

How to report on pandemic-related disruption to child immunization

Polio, once affecting many hundreds of thousands of children each year, has been **near eliminated** because of vaccines. Vaccination is considered to be among the most cost-effective public health tools available. A **Lancet study** estimates that vaccine programs targeting 10 diseases will save 69 million lives in 98 low- and middle-income countries (LMICs) between 2000 and 2030.

These remarkable successes achieved through routine childhood immunizations are now in jeopardy. Since the onset of the COVID-19 pandemic, child vaccination has suffered a backslide all over the world. In 2020 alone, some **25 million children missed out on basic childhood vaccines** through routine health services.

In Africa, the glaring repercussions of the pandemic on routine child immunizations have undone years of exceptional progress made in preventing and controlling the devastating burden of vaccine preventable diseases.

- **African countries** had nearly eliminated the deadly form of meningitis type A. But a four-month-long meningitis outbreak was reported in the **Democratic Republic of Congo** in 2021. It accounted for 2,665 cases, claiming 205 lives. The resurgence is **linked** with the suspension of meningitis vaccination campaigns at the height of the COVID pandemic.
- In February 2022, **Malawi** reported its first wild case of poliovirus type 1 in 30 years. A second case followed in **Mozambique** three months later. The outbreaks sparked **mass polio vaccination campaigns** across southern Africa.
- In Zimbabwe, the deaths of more than 750 children and young people due to measles between April to early October 2022, was related to religion-based refusal to get vaccinations for anything, but can also be linked to the disruption of vaccination services because of the recent COVID-19 pandemic and the resulting lockdowns. The rising death toll has fueled calls in Zimbabwe for **mandatory shots to halt the virus**.

Low confidence in COVID-19 vaccines and misinformation about their impact on health among some communities has a spillover adverse impact on routine child immunization programs. The resurgence of vaccine preventable diseases underscores the need for in-depth understanding about immunization basics; story telling on how the pandemic has severely disrupted national health systems and routine immunization schedules; and what needs to be done to get immunization back on track:

1. What is the difference between immunization and vaccination?



People sometimes get confused between immunization and vaccination. Vaccination refers to the physical process of giving a vaccine. Immunization refers to the way a vaccine stimulates a person's immune response to provide protection against infection. But since the whole point of giving a vaccine is to induce an immune response, there may be little point in maintaining the distinction, and many of us use the two words interchangeably.



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2. What is an immunization schedule and why is it important?

