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## Childhood vaccinations: playing catch-up

The COVID-19 pandemic has had huge indirect effects on health and health-care systems around the world, with one of the most severely affected being routine child immunisation services. A new report by WHO and UNICEF, published on July 15, outlines in stark numbers the result of the pandemic on childhood vaccinations worldwide. Coverage of the third-dose vaccine against diphtheria, tetanus, and pertussis (DTP3) dropped to 83% in 2020, from 86% in 2019, such that almost 23 million children were either unvaccinated or undervaccinated—almost 4 million more in 2020 than in 2019. Global coverage also decreased for other vaccines, including the human papilloma virus (from 15% to 13% of girls aged 9–14 years from 2019 to 2020) and for measles (from 86% to 84% for first-dose measles-containing vaccine [MCV1]), leaving 3 million more children potentially vulnerable to measles.

In parallel, an even more concerning outlook was predicted by a study by Kate Causey and colleagues published in *The Lancet* on July 15. Instead of contrasting data from 2019 and 2020, this study modelled what the 2020 coverage of DTP3 and MCV1 would have been in the absence of the pandemic, based on data from 1980–2019, and compared this with data on the actual coverage. As annual vaccination rates can fluctuate, such data offer a deeper insight into the pandemic's disruptive effects. The estimated global coverage in 2020 for the two vaccines was 77% for DTP3 and 79% for MCV1. This equates to a drop in coverage of almost 8% for both vaccines compared with what would have been expected without the pandemic, taking the coverage down to levels not seen in more than a decade. In real terms, this translated to an estimated 30 million children missing doses of DTP3 and 27 million children missing MCV1 doses.

At the regional level, DTP3 coverage was most disrupted in southeast Asia, the eastern Mediterranean, and the Americas during the pandemic, but the eastern Mediterranean region has also made the most robust recovery. Using different regional classifications, the *Lancet* study found that the two most affected regions were south Asia (13% annual reduction), which had the most severe impact but also a strong recovery, and north Africa and the Middle East (11% annual reduction), where disruptions were less acute but recovery plateaued.

Interventions such as mask use, physical distancing, and other preventive behaviours are likely to have reduced the transmission risk of vaccine-preventable disease during the pandemic, but once these behaviours subside, risk of disease outbreaks will increase, particularly for the most contagious childhood diseases such as pertussis and measles. Health systems are already under great strain through the mass rollout of COVID-19 vaccines, and catch-up of clinical services and early wellbeing checks, but both the WHO–UNICEF report and *Lancet* study reinforce the urgent need for effective catch-up of vaccination services. Reassuringly, some initiatives are under way and many use pre-existing programme strengths (eg, vaccination clinics at schools, supermarkets, or pharmacies) and protocols for safer vaccine administration amidst a pandemic (eg, mandating appointments to decrease crowding at clinics).

As these vaccination services are reappraised, there is an opportunity not just to catch up, but to expand to children not previously reached. According to the WHO–UNICEF report, during 2020, 17 million children received no dose of DTP at all, with the majority of these children living in the African continent, in countries affected by conflict, or in informal or slum settings with limited access to health and social services.

The global vision for vaccines—as set out in the Immunization Agenda 2030 that launched in April, 2021—is to make vaccination achievable for everyone, everywhere by 2030. The agenda stresses that investment in future vaccine research, and effective, equitable international delivery are critical for global health security. Data-driven interventions are among the agenda's core principles for success, and we welcome evidence that will inform efforts towards global equity for childhood vaccinations, including studies of access to services, barriers to uptake, and vaccine delivery innovations such as needle-free techniques.

Childhood vaccinations have saved millions of lives and improved health across many generations and countries. We must not falter now. Urgent action must be taken to ensure that not only are all children with missed vaccinations identified and immunised, but that global attention can be harnessed to reach the often overlooked zero-dose children with no previous access to immunisation programmes. ■ *The Lancet Child & Adolescent Health*



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For the **UNICEF and WHO report on immunisation coverage during the pandemic** see <https://data.unicef.org/resources/dataset/immunization/>

For the **estimates of disruptions to childhood vaccination coverage during the pandemic in 2020** see **Articles** *Lancet* 2021; published online July 15. [https://doi.org/10.1016/S0140-6736\(21\)01337-4](https://doi.org/10.1016/S0140-6736(21)01337-4)

For **routine childhood vaccine coverage during 1980–2019** see **Articles** *Lancet* 2021; published online July 15. [https://doi.org/10.1016/S0140-6736\(21\)00984-3](https://doi.org/10.1016/S0140-6736(21)00984-3)

For the **WHO Immunization Agenda 2030** see <https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030>