Routine Immunization Transformation and Equity

# EXPLORING ZERO-DOSE CHILD DEFINITIONS AND MEASUREMENT

## Webinar Transcript

00:00:00.42 >> Well, good morning, afternoon, evening, whatever your time zone is, and welcome to this "MOMENTUM Routine Immunization Transformation and Equity" and "Zero-dose Children Definitions and Measurement," on today, February 14th, 2024. Can I have the next slide? Today, we do have the webinar offered in both English and French, and please use the Interpretation icon at the bottom of your Zoom screen to listen to today's webinar. You will see it at the bottom there, like the globe. It looks like a globe, and choose whether you want to listen in English or in French. Can I have the next slide? Today, for questions, if you want to write a question, please use the Q&A function to ask questions during the presentations or to ask for technical help. Please do not use regular chat for that, and then use the chat feature to introduce yourself and share your thoughts during the presentations. So the Q&A function, strictly for asking questions or asking for technical help during the presentation, the chat feature to introduce yourself and share your thoughts during the presentations. Next slide. I guess I'm to introduce our great speakers today. We've got a wonderful team. We've got Dr. Jessica Shearer with the Monitoring and Evaluation Learning Lead on MOMENTUM Routine Immunization, Transformation and Equity. Welcome, Jessica. Then, you've got Dr. Aime Cikomola, who is a medical director at the Programme Elargi de Vaccination, whatever it is. He's obviously the EPI Manager in the Democratic Republic of Congo. Then you've got Dr. Graca Matsinhe, the Immunization Technical Lead, MOMENTUM Routine Immunization, Transformation and Equity, and Dr. Jasim Uddin, who is an Emeritus Scientist at the Health Systems & Population Studies Division in Bangladesh. Welcome to the speakers, and I'm Chilunga Puta. I'm the Senior Immunization Data Advisor for the MOMENTUM Routine Immunization Transformation and Equity. A wonderful welcome to you all. With you all, we look forward to your presentations and your input into this webinar. Next slide, please. So we've got quite a packed agenda today. I'll briefly introduce M-RITE, the project, and then I'll give you ...

### 00:03:06.39 >> MRITE [foreign].

00:03:12.43 >> ... and then we'll have Jessica introduce some of the definitions around the zero-dose child definitions, and she'll give you a bit of background to that. And then we'll go into the presentations of the methods and experiences from Democratic Republic of Congo, followed by Mozambique and followed by Bangladesh. Then hopefully we will have time for discussions and for questions and answers. There has been a slight change in the sequence of the countries, so instead of starting with Mozambique, we'll start with the Democratic Republic of Congo, and then we'll move to Mozambique and then to Bangladesh. Next slide, please. Okay, our project, which is MRITE for short, actually envisions a world in which all people eligible for immunization from infancy right through the life course and particularly in the underserved and marginalized and vulnerable populations, want to be sure that these people are regularly reached with high-quality vaccination services, and that they do use these services to protect their children and themselves against vaccinepreventable diseases. Next slide. So what is the tool kit learning exchange series? Next slide, please. First of all, I want to give you a background to this tool kit that we're talking about. We haven't finalized the meaning of that tool kit, but basically we are right now calling it a zero-dose children tool kit for convenience. It is going to be to answer the need for a one-stop shop of resources to identify, reach, monitor measure and advocate for zero-dose and under-immunized children. Secondly, we are aware that there are many tools and guidance documents out there. They do exist, and this coming tool kit aims to pull them together in a user-friendly fashion, and the tool kit is actually linked and is complementary to already available manuals and guides. Next slide, please. What approach are we taking to actually revising this tool kit? One of the





things they're doing is precisely what we're doing now, the learning exchanges. So we look at different topics related to zero-dose and under-immunized children, and the goal is to get user feedback and experiences to inform the tool kit, to build demand, to generate knowledge, accumulate knowledge, the skills and for the methods and approaches outlined in that tool kit. So we hope that from this presentation, we'll get rich feedback that would in turn feed into that final product. We have studied that work in a field test, and the location is Nigeria. We've conducted interviews. We hope to use the tool right there in that place in a practical way and get user feedback, and finally, we have contacted and to a certain extent touched back with the design collaborative of five to 10 countries who provide input into the design and content of this tool kit. Next slide. Okay, so I think at this point I'll call on Jessica to introduce us to some of the zero-dose operational definitions. Jessica?