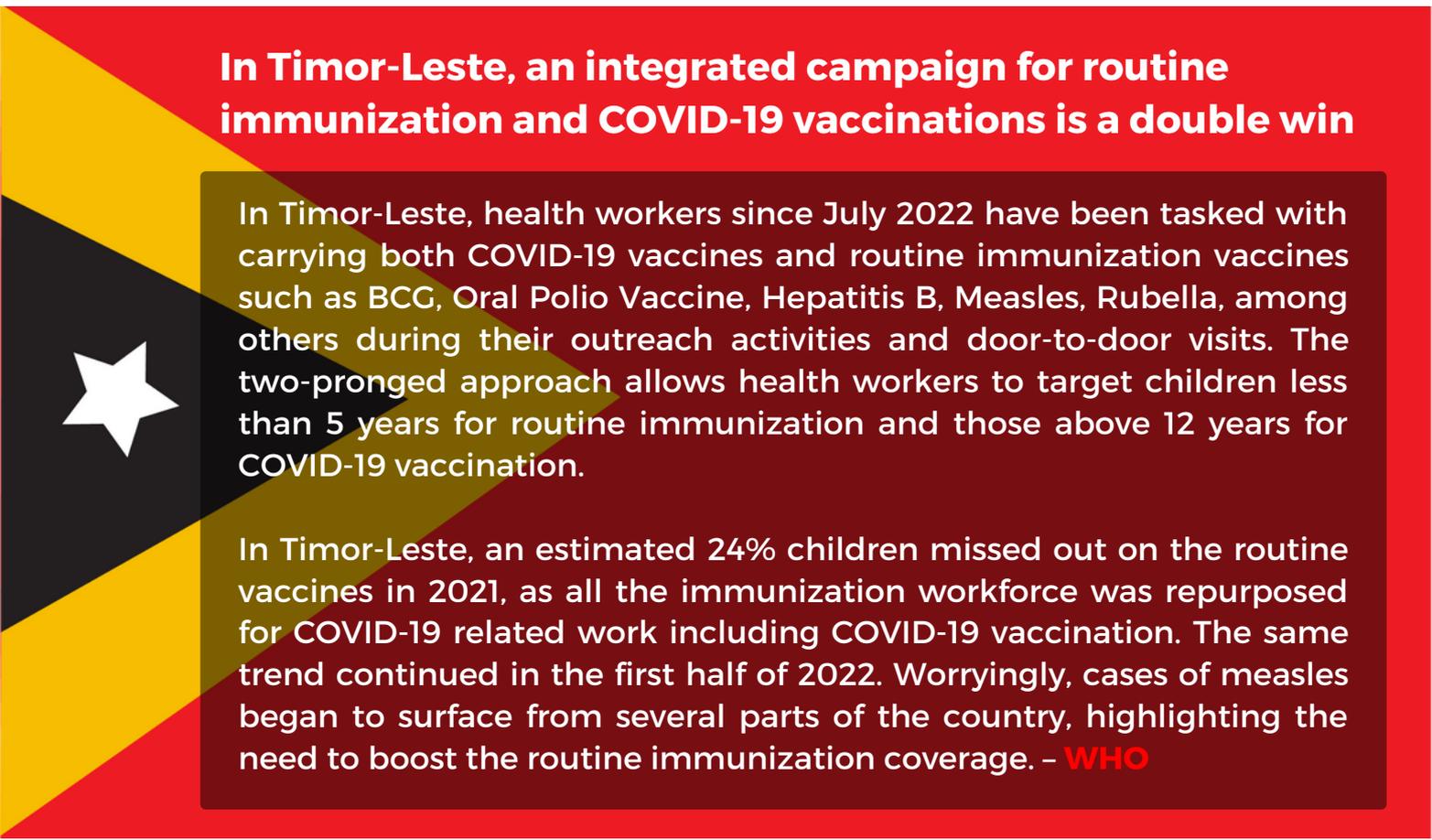


An immunization schedule is a series of routine vaccinations, including the timing of all doses, **which may be either recommended or compulsory, depending on the country.** The timing of the doses is important for the child as this determines the period when the vaccine can have the best effect. When this schedule is not followed, children could be vulnerable to vaccine-preventable diseases.

COVID-19 has caused more disruption to outreach immunization services than fixed-post vaccinations. Outreach services are commonly used in many low-income and middle-income countries and require regular visits to deliver routine child immunization services to communities, particularly those with poor access to health facilities.

Communities that depend on outreach routine immunization are more likely to experience service disruptions and are also the **last to recover**, leaving children in these populations at higher risk of vaccine-preventable diseases for years to come.

In Timor-Leste, an integrated campaign for routine immunization and COVID-19 vaccinations is a double win



In Timor-Leste, health workers since July 2022 have been tasked with carrying both COVID-19 vaccines and routine immunization vaccines such as BCG, Oral Polio Vaccine, Hepatitis B, Measles, Rubella, among others during their outreach activities and door-to-door visits. The two-pronged approach allows health workers to target children less than 5 years for routine immunization and those above 12 years for COVID-19 vaccination.

In Timor-Leste, an estimated 24% children missed out on the routine vaccines in 2021, as all the immunization workforce was repurposed for COVID-19 related work including COVID-19 vaccination. The same trend continued in the first half of 2022. Worryingly, cases of measles began to surface from several parts of the country, highlighting the need to boost the routine immunization coverage. – **WHO**

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3. What is the Expanded Program of Immunization (EPI) and how does it improve child vaccinations in routine immunizations?

Even before the COVID-19 pandemic, children in many countries missed getting vaccinated for various reasons. In many African countries, for instance, national routine immunization programs before the COVID-19 pandemic were disrupted by armed conflicts and climate-related disasters, including flooding, drought, and famine.

So, community uptake of vaccines delivered through routine immunization programs remains variable and often poor in many low-and-middle-income countries. This suggests that routine immunization alone is insufficient to achieve optimal immunization coverage in LMICs.



