
ANNEX 1: FREQUENTLY ASKED QUESTIONS... AND SOME ANSWERS (UPDATED)

This FAQ was first developed to provide answers to generic and case study-specific questions raised at the ZDLH-X1 peer learning session between Bangladesh and Mali. It has now been updated to include questions raised at the ZDLH-X2 event between Nigeria and Uganda, with specific questions focusing on case studies in Annex 2. Participants had the opportunity to post questions during the event itself or when watching a recording. Answers were provided by immunization specialists familiar with LMIC settings and, when appropriate, by the individuals who contributed during the experience-sharing event.

This generative process, in which answers are provided in response to specific knowledge needs and questions, is an example of working towards knowledge translation (i.e. turning learning into action). It illustrates the beginning of a “learning loop” in which learning can be connected to practitioner needs as they consider what they need to know in order to take action.

To continue down a pathway leading to action, it is recommended that relevant MoH EPI teams, Country Learning Hubs and in-country partners use this FAQ and the case studies as part of ongoing follow up and technical assistance to sub-national immunization practitioners.

GENERAL QUESTIONS

1. Can you clarify the definitions and the differences between zero-dose children (ZDC), zero-dose pregnant women (ZDPW), under-immunized children, insufficiently vaccinated children, and zero-dose communities?

The most direct and simple answer, and according to Gavi’s operational definition, is that ZDC are **children who have not received a single dose of diphtheria-, tetanus- and pertussis-containing vaccine (DTP)**, such as Penta1. However, for most purposes, ZD children are those who have never been immunized. “ZDPW Td1” pregnant women are those who have not received a dose of Td (tetanus–diphtheria) vaccine; both pregnant women and their to-be-born infant are therefore at risk of getting tetanus.

“Under-immunized” or “under-vaccinated” children were traditionally called “defaulters”. These are **children who started but did not complete the number of doses required for each antigen according to the national immunization schedule**. But they have received at minimum the first dose of Penta vaccine (Penta1). They may have missed out on any of the required subsequent doses (i.e. Penta 2, Penta 3) or measles- and rubella-containing vaccine dose 1 (MR1) or dose 2 (MR2), or oral poliovirus vaccine/inactivated poliovirus vaccine (OPV/IPV) doses. Under-vaccinated

children may sometimes be a far bigger issue than ZDC (in terms of absolute numbers), and lead to a higher risk of outbreaks such as measles.

The term **“zero-dose communities”** refers to urban or rural communities where ZDC or ZDPW tend to cluster or accumulate for various reasons. It is important to understand these reasons, so efforts can be prioritized and specific priority areas defined for corrective measures. Such communities could be hard to reach or never reached due to health system constraints (e.g. lack of human resources, logistics, difficult terrain, limited funding), isolation due to insecurity, or being part of nomadic communities. Such communities may also be affected by vaccine hesitancy or refusal for various reasons that need to be investigated.

It is important to assess if ZD communities and caregivers of ZDC face **accessibility or utilization issues**, or both. Care should also be taken not to label a whole community as ZD unless they truly are, as this label can lead to generalizing the issues in that community. The term “community” suggests that the group is organized around certain commonalities (e.g. geographic location or sociocultural connections). In some cases, ZDC are marginalized because they are outside of a group (e.g. newly arrived urban poor who may be living on the streets or in construction zones, as opposed to urban poor who have settled in slum dwellings).

2. How do the number of ZDC contribute to low-dose routine immunization in the context of limited resources? Would it be possible to learn more about your experience and the methods you used to assess the situation?

The “absolute number” of ZDC Penta1 will not tell you how high or how low your Penta1 coverage is, as this depends upon the total number of targeted children in the area served by an immunization post, health centre, subcentre, or in a district, region or country.

If your Penta1 coverage is high (over 90% or 95%), then data should be triangulated (data from different sources compared to check for similarities/differences) to find any pockets of ZD and under-immunized children. These children may belong to groups who have migrated from rural areas and may also likely miss out on other services such as malaria prevention or nutrition, and integrated services or linkages to PHC may be needed. Even with high overall coverage, pockets of ZDC and/or under-immunized children can lead to outbreaks of vaccine-preventable diseases.

In some areas, high Penta1 coverage may be associated with a low Penta3 or measles vaccine coverage due to a major drop out between Penta1 and Penta3 or measles vaccination (over the 10% that WHO recommends as a threshold of acceptability). The absolute number of drop-outs in an area may be far higher than the number of ZDC, representing a bigger problem and a higher risk of outbreaks of vaccine-preventable disease such as measles or diphtheria. The number of drop-outs may become a priority if the dropout rate exceeds 5–8%.

