Overall, 4,752,988 deaths worldwide have been attributed to COVID-19, as of September 28, 2021.\(^1\) Mortality estimates are widely reported as measures of the impact of the pandemic, yet comparisons between countries are fraught with complexities, from variation in how deaths attributable to COVID-19 are defined to differences in detection of cases through availability and access to testing.\(^2\) Excess mortality is a widely used measure of the observed mortality from any cause relative to that expected based on historic averages and may give more comparable estimates between countries, but most available data and existing studies come from high-income countries (HICs).

In understanding the scale of the pandemic, a concern has been the prospect of underreporting of deaths, particularly in regions of the world with limited COVID-19 testing capacity and less robust systems for reporting of deaths, as is the case in many low- and middle-income countries (LMICs).\(^3\) Systematic undercounting of deaths would imply the true toll of the pandemic to be far greater than official statistics indicate, but there have been few studies to support or refute this. Barnwal and colleagues\(^4\) address this subject in reporting results of an epidemiological survey of mortality across 135 villages in a rural area east of Dhaka, Bangladesh.

Bangladesh is one of the most densely populated countries in the world and despite rapid urbanization, the majority of its more than 160 million population live in rural areas.\(^5\) The first patient with COVID-19 infection was reported in Bangladesh on March 8, 2020, leading the government to adopt several measures to control the epidemic, including testing, mandatory facemasks, isolation, quarantine, lockdowns, business closures, public awareness campaigns, and social distancing requirements.\(^6\) According to official estimates, Bangladesh recorded relatively few COVID-19 cases and deaths in 2020, with the vast majority in the urban areas of Dhaka and Chattogram.\(^4\) But whether there were genuinely low case numbers and deaths in rural areas or undetected or unreported cases was unclear. By estimating excess mortality between February and the end of October 2020, the study by Barnwal and colleagues\(^4\) demonstrates no significant difference in deaths compared with 2019, suggesting there was not a large unreported burden of COVID-19 mortality.

While these findings are encouraging, low mortality rates now may not predict low mortality rates in the future. Neighboring India reported relatively low numbers of COVID-19 deaths in 2020 but with the emergence of the delta variant, experienced a surge in cases and deaths in the first half of 2021. A recent study has shown that states such as Madhya Pradesh and Andhra Pradesh, with large and predominantly rural populations have experienced a 197% and 164% rise in excess mortality respectively in 2021, with significantly higher mortality than in 2020.\(^7\) Furthermore, the same study reports that COVID-19 mortality in India from June 2020 to June 2021 may be 7 to 8 times that officially reported.\(^7\) Caution must therefore be applied in using retrospective results to guide future policy decisions, particularly in the face of new and emerging COVID-19 variants.

International comparisons of mortality only give a partial understanding of the overall impact of the COVID-19 pandemic. Reductions in global poverty in the last decade have already been partly reversed, with an estimated 97 million additional people moved into poverty worldwide over 2020.\(^8\) The study by Barnwal et al\(^8\) emphasizes the importance of the economic consequences of the pandemic on household income and job security. Average monthly earnings of employees surveyed dropped 40% in May 2020 vs before the pandemic and corresponding mobility data showed large average declines in April, following a national lockdown on March 23, 2020. However, by November of 2020, mobility was at prepandemic levels, but monthly earnings remained substantially lower.
suggesting lasting impact beyond the immediate effect of social restrictions. The government of Bangladesh announced several financial stimulus packages over the course of the pandemic, amounting to Tk 390.7 billion (US $4.6 billion), of which Tk 186 billion (US $2.2 billion) had been disbursed by May 2021. Nevertheless, entering the pandemic with one of the highest rates of child malnutrition in the world, an increasing burden of multimorbidity, and limited access to affordable health care, the economic repercussions of the pandemic will in turn have long-term impacts on health, which are unaccounted for in short-term estimates of excess mortality.

COVID-19 mortality surveillance systems rely on timely, accurate, and accessible testing, diagnosis, and reporting systems, which are often lacking in LMICs, particularly in rural areas with weak health care infrastructure. Excess mortality is valuable in understanding the burden of COVID-19, as it is less susceptible to limitations in these systems. But where the incidence of COVID-19 is relatively low, as in Bangladesh over the study period, excess mortality may add little value to routinely reported COVID-19 deaths. For instance, excess mortality estimates from India during the first wave were relatively similar to reported COVID-19 death counts. But in the larger 2021 peak, excess mortality was 10 times higher than the reported COVID-19 death toll. In both cases, without a detailed understanding of underlying causes of death, aggregated, population-level estimates of COVID-19 mortality and excess mortality may mask greater changes within demographic groups and from other attributable causes of death. Because of this context-dependency, policy makers must be careful not to see agreement between post hoc estimates of excess mortality and routinely reported national deaths, as evidence that existing mortality surveillance systems are sufficient. Further investment to improve the timely recording of deaths and the reporting of cause of death, is a vitally important component of both health system strengthening and pandemic preparedness in LMICs.

The findings from Barnwal and colleagues are reassuring to the extent that there was not a large undetected burden of short-term mortality in Bangladesh but point to the wider impact of the pandemic on people's livelihoods, which are likely to have long-term impacts on health. We should view the findings with cautious optimism, given that experience from the ongoing pandemic demonstrates how indicators of success now can rapidly change in the face of new variants and dynamically changing government policies. Excess mortality will continue to be a useful adjunct to routine surveillance systems, particularly in resource-constrained settings and at times of high disease incidence. But as vaccinations proliferate and social restrictions are eased, investing in routine surveillance systems will be increasingly essential to understand the persisting impact of COVID-19 relative to other major causes of death. As the world shifts toward living with COVID-19, policy makers and public health professionals must ensure that the intelligence on which priorities and decisions are based shifts with it.

ARTICLE INFORMATION

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