



USING DATA TRIANGULATION FOR IDENTIFYING ZERO-DOSE AND UNDER-IMMUNIZED CHILDREN

Webinar Transcript

00:00:14.50 Thank you for all of those who are joining the webinar. We'll just give people about a minute or so to -- to join, and then we'll start.

00:00:49.09 Okay, I think we can start, and the others will keep joining us. I just want to say good morning, good afternoon and good evening to all of you who have taken the time to join. If you have not done so, would you kindly introduce yourself in the Chat function; just your name, perhaps where you work and which country you come from. My name is Chilunga Puta, and I'm a senior immunization data advisor for the MOMENTUM Routine Immunization Transformation and Equity Project, in short, MRITE. I'm pleased to introduce today's webinar on using data triangulation, and to identify zero-dose, and my apologies, I forgot to put on my -- yes. I'm happy to introduce today's webinar on using data triangulation to identify zero-dose and under-immunized children. But before I do that, I'll just go a little bit over the Zoom environment for this webinar.

00:02:05.43 We do have interpretation today, and if you are French, for example, you go to the Interpretation icon there below, at the bottom of the screen, just go to Interpretation, you click on that, and you select the language that you want to use. Please note that we are using the Chat feature to introduce ourselves, and to share your thoughts during the presentation, but the questions that you want answered must go in the Q and A button; the Q and A button in the Zoom function. So use the Q and A button, please, for the questions.

00:03:00.25 And then if you need help, again, do not use the Chat to ask questions. The questions you ask must go into the Q and A button, and remember that they're only visible to you, our presenters and technical support. I will collect your questions for our speakers, and save them for the discussion period following the presentation.

00:03:31.10 The webinar is being recorded, and following today's event, you will receive an email with a link to the recording. If there are questions that do not get answered during the Q and A session today, we will forward them to the presenters and share their responses by email to all the participants. Can I have the next slide?

00:03:57.82 And now I would like to introduce our great speakers today. I think we can start with Carolina Danovaro, and then Dr. Ana Morice. They'll be our main presenters. Carolina is a medical epidemiologist. She's an immunization analyst on the Insights Team at WHO. Dr. Ana Morice Trejos is a medical epidemiologist and pediatrician. And then there's Dr. Rajendra Bohara, who's a team lead at IVD, WHO. He's a [project guide?], and is very experienced in immunization. And then you have Angela, who's one of our guest speakers. Angela is an epidemiologist at the Global Immunization Division at CDC in the US, and she actually has led quite a bit of this work on using triangulation to find the zero-dose children.

00:05:11.28 And I think that's all the speakers for today. I will just go through that agenda. Today I'd like to just briefly, very briefly describe MRITE, the MOMENTUM Routine Immunization Transformation and Equity Project, and I'll give a brief overview of the zero-dose child toolkit, and tell you a little bit about the learning exchanges, this series that we're doing.

And then there will be the introduction to using data triangulation to identify ZDC by Carolina and Ana, and then there'll be a panel discussion, which will be combined with Q and A after that. Hopefully then we'll come to the end of the webinar. You'll be expected to do an evaluation, and you'll be given a link for that in the Chat, or else you can just swipe whatever they call it, at the end of the presentation.

00:06:18.78 So to kick off, then, next slide -- at the MOMENTUM Routine Immunization Transformation and Equity envisions a world in which all people eligible for immunization, from infancy throughout the life course, are able to access high-quality vaccination services, particularly those that are vulnerable, underserved and marginalized, and those who are likely to miss vaccinations. Why? Because we do want them to be protected against vaccine-preventable diseases. The MRITE project was awarded on July 27 -- can you lift this up, because there's something covering your -- okay, thanks -- 27, 2020, and it's for five years. And we have country programs -- 18. Next slide.

00:07:21.94 Okay, so the ZDC toolkit -- and please may I bring to your attention that at the end we want you to suggest what we could call this kit. Why did the WHO actually generate this rough toolkit, that we're working on now? I think it's because there is a problem with current administrative beta assistance. We fail to accurately quantify and localize ZDC children, and this is recognized particularly in low-income and low and middle-income countries. So it is important, then, that we should have guidance for the countries to help them locate these tools. And as a result of this, this toolkit was actually designed and is being developed.