The maximum Penta3 coverage possible is Penta1 coverage with zero drop-outs. But Penta1 coverage can be low due to lack of access to immunization of certain communities or groups, automatically affecting Penta3 coverage. There are several steps you can take here:

- Review administrative data at different levels in urban and rural areas.
- Review the results of coverage surveys (whenever they occur), even if they are usually conducted only at national and subnational levels, to compare with administrative data (and especially if the coverage surveys have a high number of documented doses rather than recall/history).
- Map accessibility to immunization sites (fixed/static, outreach, mobile) in urban and rural areas and look at the distance between communities and immunization sites.
- Review operational indicators of a functional immunization system such as stock-out of vaccines, percentage of immunization sessions by fixed/static, outreach and mobile vs planned sessions.
- Map hard-to-reach or never-reached communities that are served only during supplementary immunization activities (SIAs) and not routine immunization.
- Confirm the results on localization of ZDC or drop-outs, using a LQAS approach (lot quality assurance sampling; see [Review of Lot Quality Assurance Sampling Methodology and its Application in Public Health - PMC \(nih.gov\)](#)), especially in urban areas.
- Conduct key informant interviews to localize ZDC and understand causes. These could be with:
 - Policymakers (health and non-health, especially those linked to local budgetary decision-making).
 - Health workers dedicated to immunization services at national and sub-national levels.
 - Programme managers.
 - Caregivers of ZDC and ZDPW.
 - Community leaders (males and females).

This assessment will help to find out the localization of ZDC and under-immunized children in hard-to-reach areas and urban slums, and shed light on contributory factors.

The sharing of tools, methods, and results between countries at each level will be very useful for practitioners.

3. What are some upcoming funding opportunities for CSOs to sustainably support the efforts to reduce the number of zero-dose children (ZDC) and zero-dose pregnant women (ZDPW)?

CSOs are very country- and community-specific. In supporting their role and efforts towards improving routine immunization coverage, SIA coverage and catch-up campaigns, resources have been made available by Gavi in its support of country multi-year plans and yearly plans (e.g. full portfolio planning, health system and

immunization strengthening), catch-up campaign resources, equity accelerator funding (EAF), and COVID-19 vaccine operational resources. HSS (health system strengthening) grants are now required to dedicate at least 10 percent of their budgets to CSOs – although the number of local NGOs is still low. In-country donors and international NGOs may also have resources to support ZD-specific efforts (for example, see Gavi’s ZD Immunization Project (ZIP) <https://www.gavi.org/vaccineswork/zip-new-way-get-vaccines-zero-dose-children-some-worlds-toughest-regions>).

QUESTIONS RELATED TO CONFLICT-AFFECTED POPULATIONS

4. How can you overcome socio-cultural barriers in areas of conflict or humanitarian crisis?

Socio-cultural barriers in conflict areas need to be understood and addressed through a dialogue and consensus with local leaders on how to successfully deliver vaccines to the targeted populations.

A common barrier in some countries is the gender of vaccinators. Male vaccinators may not be authorized to vaccinate women outdoors or sometimes indoors. And in some areas, there are insufficient female workers able to inject vaccines. Some countries have been able to mobilize female vaccinators in neighbouring districts or in nursing schools. Others have decided to spread over time the execution of outreach and mobile activities.

Some in conflict areas have managed to arrange a truce to allow access; others have recruited personnel (sometimes skilled vaccinators) from the opposition groups with roles and responsibilities to ensure smooth and safe operations.

5. How do you track zero-dose children in highly migratory populations, particularly in urban or peri-urban slum-like areas?

Tracking and vaccinating migratory populations may require sustained efforts and resources. It is essential to prioritize equity and access to healthcare for all, including those who are highly mobile.

Some strategies that can be employed to identify and reach all children, including the zero-dose and under-immunized within these populations, relate to:

- **Mapping and understanding migration patterns:**
 - Use data and local knowledge to map out the migration patterns of these populations to predict where they will be at different times of the year.
 - Engage with community leaders to gain insights into the movements and needs of migratory populations.
 - Collaborate with sectors that regularly interact with migratory populations, such as agriculture, construction, and transportation.
 - Use these collaborations to gather information about migratory patterns and to disseminate information about upcoming vaccination clinics.