00:07:20.40 >> Thank you so much, Chilunga, and thank you to everyone who was able to join us today for this important topic. We ... As Chilunga has mentioned, we have been collaborating with WHO and other partners on this tool kit to support all of you here to be able to identify, reach, monitor zero-dose children. But every time we talk about this, of course, the question of definitions comes up, which is why we are having this topic today on definitions. So first of all, I'll share some slides today on definitions, but we would love for you to put your questions and your comments and your thoughts about definitions in the Q&A. So you can see a Q&A button on the bottom of your Zoom bar, and please add your questions, thoughts or comments there because this is an active and open discussion that we are having as a global community all the way down to operational levels. And so just a quick framing slide on behalf of IA2030, why the focus on zero-dose? The reason that we are moving towards measuring zero-dose is because zero-dose children signal communities and families and children who are systematically missed by routine services. It's a very important indicator of equity. And what may be surprising to many of you is that there are actually more children globally who are considered zero-dose compared to those who drop out, so it is imperative for us as an immunization community through an equity lens to be able to identify which children those are, why they are zero-dose and how we can reach them. Next slide, please. So we wanted to present the IA2030 definition of zero-dose children. This is this definition, what we call the operational definition also used by WHO and Gavi. You will see today from our amazing country presenters that they are perhaps refining this definition to make it work for them, to make it work for their use cases in their context. But let's start with this operational definition. So zero-dose children are considered those who didn't receive any vaccines through routine services by the age of 1 year old. And officially what we typically do is, we look at the number of children who were less than 1 year of age and then the children who did not receive penta1 in particular amongst those children. And so this definition considers a child to be zero-dose if they did not receive penta1 in that first year of life for any reason, including they're hard to reach, left out, opt out, et cetera. And this definition does exclude campaign doses. As I've mentioned before, the pointer, the rationale of the zero-dose definition, is to signal access to routine services. Next slide, please. Now, there are a number of known challenges with this definition. It's not perfect for all use cases, and indeed, one single definition probably cannot cover all of the use cases that we would have related to zero-dose children. So first of all, as an IA2030 definition, it was developed with the intention for global and sometimes regional monitoring over time across years, right? The definition implies an annual birth cohort, that you're looking at trends year after year. It works well for global monitoring, so it works well for WUENIC monitoring year on year for IA2030 monitoring. It can also work well at a regional level. But as we get lower and lower down the levels of the health system, the data behind the definition may not be of as accurate quality, but in addition, the definition itself is not intended to or not designed for, and you can see some examples here, real-time measurement or point-in-time measurement. So if you go to a given community and want to know at that point in time who are the zero-dose children, which children are zero-dose or how many zero-dose children there are, this definition may not be helpful for that point in time because it is taking all of the children under the age of 12 months and not necessarily considering age cutoffs, different national definitions of when a child is vaccinated on time or late, et cetera. It also, of course, doesn't tell us because it's an aggregate definition. It does not tell us about who precisely is zero-dose, and of course, it doesn't tell us why children are zero-dose. And we have learned over the past few years as a community we have been designing interventions to reach zero-dose children that it's also not very helpful in real-time monitoring or evaluation of those interventions' ability to reach zero-dose children. So in other words, it is not very helpful for that type of timely monitoring that we might be looking for. So with all of these challenges in mind, and I'm sure you have others, please do add other challenges or reflections or questions to the Q and A so that during the discussion we can discuss those challenges and the thinking around them and how we might be able to, how you might be able to, overcome them for your very particular example. So if we go to the next slide, this is a perfect opportunity. So I'll pass this back to Chilunga to

introduce this poll question to get your feedback, and then we'll hear from our wonderful country speakers on how they are dealing with these challenges in their countries. Chilunga, back to you.

**00:13:21.89** >> Okay. Thank you very much, Jessica. Melissa, can you set up the poll question for the audience so they can go to the Mentimeter?

**00:13:38.24** >> Yes. I think Katie has just put the link in the chat, or people can scan the QR code to go to the Mentimeter.

