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## Foreseeing a Worsening of Pediatric Malnutrition Following SARS-CoV-2 in Low and Middle-Income Countries Such as Pakistan



Dear Editor,

We read the paper “Children are at Risk from COVID-19” by Dr. Fry-Bowers (2020) with great interest and would like to comment on the discussed situation in the setting of Low and Middle-Income Countries (LMIC). SARS-CoV-2 was declared a global pandemic on 12th March, 2020; however, Pakistan registered its first two cases of the novel coronavirus on 26th February, 2020. To date, 28th June, 2020, it has recorded greater than 165,000 cases (case fatality ratio: 1.95%). The rapid registering of cases was closely followed by the government’s policy of enforcing lockdown restrictions in the country to contain the spread of the viral disease. Even though this action was critical in ‘flattening the curve,’ it brought a loss of livelihood. LMIC such as Pakistan have a large majority of the population who are either daily wagers or depend on their weekly incomes to feed their families. With predicted three million people losing jobs (one million in industrial; two million in the services sector) and poverty headcount to soar from 24.3% to 33.5% (Reuters, 2020) - many families are expected to be pushed towards starvation, rendering children more vulnerable to an already prevailing malnutrition.

As with other LMIC’s in Asia and Africa, Pakistan, record a significantly high incidence of pediatric malnutrition. A recent study (Laghari et al., 2015) has shown that approximately 66% of the children in Pakistan (females > males) suffer from malnutrition, ranging from mild malnutrition in 43.2% to severe malnutrition in 10.2% of the population. However, it is not Pakistan alone, which suffers from a higher incidence of malnourishment. United Nations Children Fund (UNICEF) predicts, on average, 47 million children under the age of five suffering from wasting (UNICEF, 2020).

The children are at a higher risk during the SARS-CoV-2 because of interruption to supply food services, which are essential to their survival. This interruption in nutritional supply is especially pertinent in areas relying heavily on external aid, which were either cut off due to travel restrictions or as a result of a decline in production. Secondly, undernourished children tend to have a weaker immune system and hence, rendered more susceptible to the viral disease, with lesser chances of survival (Dunn et al., 2020; UNICEF, 2020). Perhaps, the most important is the double-edged sword; parental exposure to the virus. This phenomenon holds in the context of LMIC, such as Pakistan, where the GDP per capita is estimated at \$1482 (vs. \$62,794 of United States of America), and the family’s breadwinner in most cases being a daily or weekly wager. If the breadwinner stays home and is not earning, he is risking bringing starvation for the family; however, if he goes to work and contacts the virus, he will end up spending more on treatment-which remains out-of-pocket in Pakistan. All of which will predispose the child to malnourishment. The way out?

UNICEF recommends promoting safe breastfeeding and providing complementary foods to children- either by upscaling the supply from non-governmental organizations or strengthening the pre-existing nutrition program of the country. Every effort should be made to provide a buffer stock of a minimum of two months, including therapeutic milk and ready to use therapeutic foods to prevent child wasting and ensure the healthy growth of our children during this pandemic.

### Declaration of competing interest

All authors report no conflict of interest or funding for this paper.

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