

The question asked by the researchers was: is exposure to multiple vaccines in early childhood associated with an increased risk of infections that cannot be prevented by vaccination?

The authors selected 193 cases aged 24-47 months with a confirmed diagnosis of infection not preventable by vaccination (such as upper and lower respiratory tract infections, gastrointestinal infections and other viral and bacterial diseases), and 751 controls without such infections. and compared the mean cumulative antigenic exposure in the first 23 months of life in the two groups.

The results of the study are solid and offer further confirmation of the safety of current vaccination schedules: exposure to vaccine antigens was similar in the two groups (average cumulative exposure of cases vs controls 240.6 vs 242.9, difference not statistically significant).

The authors concluded that among children aged between 24 and 47 months with infections not preventable by vaccinations, no significant differences were found in the cumulative antigen exposure in the first 23 months estimated compared to children without infections.

Useful resources

Read the article Association between estimated cumulative vaccine antigen exposure through the first 23 months of life and non-vaccine-targeted infections from 24 through 47 months of age (Glanz et al, JAMA 2018; 319: 906-13).

Official data published today by the WHO and UNICEF record the largest sustained decline in children's vaccinations in about 30 years. The percentage of children who received three doses of diphtheria, tetanus and pertussis (DTP3) vaccine - an indicator of vaccination coverage used both within and between countries - fell by 5 percentage points between 2019. and 2021, reaching 81%.

As a result, 25 million children in 2021 alone did not receive one or more doses of DTP from routine vaccination services.

This is 2 million more than those who skipped vaccination in 2020 and 6 million more than in 2019, highlighting the growing number of children at risk of terrible but preventable diseases.



- The decline is due to many factors, including the increase in the number of children living in contexts of conflict and frailty, where access to vaccinations is often difficult, the increase in misinformation and problems related to COVID-19, such as disruptions to services and the supply chain, diversion of resources to pandemic response activities and containment measures that have limited the access and availability of vaccination services.
- 18 of the 25 million children did not receive even a single dose of DTP during the year, most of whom live in low- and middle-income countries, with India, Nigeria, Indonesia, Ethiopia and the Philippines having the highest numbers. Among the countries with the largest relative increases in the number of children who received no vaccines between 2019 and 2021 are Myanmar and Mozambique.

Coverage of the first dose of measles dropped to 81% in 2021, the lowest level since 2008.

This means that 24.7 million children did not receive their first dose of measles vaccine in 2021, 5.3 million more than in 2019. Another 14.7 million did not receive the required second dose. Similarly, compared to 2019, 6.7 million more children have not received the third dose of polio vaccine and 3.5 million have not received the first dose of the HPV vaccine, which protects girls from cervical cancer in old age.

“This is a red alert for children's health. We are seeing the largest sustained decline in children's vaccinations over the course of a generation. The consequences will be measured in human lives,” said Catherine Russell, UNICEF Director-General. “While the pandemic was expected to spill over from the disruptions and closures caused by COVID-19 last year, what we are seeing now is a persistent decline.

COVID-19 is no excuse

We need to recover vaccinations for the millions of missing children, otherwise we will inevitably see new epidemics, more sick children and greater pressure on health systems already in trouble”. Globally, more than a quarter of human papillomavirus (HPV) vaccine coverage achieved in 2019 has been lost.



This has serious consequences for the health of women and girls, as the global coverage of the first dose of HPV vaccine is only 15%, despite the fact that the first vaccines were authorized over 15 years ago. It was hoped that 2021 would be a year of recovery, during which the strained vaccination programs would replenish and the group of children not

reached in 2020 would be made up.

Instead, coverage of DTP3 has been pushed back to its lowest level since 2008 and, coupled with the decline in coverage of other core vaccines, has driven the world away from achieving global goals, including the vaccination indicator for the Development Goals. Sustainable.

- This historic retreat in vaccination rates takes place against a backdrop of rapidly rising rates of severe acute malnutrition.
- A malnourished child already has weakened immunity and lack of vaccinations can cause common children's diseases to quickly become lethal for them.
- The convergence of a hunger crisis and a growing vaccination shortage threatens to create the conditions for a crisis of child survival.

Vaccination coverage dropped across all regions, with the East Asia and Pacific region experiencing the strongest turnaround in DTP3 coverage, dropping nine percentage points in just two years. “Planning and addressing COVID-19 should go hand in hand with vaccination for deadly diseases such as measles, pneumonia and diarrhea,” said WHO Director-General Tedros Adhanom Ghebreyesus. “It is not a question of one or the other, it is possible to do both”.

Some countries have held back the decline.

Uganda has maintained high levels of coverage in routine vaccination programs, while launching a targeted vaccination program against COVID-19 to protect priority populations, including health care workers.

- Similarly, Pakistan has returned to pre-pandemic coverage levels thanks to high-level government engagement and significant recovery vaccination efforts. It is to be commended that this is achieved in the midst of a pandemic, when health systems and health workers were under considerable pressure.
- Monumental efforts will be needed to achieve universal coverage levels and prevent epidemics. Inadequate coverage levels have already caused preventable outbreaks of measles and polio in the past 12 months, underscoring the vital role of vaccinations in keeping children, adolescents, adults and society healthy.

The sharp two-year drop follows nearly a decade of stalled progress, underscoring the need to address not only pandemic-related disruptions but also systemic vaccination-related challenges to ensure every child and adolescent is met.

WHO and UNICEF are working with Gavi, the Vaccine Alliance and other partners to implement the Global Vaccination Agenda 2030 (IA2030), a strategy for all interested countries and global partners to reach the objectives set for the prevention of diseases through vaccinations and the provision of vaccines to everyone, everywhere and at any age.

“It is heartbreaking to see more children losing protection from preventable diseases for the second consecutive year. The Alliance's priority must be to help countries maintain, restore and strengthen routine vaccinations along with the implementation of ambitious COVID-19 vaccination plans, not only through vaccines but also with tailored structural support to the health systems that will administer them,” said Seth Berkley, CEO of Gavi, the Alliance for Vaccines.