**00:13:54.95** >> Okay, we've got the link in the chat. Kindly click on that, and go to the Mentimeter and answer those questions or question that is there, please. Thank you. And there is a [Indistinct] showing the outcomes of that Mentimeter. Oh, somebody doesn't have translation.

**00:15:10.02** >> Oh, and I think that was just for the moment where you paused speaking.

**00:15:15.03** >> Ah, okay. Okay. Now, I see it in the chat where it says ... Ben is saying, "I do not have translation." Is that correct? Okay. Can I have the results projected, Melissa?

**00:15:42.68** >> Yes. Give me just one moment.

**00:15:44.51** >> Or am I the one that isn't seeing them? Okay.

00:15:50.08 >> It's loading.

**00:15:53.06** >> Great, thanks. And there we are, great. This does look exciting. And let me just make my screen bigger. Okay. I think we can see a lot of, yeah, a lot of answers there, but what comes out really predominantly is, "Not received penta1," and there's, of course, bigger up there with "Inequity," so you can see for yourself the variety of definitions around those ... and all those light words. And I think it highlights, and it goes to what we were talking about, the difficulties, the practical definitions that might arise as you are actually trying to define what you're meaning when you say zero-dose children. Thank you very much for that, and I think now ...

00:17:05.48 >> [Foreign].

00:17:18.73 >> [ Foreign ].

**00:17:32.49** >> Thank you for being here for this learning exchange. I'm sorry because my bandwidth is not great, so I will turn my camera off. I'm sorry for that. Okay, so we will just talk about the definition of the zero-dose in DRC, the challenges that we have relating to the definition and the process and the operation and also some of the key indicators that we use to measure the zero-dose children, so next slide, please. And so in the definition, we do separate the activities, so we differentiate ...

00:18:28.23 >> [ Foreign ].

00:18:32.31 >> ... vaccination, and so the reference is the BCG, so if any child who has not received the BCG I think is what we use, which gives us a very sensitive measurement tool. And so we use, when we identify, we base ourselves on the BCG, and so the parent knows if the child has received the vaccination in the arm or not. And for the operational definition, we do consider the DTC1. That's what we consider a child who's zero-dose, if they haven't received the DTC, and so that really helps us refine our research and find the zero-dose children. And so the definition is ... The best principle is that any child who has never received the antigen targeted by the campaign is a zero-dose child. And if he's under 11 months and has not received the VPO, in fact, we always use questions in the community to detect those children, and so we ask the mom if the child has received the vaccine orally because in our calendar, that is the only vaccine that we give by drops. And if the child has never received the vaccine in the thigh, and so we can also treat them as zero-dose children. Next slide, please. And so there is a process that was put in place in order to harmonize the definition. First, at the global level, we had the exchanges at the level, at the global level. We adapted at the country level with all the participants, and also we have developed rules so that everybody at the operational level could use the definition, which was presented at the CCIA level to be validated. And so at the operational level, the directions were translated with the instructions of the General Secretary and then were diffused throughout the different divisions, health divisions. So we do have challenges. We have challenges relating to the disponibility of the operation, at the operational level, and we also have tools in place to identify the zero-dose children or under-vaccinated children, but we still have challenges with the disponibility of the tools at the operational level. And so we have a definition that applies at the mass vaccination level that really creates a sort of confusion, so the field workers have difficulty to distinguish the difference that there is between zero-dose during the mass campaigns and the zero-dose during the systematic vaccination. And so we also allow to just make a distinction between the children that are above 11-year-olds and under-11-year-olds because we can ... In the routine vaccination, we can fill the gap immediately. And so we have introduced the second dose for the EPV, and as we're still in the introduction phase, we're not just yet certain that all the workers know the fact that we are now in the 2 years of the calendar, vaccination calendar, and so we do have to define what will be the approach to fill the gap. Next slide, please. So it's, of course, between 5 to 9 months. I said 50 years, but it's 5 to 9 months. And so we used the administration data to identify the children. The zero-dose children who have been vaccinated, it's always with the administrative data, and we do organize campaigns every year. So every year we do have a campaign and a survey, and with these surveys, we do manage to identify the zero-dose children and under-vaccinated children using the survey data. The other indicators are the number of children between 5 and 12 months, were vaccinated with penta1 and the coverage of penta1. Those are the indicators, and we often use them in different interventions ...

