the COVID-19 pandemic, some African countries are changing routine ANC guidelines to space (and *de facto* reduce) the number of contacts to one every 3 months instead of monthly visits, or delaying the postpartum visit to 3 months after delivery (therefore no longer constituting a postpartum visit).¹⁰ With an average gestational age at first ANC visit of 24 weeks, this new recommendation implies that many pregnant women will attend an essential preventive health service only once during their pregnancy. The implications for maternal and neonatal health are likely to be significant.

When not tailored to the given context, public health measures can lead to unintended harm that is potentially greater than the one that it intended to avoid. Preventing these indirect effects is especially important in low-resilience

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For the Lives Saved Tool see

<https://www.livessavedtool.org/>

health systems. The challenge is how to contain the effects of epidemics while understanding its effects on maternal and child health and ensuring that essential health services are maintained. National programmes should keep providing core maternal and child interventions even with the risk of COVID-19 transmission. Continued provision of these interventions is essential to save maternal and child lives.

We declare no competing interests.

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- 1 Makoni M. Africa prepares for coronavirus. *Lancet* 2020; **395**: 483.
- 2 Robertson T, Carter ED, Chou VB, et al. Early estimates of the indirect effects of the COVID-19 pandemic on maternal and child mortality in low-income and middle-income countries: a modelling study. *Lancet Glob Health* 2020; published online May 12. [https://doi.org/10.1016/S2214-109X\(20\)30229-1](https://doi.org/10.1016/S2214-109X(20)30229-1).

- 3 Sochas L, Channon AA, Nam S. Counting indirect crisis-related deaths in the context of a low-resilience health system: the case of maternal and neonatal health during the Ebola epidemic in Sierra Leone. *Health Policy Plann* 2017; **32**(suppl 3): 32–39.
- 4 Stein D, Ward K, Cantelmo C. Estimating the potential impact of COVID-19 on mothers and newborns in low- and middle-income countries. <https://medium.com/@HealthPolicyPlus/estimating-the-potential-impact-of-covid-19-on-mothers-and-newborns-in-low-and-middle-income-3a7887e4a0ff> (accessed May 5, 2020).
- 5 Bong CL, Brasher C, Chikumba E, McDougall R, Mellin-Olsen J, Enright A. The COVID-19 pandemic: effects on low and middle-income countries. *Anesth Analg* 2020; published online April 1. DOI:10.1213/ANE.0000000000004846.
- 6 Lathrop E, Jamieson DJ, Danel I. HIV and maternal mortality. *Int J Gynaecol Obstet* 2014; **127**: 213–15.
- 7 UNAIDS. Forty years into the HIV epidemic, AIDS remains the leading cause of death of women of reproductive age—UNAIDS calls for bold action. https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/march/20200305_weve-got-the-power (accessed May 5, 2020).
- 8 Gonzalez R, Munguambe K, Aponte J, et al. High HIV prevalence in a southern semi-rural area of Mozambique: a community-based survey. *HIV Med* 2012; **13**: 581–88.
- 9 WHO. WHO recommendations on antenatal care for a positive pregnancy experience. https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2020/march/20200305_weve-got-the-power (accessed May 5, 2020).
- 10 Ministério da Saúde. Direção Nacional de Saúde Pública. República de Moçambique. Pacote de Serviços para Populações vivendo com o HIV no âmbito da resposta ao COVID-19. <http://www.misau.gov.mz/index.php/directrizes?download=245:pacote-de-servic-os-para-phiv-no-a-mbito-do-covid19> (accessed May 6, 2020).