00:08:15.02 What does it want to zero in? It's an integrated approach; it does so and connects with existing tools. It wants to be able to identify non- or unvaccinated communities and zero-dose, and under-immunized children by using a decision-making criteria and combining tools to decide if you need to do it, when you need to do it, where you need to do it, how to go to the field to conduct rapid convenience assessments, or targeted probabilistic surveys and take actions to reach, vaccinate and follow up on non- and under-immunized communities. The toolkit is linked and complimentary to already-available manuals and guides. Next slide.

00:09:13.35 And how are we refining this tool? We've got three approaches; one, we have a design collaborative of five to ten countries who will have an in-depth look at the toolkit. Then we have these learning exchanges where we are hoping to learn from our audience, and to learn what can improve, what can we do, what are the needs, what are the gaps, what should we include, and so on. Then we will have a field test in Nigeria, and we'll use a case to see how the revised toolkit performs in that metro environment. So those are the three approaches that we've taken. Next.

00:09:58.85 So today's topic which I'm introducing is using data triangulation to identify zero-dose children. I think at this point, I'm going to allow our two speakers to take over and make their presentation.

00:10:18.08 >> Thank you, Chilunga, I think it's my turn. Good morning, afternoon, evening. I'm Carolina Danovaro, was introduced already, and I work with the Global Immunization Monitoring Team in WHO. We have been working, and some of you have already seen a draft guide on -- we don't have a good name, so please, please, please think about a good name. But what's included in the draft, it's guidance on how to do data triangulation, and then to define if, where, when and how to conduct targeted field assessments. They can be service or rapid convenience, or [INAUDIBLE] or some other tool, to identify and reach non- and under-vaccinated communities and children. And as a reminder, the Immunization Agenda 2030 calls for a world where everybody has access to the benefits of vaccines. So really, equity is at the heart. And one of the indicators towards that equity, it's to reduce the number of children who have never received a vaccine, the zero-dose those children who are now monitored as children not receiving any dose of listeria [INAUDIBLE] pertussis vaccine containing, and then to reduce that number by a quarter, by 2025, compared to pre-pandemic, and then by a half at the end of the period of the implementation of the Immunization Agenda, which is 2030.

00:11:44.15 The next one, the next slide, will guide you what we will be talking about. So what's data triangulation? We talk about it, but really so we have a common understanding of what we are saying when we say, let's triangulate data, and then how this type of triangulator analysis can be used to identify areas where we may need to dig deeper. And then from the results of the triangulation, really understanding if we have enough information to take action, or if, where, when and how we may have to go to dig further through targeted field assessments.

00:12:24.30 So then next slide just shows the definition of data triangulation. And it's this idea that we're all partially seeing the elephant on the right here, and we are trying to describe it with the parts that we can touch and see, but how we synthesize existing data from two or more sources to the different questions. So "question" is a key word here, and more than one data source is another key part of the data triangulation. And then for doing something about it, so for planning and decision-making. So in the absence of really perfect data, we understand that we can do better by combining different pieces of weaker evidence to have a strong basis for improved decision-making. And as important of combining the different pieces, it's to put the thinking, to really -- it's not a formula. And I think what we're trying to propose here is a guide to help you with the critical thinking that is required to be refining the questions, interpreting the data, and then using that information that we're learning for action, with important component of repeat -- so always assess, am I doing well checking, and then doing better, if you need to.

00:13:50.33 The next slide shows the triangulation in a four-step process, and this is already in the guide that's available in technet on the triangulation process, with asking the question, what's your question? What are you trying to understand, then identifying the data sources that you already have, and summarizing that data in the context of your local area where you are. Finally, the developed plan of action. This is not news, it's a way just of organizing your own mind in how we're going about the step triangulation process. Some critics are joining here, where in a triangulation workshop, for example, a couple of weeks ago in African region.