#### 00:24:58.79 >> [Foreign].

**00:25:08.19** >> ... so during the mass campaigns or the systematic vaccination, et cetera. So that's what I want to say. I think that we can go further during the discussion. Thank you.

**00:25:24.75** >> Thank you so much to Aime. Please remember to put your questions in the Q&A so that you can have your queries answered. We shall proceed now to Mozambique, the next country to actually present on zero-dose, its definitions and so on in that country, Mozambique. Okay, Graca.

**00:25:50.91** >> Thank you, Chilunga. Greetings, everyone. I will take you through the presentation of Mozambique. Well, let me say that most of the things that Mozambique has present, the colleague who preceded me had already mentioned, but nevertheless, [Indistinct] on the specific topics because they're similar. Next slide, please. So what are we talking when we mention the zero-doses? The zero-doses term has been very frequent nowadays, and not anyone who works in immunization will miss this zero-dose aspect because it's crucial for the delivery of equitable immunization intervention. Next slide. So in terms of contextualization ... You can proceed. We know that many investments and progress has been made in immunization, but performance of EPI in Mozambique specifically is always measured based on the children reached. So if we miss children in the community, it means that our performance is not adequate. And obviously, for many years, even adjusted, the performance of EPI has been stagnant. The quality of data and imprecise denominators have discredited the reported coverage, which means that even though we report very high coverages, it's still questionable because there are many issues related to the quality of data. And we also know that millions of children around the world continue not to receive vaccination, and this is justified by the growing number of susceptible population and the emergence of outbreaks of vaccine-preventable diseases. In Mozambique, for instance, in the past 2 years, the EPI has been battling with polio and measles, and obviously this is a result of immunity gap in the community, which is ... It's a result of not reaching all the children. Next slide, please. So as a result of extensive consultancy in June 2019, Gavi approved a new 5-year strategy, which is the Gavi 5.0, and the main vision of this strategy is leaving no one behind in the mission of saving lives and protecting people's health, obviously, providing equitable and sustainable use of vaccines. And a central focus of the strategy is to reach the zero-dose children and lost communities as a principle of equity. Next slide, please. So what do we use as definition of zero-dose, and how do we calculate zero-dose in Mozambican context? Children with zero-dose are those who have not received any routine vaccination since birth. So anyone who has not ... Any children who has not received vaccine, we consider it zero-dose. But for operational purposes, Gavi defines zero-dose children as the children who have not received the first dost of the pentavalent1 vaccine, and we also have the definition of lost or unserved communities, which are communities with zero-dose or under-immunized children. So those are the main terms that we will be addressing in this presentation. Next slide, please. And how do we calculate the zero-dose in Mozambique? Zerodose is estimated based on calculation of the number of children under 12 months who have been vaccinated subtracted by the number of children administered penta1 in the same time interval. So in terms of formula, we have the zero-dose number, which would be the BCG minus the penta1. Here, we consider these children who will come out from this result. They are zero-dose. And in terms of percentage, obviously, we will take the zero-dose, and which equals the BCG minus penta1, divided by BCG and multiplied by 100. So this is basically how we define the zero-dose children in the community. There are a lot of discussions around this, especially when we go to the most peripheral levels of the system because

people understand that zero-dose is the one who never got the vaccine, which is not ... It's not wrong, but the main challenge here is because the children who have not had any contact with the health facility automatically we cannot count, so this method of calculating based on BCG, it's most reliable in our context. Next slide, please. So in terms of identification and outreach strategies, for the identification, we use the RED and REC record book, which is the Reach Every District and Reach Every Community strategy, whether from a fixed post or mobile brigades and identifying zero-dose children in those books but to also triangulate data from record books with data from the DHIS2 just to make sure that we don't miss any children in between the two sources of data reporting. And after that, we train the Community Focal Points for the implementation of RED and REC strategy, be it in registration of demographic events such as births, absent children, zerodose, et cetera, in the community. We work hand in hand with the Community Focal Points because they are the ones who in the community, and they are the ones who know the children, especially the ones that have missed vaccination. That's why it's very important to have very strong linkages with the Community Focal Points and the community strategies for the identification of zero-dose children. And after that, we do implementation of active search based on the plan which comes out from this identification of children. The Community Focal Points and other community actors are the ones who, with supervision of health workers, they go to the communities and search the children and bring them back to the vaccination course either at the health facility or at the mobile brigades. And then after that, we move to reach the children. Next slide, please. Next slide.