According to GAVI, the Vaccine Alliance, almost half of all vaccine preventable deaths in LMICs are among **zero-dose children** in hard-to-reach communities. Zero-dose children are those who don't receive a single dose of diphtheria, tetanus and pertussis-containing vaccine. When children get sick, **parents can be burdened with crippling financial costs**. These costs can include medical care, transportation for treatment, and lost wages.

To overcome these challenges, the World Health Organization established the Expanded Program on Immunization (EPI) to develop and expand immunization programs throughout the world in 1974. Every country had its own EPI within its own National Immunization Program and in 1977, the goal was set to make immunization against diphtheria, pertussis, tetanus, poliomyelitis (polio), measles and tuberculosis available to every child in the world by 1990.

Journalists need to check what the EPI in their own country looks like.

A country's EPI can make changes to routine vaccination schedules based on evidence of changing incidence of vaccine preventable diseases on the recommendations of WHO. Currently, the most common and serious vaccine-preventable diseases tracked by WHO are: diphtheria, Haemophilus influenzae serotype b infection, hepatitis B, measles, meningitis, mumps, pertussis, poliomyelitis, rubella, tetanus, tuberculosis, and yellow fever.

The EPI is also used to improve routine immunization delivery with a focus on establishing strong outreach and mobile strategies, recruiting and training vaccinators and providing incentives to staff and improving the cold chain and vaccine management.

A country's National Immunization Program, through the EPI, can also carry out **Supplementary Immunization Activities (SIAs)** to rapidly scale up coverage of key immunizations. SIAs are commonly used for polio and measles vaccinations and have proven to be successful in conflict-ridden countries like **Afghanistan** and **Somalia**. Polio SIAs were carried out in the Malaysian of Sabah in response to a vaccine derived poliovirus outbreak in December 2019. Prior to this, Malaysia had been polio-free over the past 27 years.

In response to the **present measles outbreak in Zimbabwe**, the country's EPI with support from the Measles Rubella Initiative, Gavi, the Vaccine Alliance, the Health Development Fund, the Government of Japan and the European Civil Protection and Humanitarian Operations (ECHO), is carrying out SIAs targeting more than 2 million children aged between 6 months and 5 years and more than 4 million children aged 5 to 15 years. Zimbabwe and its development partners are going all out to ensure that no one is left behind as its catch-up measles vaccination campaign gets underway.

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4. How do immunization programs keep track of their routine immunization work and how has COVID-19 affected the programs?

Health workers who give child routine immunizations use two key indicators to track their progress in vaccine coverage: they check to see who received the diphtheria-tetanus-pertussis first-dose (DTP1) and the third-dose (DTP3) vaccine. Tracking diphtheria-tetanus-pertussis (DTP) coverage enables health workers to measure the percentage of one-year-olds who receive three doses of the combined diphtheria, tetanus toxoid and pertussis vaccine in a given year.

So, the DTP1 coverage is when children receive the first dose of diphtheria, tetanus and pertussis vaccine. DTP3 coverage is a standard measure of the strength of immunization and health systems and considered to be a marker of vaccine coverage. If children miss these jabs, they're probably also missing out on crucial vaccinations for many other diseases. This is because the delivery of **DTP3 requires three contacts with the health system at appropriate times.**

Another indicator of immunization system performance is the dropout rate between DTP1 and DTP3 coverage levels. The dropout rate is effectively the proportion of children who did not finish the vaccination course. DTP1 is used as a proxy for inequity - quantifying Zero Dose children - those that receive no childhood vaccinations.

The DTP vaccine tends to be given through routine national immunization programs rather than campaigns. As measles is so contagious, very high vaccine coverage (95%) with two timely doses of measles-containing vaccine is required to prevent its spread. Vaccination for measles is part of the EPI in all countries. Now, according to WHO, coverage with the first dose of measles vaccine has plateaued globally at around 85% over the past decade.

Although coverage with the second dose has increased to 69%, the percentage is not sufficiently high, and supplementary means of delivering vaccine are necessary through planned campaigns, periodic intensification of routine immunization and other strategies

Journalists can also check the [Primary Health Care Performance Initiative with data from the National Immunization Programs](#) that has a dashboard on global DTP3 coverage and allows comparisons to be made between countries.