- Create a system to document their movements, such as travel history or temporary residence addresses.
- **Robust data collection and monitoring:**
 - Implement systems to track the vaccination status of individuals within migratory populations, considering their mobility.
 - Use this data to identify gaps in coverage and to plan targeted interventions.
 - Track and register all pregnant women using a unique country-wide code and track the vaccination status of the newborn until they are 5 years old. This will also ensure that all pregnant women receive their required vaccination doses. Post-natal visits can also be useful and can be done by health worker or civil administrators responsible for registering births.
 - Establish a system for sharing vaccination records across regions or countries to ensure continuity of care, especially for those who move frequently.
- **Community engagement:**
 - Engage with community leaders and organizations within migratory populations to gain their trust and support in the vaccination efforts through advocacy meetings.
 - Train and employ community health workers who come from the migratory populations themselves selected with help from community leaders, as they can more effectively communicate and build trust within these communities.
 - Use these community health workers to conduct outreach, share information about the importance of vaccination, and assist in organizing vaccination sessions.
 - Invest time in building trust with migratory communities, understanding their concerns, and addressing any misconceptions about vaccination.
 - Involve community leaders and influencers in vaccination efforts.
 - Develop communication materials and strategies that are culturally sensitive and tailored to the languages and preferences of migratory populations.
 - Engage in social mobilization efforts to raise awareness about the importance of vaccination and address vaccine hesitancy.
- **Mobile vaccination clinics:**
 - Deploy mobile vaccination units that can travel to locations where migratory populations are temporarily residing.
 - Ensure that these mobile units or clinics, if available, are equipped with cold chain facilities to ensure vaccine efficacy.
 - Implement sustained catch-up vaccination schedules and allow for flexibility in vaccine administration timings to accommodate the transient nature of migratory populations.
 - Consider offering multiple vaccines during a single visit to maximize coverage.
- **Integration of surveillance and zero-dose activity:** During surveillance activities healthcare workers can come in contact with children with diarrhoea, meningitis, or

other infections. They can use this opportunity to ask for the child immunization records and check immunization status. Zero-dose children can be line-listed and linked with routine immunization services for catch-up vaccination as well with communities for follow up.

Additional reading:

Reaching ZDC in India: <https://www.unicef.org/stories/sowc-2023/india-reaching-zero-dose-children>

Reaching ZDC in Urban slums in Nigeria: <https://www.unicef.org/stories/sowc-2023/nigeria-vaccination-campaign-urban-slums>

Documents focusing on global and country-level findings around ZDC: [Resource Library | Zero-Dose Learning Hub \(gavi.org\)](#)

6. How do we restore and strengthen immunization to effectively reach populations in humanitarian settings?

To effectively reach populations in humanitarian settings and strengthen immunization programmes, a comprehensive and adaptive approach is required. These settings are characterized by armed conflict, insecurity, and mass displacement, and are highly susceptible to the spread of epidemics due to weakened health systems and disrupted vaccination programmes.

Gavi's ZIP programme is also advocating for understanding the experiences of people who have been displaced due to conflict/insecurity. A better understanding of how long their regular health care has been disrupted and the other experiences they may have faced will likely help inform programming in terms of planning for needed vaccines and to address other health/social service issues.

- **Strengthening supply chains:** Ensure the continuity of vaccination programmes by stabilizing supply chains, maintaining cold chain viability, and ensuring the availability of vaccines even in sporadic conditions.
- **Capacity building for health workers:** Train and equip health workers to safely and effectively deliver vaccines, even in insecure environments. This includes providing personal protective equipment (PPE) and training on infection prevention and control (IPC) measures.
- **Community engagement:** Build trust within communities through transparent communication, addressing misinformation, and actively engaging with the population to understand and meet their broader needs, not just focusing on immunization.
- **Adaptation to population movement:** Develop strategies to reach displaced populations, including those in internal displacement or refugee status, and adapting vaccination programmes to cater to the increased demand.
- **Infrastructure protection:** Protect healthcare facilities from attacks and damage, ensuring the preservation of medical records, cold-chain equipment, and the overall integrity of the health system.
- **Focusing on the most vulnerable:** Prioritize zero-dose children and underserved communities, ensuring that the most vulnerable are not left behind.

- **Integration of immunization with broader health issues:** Work to improve related health issues such as water, sanitation, and hygiene (WASH) services and food security, and address gender-related barriers to healthcare access.
- **Flexible and innovative service delivery:**
 - Utilize mobile clinics to reach populations in conflict-affected areas.
 - Tailor immunization programmes to the specific needs and circumstances of conflict-affected populations.
- **Leveraging technology and data:**
 - Implement digital health records to keep track of vaccinations, even when paper records are lost or destroyed.
 - Utilize data to make informed decisions about where and how to deliver immunization services most effectively.

For more details on how to strengthen and reach populations in humanitarian settings you can download this guideline from UNICEF:

<https://www.dropbox.com/scl/fi/wz2vwtehwno2l0mnl6qng/UNICEF-Immunization-in-emergencies-and-humanitarian-settings.pdf?rlkey=vrt0u415xgjax5qa20877xz4q&dl=1>

Advanced E-course on vaccination during humanitarian emergencies:

<https://agora.unicef.org/course/info.php?id=13019>

Global research agenda on health, migration, and displacement: strengthening research and translating research priorities in to policy and practice:

<https://www.who.int/publications/i/item/9789240082397>