00:32:31.11 Where we use the RED and REC planning meeting, community meetings with focal points to monitor the implementation of the strategy and discuss the challenges, this is the perfect platform to discuss these challenges because we have not only the health workers but also other actors which sometimes are members of the community, the community health committees and other community structures that are very relevant to reach these children. After the meetings, we do prioritization of communities based on the number of zero-dose children, so that we can target the mobile brigades to those communities which have the highest number of zero-dose children first, and then we target other communities with not-so-high numbers of zero-dose children. In those mobile brigades, we think that integration is essential. We take the opportunity of looking and reaching the zero-dose children to integrate other essential interventions, so that when the mobile brigade goes to the community, it not only offers vaccination but also other interventions which are very important not only for the children but also MCH intervention. For this, we obviously rely on good communication strategies, especially communication for demand generation and interpersonal communication, to make sure that people understand the importance of vaccinating the children. And also they inform other people in the community, especially the mothers, so that they can go to the vaccination posts. And finally, we do the monitoring of zero-dose, making sure that the children that we have identified come back to the health facility to be vaccinated, and in that sense, we make sure that we reach the children with zero dose and obviously offer the immunization services. With that, I finish my presentation. Thank you for your attention.

**00:34:38.89** >> Thanks so much, Graca, fantastic presentation. We'll move on. I'll now remind you people again, please put your questions in the Q and A. We move on to the next presenter, Dr. Jasim from Bangladesh. And could I please request those who are not presenting to make sure that their mic packs are off. Thank you so much. Dr. Jasim, kindly to take the stage.

**00:35:12.79** >> Thank you. Thank you [Indistinct] is a critical objective in [Indistinct] health, and it is at the heart of immunizations and [Indistinct] about 81 percent of children now receive the routine vaccine in low-income countries. Recently, in Bangladesh, vaccination coverage is 80 to 84 percent for the last 1 decade, it is in a ... stagnant. And recently, Gavi and Global Immunization Agenda 2030 have intensified their emphasis on equity to zero-dose and underimmunized children. We know all about this. To support this, we have working here [Indistinct] I am sharing with you the [Indistinct] activity center in zero-dose definition, measurement and some experiences. Next slide, please.

**00:36:23.46** Yeah, the operational definition of zero-dose is according to Gavi definition. Zero-dose are children who missed the first dose of DTP vaccine. Yeah, children who missed the first DTP vaccine, and underimmunized are vaccinated children who missed a third dose of DTP vaccine, and missed community means areas with high zero-dose and underimmunized children, according to Gavi definitions which [Indistinct] we have following these definitions. Next slide, please.

**00:37:06.01** Here is the operational in Bangladesh, now operationalized the rules in Bangladesh in [Indistinct] DTP. Pentavalent is given to the children. Therefore, pentavalent, if a child miss any past dose of pentavalent, then we consider this as if zero-dose, and if a child who missed the third dose of pentavalent, we consider this as underimmunized children. Missing a first [Indistinct] dose of pentavalent are zero-dose, and missing a third dose of pentavalent is there a missed underimmunized children. Yeah, it's next slide.

**00:37:55.46** How we define this in Bangladesh, the first dose of pentavalent is given to a child at 42 days. That's 6 weeks, and subsequently, the second and third dose is given to 28 days interval. I know all [Indistinct] know this, but it is essential for a child to receive all three doses of the pentavalent vaccine by the age of 3.5 month. Therefore, the age limit where we can [Indistinct] here for measurement, 4.5 months, 18 weeks. Fourteen weeks is the endpoint for completion of third dose of pentavalent, but for any measurement, we consider 18 weeks defining or measuring the zero-dose. If a child missed the first dose of pentavalent vaccine within the age of 18 weeks, then she is considered as a zero-dose in our ... in this. Yes, please, next slide.

