

## Editorial

### The COVID-19 Pandemic and Asia-Pacific Children

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Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a novel virus and has caused COVID-19 pandemic. Cases were first reported in December 2019 in Wuhan, China, since then the disease has spread to 188 countries with a total of more than 22 million cases.<sup>1</sup> After 8 months, the pandemic shows no signs of slowing down, with resurgences seen in countries which have previously reported less numbers of cases and rising casualties, including the countries of Asia Pacific region. In Southeast Asia, countries like Indonesia have reported more than a thousand new cases per day, despite low testing capacity. For a country of 270 million people<sup>2</sup>, Indonesia has only tested 1.1 million, with a testing rate of 3.95 tests per 1000 people.<sup>3</sup> Compared to other countries of the region, Indonesia has one of the lowest testing capacity; Pakistan has 10.49 tests per 1000 people and Malaysia has 34.88 tests per 1000 people, to name a few.<sup>3</sup> Due to low testing rate, the reported numbers may be underestimated.

In epidemiological studies of the disease, the paediatric population may seem underrepresented, with low death rates. A multi-centre study in Europe involving 582 children in 25 countries described a case fatality rate of 0.69%.<sup>4</sup> But in Indonesia, more than 300 children with suspected COVID-19 infection have died since March, with a case fatality rate of 1.1%.<sup>5</sup> Deaths include infants less than a month old to adolescents. Compared to another hard-hit country, the United States of America, the proportion of children in overall number of cases is similar to Indonesia (9% in the USA and 9.1% in Indonesia), but there is a notable difference in mortality (0-0.6% in the USA).<sup>5,6</sup> This disparity may be caused by the differences in living conditions in low-to-middle income countries (LMICs) and in high-income countries, prevalence of malnutrition, access and quality of health care system and presence of comorbidities. A report by UNICEF showed higher proportions of cases among people under 20 years old were seen in LMICs, where young people are more vulnerable to disease in general. The report argued the narrative that children and adolescents are largely spared from the virus was built on data from China and European nations that had been hit early by the virus and low testing rates in children, excluding emerging data from LMICs. Thus, risks of COVID-19 in children and young people largely depend on where they live.<sup>7</sup> Although this pandemic has caused less infections and deaths in children, however this has significant indirect impacts on children's health and services. Modelling scenarios by UNICEF showed disruptions in essential maternal and child health interventions can lead to a 9.8-44.7% increase in deaths of children under five years old. Deaths to other diseases also increased, such as a 20% increase in deaths due to tuberculosis and a 36% increase in malaria deaths.<sup>8</sup>

Due to modes of transmission of the virus, public health interventions such as quarantines/lockdowns are needed to control the pandemic, which include school closures. As the beginning of the new school year in many part of the world draws near, the debate on whether schools should open is heating up. Some countries in Europe, such as Denmark, have opened schools for a few months and see no upsurge in cases, but this finding cannot be easily extrapolated to other countries with differences in income levels and resources. Modelling studies showed opening schools will increase R0, especially when done in conjunction with relaxation of other public health measures.<sup>9</sup> The Philippines, the country with the highest number of cases in Southeast Asia, decided to postpone the school year until October 5 and had largely ruled out face-to-face classes until the end of 2020. Their new school year will consist of online, television, and radio classes.<sup>10</sup> Meanwhile, Indonesia, with the second highest number of cases in Southeast Asia with the highest number of deaths<sup>11</sup>, is set to end distance learning programs and resume face-to-face academic activities in areas deemed safe from COVID-19. To date, 138 students and 54 teachers tested positive for the virus, with at least nine school-related clusters of cases.<sup>12</sup> A

World Economic Forum study described living circumstances in LMICs may worsen virus transmission such as crowded living conditions and bigger households in which elderly family members live together with school-aged children; thus in these situations, delaying school reopening may save lives.<sup>13</sup>

In the face of a spreading pandemic, policies made by governments can make or break a country's chance of survival. Despite repeated warnings from scientists that a pandemic was bound to happen, a lot of countries were slow in implementing public health measures, and many did not base their actions on scientific evidence. Many vaccines are in clinical trials, but further hurdles such as scaling up production to provide billions of dose, vaccine hesitancy and anti-science movements, and questions on when will the herd immunity threshold be reached, especially in children, remains unanswered. As paediatricians in Asia Pacific, a region of great socioeconomic inequality, we need to prepare to fight a long war, especially in countries that do not prioritize public health measures and scientific evidence of prevention.

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