According to data from **WHO and UNICEF**, the percentage of children who received three doses of the vaccine against diphtheria, tetanus and pertussis (DTP3) - a marker for immunization coverage within and across countries - fell 5 percentage points between 2019 and 2021 to 81 per cent. The UN agencies cited several factors for the alarming decline including an increased number of children living in conflict and fragile settings where immunization access is often challenging, increased misinformation and COVID-19 related issues such as service and supply chain disruptions.

As a result, 25 million children missed out on one or more doses of DTP through routine immunization services in 2021 alone. This is 2 million more than those who missed out in 2020 and 6 million more than in 2019.

The WHO points out that 18 million of the 25 million children who did not receive a single dose of DTP during the year, live in low- and middle-income countries, with India, Nigeria, Indonesia, Ethiopia and the Philippines **recording the highest numbers.** Among countries with the largest relative increases in the number of children who did not receive a single vaccine between 2019 and 2021 are Myanmar and Mozambique.

According to the United Nations, global DTP3 coverage has been set back to its lowest level since 2008 which, along with declines in coverage for other basic vaccines, pushed the world off-track to meet global goals, including SDG 3.b - the **immunization indicator for the Sustainable Development Goals (SDGs).**

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Exploring the reasons behind why parents refuse to get their children vaccinated

Parental refusal of vaccines is a growing concern for the increased occurrence of vaccine preventable diseases in children. A number of studies have looked into the reasons that parents refuse, delay, or are hesitant to vaccinate their child(ren). These reasons vary widely between parents, but they can be encompassed in 4 categories: religious reasons, personal beliefs or philosophical reasons, safety concerns, and a desire for more information from healthcare providers.

When it comes to vaccine acceptance, a big part of the conversation is dominated by vaccine hesitancy — often placing the blame on individuals and communities who are not coming forward to take the vaccines. However, research has shown the opposite. People from communities that are under vaccinated are willing to take the vaccines but there is lot of mistrust and misinformation. Put it bluntly: vaccine demand does not necessarily translate to vaccine acceptance.

Parents who are hesitant to vaccinate or who refuse vaccines care about their children and want to do what they can to protect them, just like any other parent. It is important for practitioners to have open and frank conversations with their patients and their families so that the families will understand the benefits of vaccination without feeling attacked or judged for having questions about their child's healthcare.

Journalists play a big role in being able to provide the information parents need to make the best-informed decisions for their children. In turn, they also help healthcare providers understand the source of parents' questions and pave the way to speak with patients on a more relatable level and to speak to the areas parents value the most. These tips from **The Journalist's Resource** will be useful:

Find out why some parents are refusing vaccines for their children

Don't assume that all parents who are avoiding shots for their children are doing it because of misinformation or conspiracy theories. Some who are hesitant have adequate knowledge about the vaccines but may need clarification or assurance about something. Access to vaccines is another barrier for some people. For caregivers in poor countries, travelling to a health facility for routine immunization of their children requires significant investments of time, effort and money. Some caregivers have to sell crops or buy less food to save money for transport to the health facility.

Let parents ask the questions

Journalists can collect the questions but putting out a call on their social media channels or on their news outlet's website. Local doctors or nurses can be asked what questions they've been getting from their patients and those questions addressed in stories. If we don't let the public ask questions, we don't know what their questions are and we're making assumptions.

Balance the voices

Media coverage of child immunizations allows parents to gauge how other parents feel about it. If the interview only includes parents who refuse immunizations for their children, inadvertently the story will appear that the majority of parents oppose vaccination for their kids – even though it might not be the case. So it is necessary to bring in more than one perspective.

Spend time in communities where most parents are reluctant to vaccinate their children to understand why child immunization rates are low in those areas

In certain communities, social norms might not seem so straight forward. There could be limited family support that places the burden of vaccination on mothers, compounding the challenges of accessing vaccination services. Limited family support can be due to community beliefs that vaccination responsibility resides with mothers and that fathers should not be involved in the process. When mothers fall sick their children will miss out on routine immunizations due to fathers being reluctant to step in to ensure their kids receive life-saving shots. Also, in some communities mothers might want their children to be vaccinated but lack decision-making powers: deferring to their male partners when it comes to their children's well-being.