**00:39:10.73** Yeah, here are some methods related to ... We have conducted a rapid assessment, and rapid assessment conducted in [Indistinct] years. This slide shows for priority areas and a study population, as I mentioned, from 18 weeks, yeah, and also we elected data for rapid assessment both ... the secondary data, the quantitative data as well as qualitative data, qualitative data for policymakers and service providers, and quantitative data to log quality assurance [Indistinct] Yeah, next slide, please.

**00:40:01.50** How ... process followed for identification of zero-dose. Initially, how we identify the zero-dose. Initially, an individual consultation with EPI stakeholders through different meetings, workshops, monitoring committee meeting, different committees, and analysis of secondary data. Secondary data includes [Indistinct] regulation survey data and DHIS2 data. And then we verified those data, field visit and collect monthly EPI report hard copy and recheck the data and the analysis of the data through ranking of zero-dose sub-districted and geo-location [Indistinct] and identification of district ... or in a district or [Indistinct] areas for some implementation [Indistinct] which will become [Indistinct] and confirmation of missed communities. How? Collection of primary data and analysis of primary data and data collected using lot quality assurance technique and identify socio-economic determinants of zero-dose and underimmunized. How? Using demographic and health survey data and also, for demand and supply side, leading causes for zero-dose with the qualitative data collection [Indistinct] and IDIs. Yeah, next slide, please.

**00:41:37.21** Yeah, as I have already mentioned, that data sources for measuring zero-dose [Indistinct] secondary data. Our secondary data [Indistinct] data and the health survey data, and primary data are used to do lot quality assurance sampling, mapping of missed communities and qualitative [Indistinct] interview, and in the interviews, [Indistinct] Yeah, next, please.

**00:42:11.64** For the LQAS, this [Indistinct] shows how we support selected households and caregivers for interview for [Indistinct] initially, selected districts, secondary data, from the secondary data randomly with these selected districts. Then we ... districts are ... Select sub-districts analysis, same as the secondary data. Then we go to the ...

#### 00:42:37.33 >> [ Foreign ]

**00:42:47.42** >> ... separated the clusters from each sub-district, two clusters are selected for LQAS interview. And finally, from every cluster, we interviewed 28 caregivers from each cluster following the LQAS [Indistinct] techniques. Yeah, next slide, please.

**00:43:11.42** In a core analysis, so we're ... Analysis of the core secondary data prevalence is analyzed of zero-doses, 100 minus coverage of Penta1 [Indistinct] percentage. This is the secondary analysis, and for primary data, we analyze the prevalence through a number of children who did not receive Penta1 divided by total number of children in the sample, and the denominator and numerator multiplied by 100. In this way, the family [Indistinct] prevalence of zero-dose are measured here. Next slide. This slide I would like to omit. We have already mentioned. Please next slide. Next slide.

**00:44:03.79** Yeah. And for qualitative data, we analyze a framework approach by verbatim transcription, incorporation of field notes and other things, and data were systematically coded, synthesized and interpreted, qualitative data also, yeah. Yeah, please, next slide.

**00:44:25.77** And this slide just shows the ... from LQAS data. This is using the [Indistinct] identified with the zero-dose children are more [Indistinct] to provide the attention for ... through implementation deserved. This slide shows an LQAS data prevalence of general and underimmunized children in those particular areas. So what lot quality ... LQAS are conducted. Yeah, please, next slide. And challenges related to the zero-dose definition [Indistinct] longstanding challenge. This is a denominator issue of DHIS2 because [Indistinct] is not up to date here. They are [Indistinct] to set the denominator based on protection of the population. The committees are challenged to find the [Indistinct] number of children. This is one challenge, and another one, challenge, general definitions differ from the definition of existing EPI. As I mentioned, the pentavalent first dose ... missing a pentavalent first dose is the definition of zero-dose, but in existing EPI, the definition of zero-dose is ... Definition of the [Indistinct] only your first dose within the 14 days after birth of each newborn. This is the definition of an EPI [Indistinct] so there is some confusion at the beginning relative to definition of that zero-dose, yeah. Yeah, next slide, please.

**00:46:16.86** And here are some recommendations related to ... for ... in identifying zero-dose children. Use of DHIS2 data is useful for initial identification of zero-dose areas. So measure should be taken to improve quality of administrative data [Indistinct] we do sometimes call it [Indistinct] yeah, and dealing with the issue [Indistinct] national surveys [Indistinct] regulations have been [Indistinct] issue from a micro-level. Here in upper level district available ... Data are available, but micro-level data that should be published to analyze. An LQAS survey can be widely used for identification and verification of missed communities. Yeah, next slide, please. And, yeah, thank you. Thank you all for patience here.

**00:47:13.69** >> Thank you so much. I was getting a little bit worried there. Thank you so much, so much, Dr. Jasim, wonderful presentation. We've had four great presentations from four great speakers, and I've got a number of questions and answers in the Q and A chat. And what are these? I'll start with the ones that have not been answered yet, and if I have a few minutes, I'll just run through the ones that have actually been answered. And the first question came from Nancy Foreman and which is concerning the campaigns in which she says, "What really constitutes campaigns, or what doesn't constitute a campaign and implications for a zero-dose measurement?" Because this was a highly discussed topic, where they had a meeting, and so, Carolina, maybe you would like to answer this question, please?

**00:48:15.16** >> Yeah, good afternoon, everyone. I hope you can see me and hear me okay. So basically, we do have some guidance on what ... in a campaign, what constitutes a routine dose and what is a supplementary dose. In fact, we try to use the term supplementary immunization activity for campaigns where you don't ascertain the status of vaccination of the child or the person, and you just give the vaccine. And those are commonly done for polio, for measles, for yellow fever, for example, where you ... say, you vaccinate everyone between, say, age 6 months and 59 months, and you give a dose regardless of whether the person already had a dose or not. And normally, those doses either don't get recorded or they just get a special piece of paper or the finger gets marked, but they are not really usually documented properly for follow-up. On the contrary, we have a different name that I don't know if people even know that name in countries which is PIRI, or periodic intensification of immunization ... of routine immunization, which is more like the health weeks, where you do an intensification but you do check the vaccination status of the person. You ask the caregiver or you look at the card to see what vaccines the person already has and what vaccines the person needs, and then you give the vaccines accordingly, and then you record those, in the card, in a tally and in a registry, and those are counted. So for this definition, for monitoring purposes, a child who has received a Penta dose, be it through outreach, be it through these periodic intensifications or in a health facility, you count them, which is not the case if you just give an extra dose of it, say, in an SIA. I hope this clarifies. I put in the chat and in the replies, and I will add a document that clarifies this. Thank you.

**00:50:20.03** >> All right. Thank you. There were two questions for Mozambique which Graca has answered, but I think it would be nice if she just shared the answer now. They were on, what about your birth cohorts? How do define zero-dose for that? And then there was another one which was in French. I think it says, "What documents do you reference for collecting data for your zero-dose?" I think. Graca, can you attend to those two?

**00:50:59.96** >> Yes, sure. For the first question, our birth cohort for zero-dose is on the 12th. However, pending in the cases, we can extend to under 24. So basically we use the under 12 for the birth [Indistinct].

00:51:26.35 >> Thank you. Did you answer the other one about the references that you use?

**00:51:33.01** >> Yeah, for this, as a reference, we use the Gavi strategy 5.0 for the completion of zero-dose, yes.

**00:51:42.39** >> Okay, thank you so, so much. And there's another question from Brooke Farrenkopf. Earlier in the presentation, it was mentioned that the IA2030 definitions is not as useful for real-time monitoring of strategies to reach zero-dose children. Could you please add a bit more detail about this? And I'll refer to ... this to Jessica Shearer.

**00:52:09.53** >> Hi, thank you. Yeah, Brooke, great clarification question. So I'll give an example to try to illustrate this point when ... and this is assuming that the IA2030 that we've been talking about today is ... we typically use routine data to look at trends or changes in that indicator, and what we have found, of course, is that ... Let's say you implement an intervention that is aiming to have more people come and get vaccinated with Penta1 vaccine or is aiming to improve the health system so that more people can vaccinated with Penta1 and ultimately aiming to reduce zero-dose. We find that the lack of smaller age desegregations makes it difficult to know ... if you see month-on-month that your number of children being vaccinated formerly zero-dose children in the sense that those were slightly older children, and they'... had you reached formerly zero-dose children in the sense that those were slightly older children, and that's why we really also appreciate Dr. Jasim's definition in Bangladesh, how they're looking at children who are, I think it was 4.5 months. So that's the point in time where they have said, "Okay, at this point, the child is zero-dose in our context because they have ... They're late, or they've missed the opportunity to become vaccinated at the time they should have for Penta1." So I hope that makes sense, but just having more of that granularity to know did we actually reach a child who was zero-dose, or have we been reached ... Have we been making services more accessible to children for that first dose of Penta? Both, in a sense, can be considered you're improving your coverage and you're reducing the number of zero-dose, but it's harder to know exactly what the circumstances of those children were. Thanks.