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5. Are children with malnutrition at a greater risk of death from vaccine-preventable diseases and has COVID-19 exacerbated the situation?

Good nutrition is the bedrock of a functioning immune system; it protects against illness and infection, and it supports recovery. Undernutrition worsens the impact and duration of disease, as it negatively impacts children's ability to generate an immune response, and consequently **increases the risk of further infections or death**. In addition, undernourished children produce lower immune response than that of well-nourished children, **potentially compromising the efficacy of immunisation**.

Malnutrition and infectious diseases are mutually reinforcing. They cause millions of preventable child deaths and contribute to a vicious cycle of poor health, stunted growth, and poverty. According to a joint report by **UNICEF, WHO and the World Bank**, from 2015 to 2019, malnutrition accounted for nearly one-half of the total number of child deaths worldwide (5.2 million in 2019) with significant costs in economic and human capital development terms. This situation has been further exacerbated by the onset of the COVID-19 pandemic that has resulted in loss of income owing to unemployment, wage retrenchment, and rising food prices. These factors are compounded by weakening social safety nets and the suspension of school feeding programs,

In economically fragile countries, where there is a mix of conflicts and climate disasters, dramatic levels of food insecurity made worse by COVID-19 can have incalculable consequences.

Malnutrition is also one of the factors in the current measles outbreak in Zimbabwe. Zimbabwean children are more susceptible to acute illness from measles because many are malnourished. **Per capita income has dropped in each of the last four years**, while food prices have surged because of numerous factors, including grain shortages caused by Russia's invasion of Ukraine and drought and higher temperatures related to climate change.

Journalists need to follow the outcomes of efforts by Gavi, the Vaccine Alliance, and the Scaling Up Nutrition (SUN) Movement, who issued a call through a **policy paper** to all global leaders, at the Nutrition for Growth Summit in Tokyo in December 2021, to take action and prioritize the integration of child immunization and nutrition.

By integrating immunisation and nutrition efforts, and allowing vaccines and good nutrition to be delivered together we can ensure we reach the most vulnerable populations – effectively and efficiently, to help enhance equity across the world.

Anuradha Gupta
Gavi Deputy CEO



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6. Will the Immunization Agenda 2030 help meet global child immunization goals?

In August 2020, the Seventy-Third World Health Assembly endorsed **The Immunization Agenda 2030: A Global Strategy to Leave No One Behind** (IA2030). It aims to sustain the hard-won gains of child immunizations once the threat of the COVID-19 pandemic begins to recede.

The IA2030 also addresses the unmet targets of the Global Vaccine Action Plan (GVAP) that were initially to be fulfilled as part of the global immunization strategy of the 'Decade of vaccines' (2011–2020).

At the end of 2020, it was becoming clear – largely due to the disruption of routine immunizations by COVID-19 – that **four of the five GVAP goals** will not be met. Reaching vaccine coverage and equity targets; eradicating polio; and eliminating measles, rubella, congenital rubella syndrome, and maternal and neonatal tetanus remain stubborn challenges. Child mortality had been reduced by 59% from 1990 to 2018, but still falls short of the Millennium Development Goal target to reduce child mortality by two-thirds by 2015.

IA2030 goals are designed for governments to implement and support efforts to improve health security, universal health coverage, access and equity for immunization and innovation.

It intends to reduce the number of zero-dose children by 50 per cent. The programs hope to do this by extending immunization services to 13 million such children. These constitute 65 per cent of more than 20 million infants who do not receive a full course of even basic vaccines and miss out on new vaccines.

Gavi's goal is to reduce the number of zero-dose children by 25% by 2025, and by 50% by 2030, which will also mark the closing of the Sustainable Development Goals. IA2030 also states new approaches to reach unvaccinated children and resolve geographical inequalities. It is based on a conceptual framework of **seven strategic priorities**, to ensure that immunization fully contributes to stronger primary health care and attainment of universal health coverage.

Political will and commitment to the overarching vision and goals of IA2030 will be central to ensuring that immunization is accessible, valued and actively sought by all people. Towards this end, journalists will play an important role in ensuring governments remain committed to supporting child vaccination and address equity gaps that impact on immunization, health and human development.



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