**00:54:08.87** >> Thank you so much, Jessica. And there's another question from [Indistinct], and this is in French. I think Carolina has seen it. Can you just answer it and repeat it for the sake of ... yeah, for the audience. Carolina?

00:54:31.24 >> Could you repeat the question? Which one is it?

00:54:35.96 >> There's a question from [Indistinct]. It says, [Foreign ]

**00:54:51.06** >> Oh, okay. I will reply in French so ... in case for the translation and the colleagues.

**00:55:00.01** >> Okay.

00:55:00.88 >> [ Foreign ]

**00:56:08.22** >> Thank you so much, Carolina. Then there's another question for Graca. I think actually there were two I noticed. I think one she's answered, and one she's answering right now. Are you able to address those questions, Graca?

**00:56:28.86** >> Yes. The first question from Dr. [Indistinct]. Yeah, that's really one of the biggest challenges, using the [Indistinct] Penta1 for the completion of zero-dose, but we assume that the other children which are missed by this calculation, they have never had contact with the health facilities. So the most realistic way of having these children and reaching them is through the community identification and community mapping. That's why we stress the importance of involving the community structures, the different community structures, so that they can be trained in knowing what is zero-dose children and help us find not only the zero-dose children but also the ones who have never got vaccinated. And since they are in the community, they should know who is the mother, who is pregnant, and who delivered at home and didn't take the children to the health facility and then bring the children through this mechanism. That's the most realistic thing to be done in those cases. The second question, I think it's mostly a comment, where he says that choosing the [Indistinct] between BCG and P1 and zero-dose can underestimate this number. Maybe you should all the time increase your estimation considering BCG coverage. I think this is correct, and we agree with this comment. That's all, Chilunga.

00:58:05.32 >> Thank you so much, everyone. We are right on the top of the hour, and I just ...

**00:58:13.83** >> Chilunga, sorry to interrupt you.

00:58:15.30 >> Yes, yes, [Indistinct]

**00:58:15.67** >> I think there's one more comment or question that Carolina just wanted to emphasize.

00:58:22.36 >> Okay, okay, please go ahead.

**00:58:23.30** >> Carolina, back to you.

**00:58:25.22** >> Thank you. I just want to make sure that we understand that the definition of no Penta for children who have reached 12 months as an indicator is really for monitoring how we are doing. Operationally, as we saw in the countries, you have to have the usual mechanisms to identify children who are not vaccinated the full thirds and then complete schedules. So this does not replace RED/REC, all the approaches. It's just a new way of framing the efforts to reduce children who are never touched but complete vaccination schedules with them, and that's, I think, the take-home message. It's just, let's keep the focus on the Immunization Agenda 2030 goal of reaching everyone and everywhere with all the vaccines. Thank you.

**00:59:12.17** >> Thank you so much, Carolina. Please don't forget to do evaluation. You can scan the QR code that is given there below or join the link. I think there's a link somewhere in your invite for the evaluation. This is important for us, so kindly don't forget to do that. Having said that, I really want to thank you all for a very ... Yeah, it's been a great webinar. Thank you so much for those who prepared presentations, presented them for the active audience. We really thank you for your time, and have a good day, good afternoon, good morning, good night, as the case may be. And, yes, there's another Q and A in there. Yeah, yeah, okay. And there's just a comment that, what is a BCG coverage? I think you can do this offline [Indistinct] Graca. Yeah, we thank you so much, all, for your participation, and I think we'll end the webinar there. Thank you.

01:00:21.14 >> Thank you.

01:00:24.21 >> Thank you.