00:14:37.07 The next slide shows that this guide, what it will help, it's to think critically the decision tree support. So first step, think about what you want to do. We want to identify communities that are un or under-vaccinated, that appear to have zero-dose and under-vaccinated people. So first question is, after [INAUDIBLE] really with the data that you have suggests that yes, they are in clusters or in groups, or in specific areas, or if they're more broadly disseminated. And then to go to the next step of purpose, whether it's possible to characterize the communities that you are identifying as probably having many children who need to get more vaccines. So then, you can decide if you have all the data you need, you can take action, but you also can decide that you may need to identify and need to collect some more data to guide you in that action that is needed, to better understand what action you will be taking.

00:15:49.18 The next slide shows that in the toolkit, it's all about supporting with the decisions, asking the key questions, either identifying key data sources; not only your routine admin data, but also from routine from campaigns, from population estimates from service data coming from surveillance. From outbreaks, what are we learning from those outbreaks? What are they happening? Have we done vaccine effectiveness analysis? Are we doing risk assessments? And there are many acronyms in this slide, but they are described at the bottom, where we need to better understand the behavioral and social drivers, the availability and readiness of services, any missed opportunities, etcetera. And then how we gather, prepare, examine, analyze the data to then see if we have everything to answer the question.

00:16:44.71 The next slide is just, again, asking key questions on the who, where, how many, and why. And it's important to understand that the evidence suggests that the answers can be really different, even in the same country about the whys, of why people are not being vaccinated at all, can be very different from why the people are not completing the schedule.

00:17:11.96 The next slide shows that in the guide with least the different data sources with the strengths and limitations - - again, we have to triangulate data, because we don't have one source of truth, so we really are trying to put the elephant together from the different pieces. And the toolkit at least a lot of existing guidance and already have, through WHO, through UNICEF, through JSI, through different partners, on how you can optimize the use of the different tools.

00:17:43.37 The next one -- importantly, the toolkit here goes to describe the step of assessing data quality. So really understanding in this example, you can see data from -- it's coverage data from district level, and it's supposed to represent different municipalities. And you see the timeframe that we are looking at is different. So you can see that, for example, the number of people vaccinated may be similar, but then coverage is fluctuating. Might be the denominators that are a problem. What's happening in another place that maybe you are seeing a decline in denominator, which is suggesting that you have increasing coverage, but in reality, the number of doses are very similar. So really, the first step before using the data is to assess the consistency and the logic. And I will pass the next slide to Ana Morice, who is the author of the toolkit.

And she has done several toolkits for neglected tropical diseases, for example, which is, again, populations that are vulnerable and neglected, and immunization for Latin American countries, as working with [INAUDIBLE]. Ana?

00:19:11.23 >> Thank you, Carolina. Okay, once you ask the key questions and collect it and divide the data sources, and assess the quality of the data, you need to summarize the data, and also consider the local context. So not only your countries -- not only the country, the national level, the local levels is very important. This is a teamwork. And again, this is about asking questions and finding the best answers. Here we need to answer, who and where are the zero-dose and under-immunized children, where are they? What are the characteristics of those areas? As you can see here, this is an example. You have some areas colored in red, so one of the characteristics of these red areas compared to the green areas, the under-vaccinated persons belong to any specific population, because we know that zero-dose children have been reporting that they live in some rural areas or slums, or some of them are migrants, or nomadic populations, or very close population, ethnic minorities. So we need to try to find, through the triangulation process, the answers to these questions. And of course, you need to make a decision and take actions. So, how many of them? What proportion of zero-dose children do you anticipate that you would be targeting in those communities that you already identified? Or, do we need to use alternate denominators or survey data? So these are some examples that are described in detail in the toolkit. Next, please.

00:21:02.91 And to answer those questions, you need to consider two main aspects; are these children hard to reach or hard to vaccinate, because the situation could be different. And maybe they are both, they are hard to reach and hard to vaccinate. So you need to assess what is the importance, the weight of each one of these type of barriers. And here, again, some questions. Are they demand-related barriers, as an example, related to lack of confidence with vaccine benefits, or any situation that is affecting that demand? Or maybe there is some social and political or gender-related barriers that you need to consider. But maybe the barriers are related to the health service, to the immunization services. Maybe these populations are not vaccinated because the distance of the facility is not near to the community, or because they have stock-outs, or because they don't have enough resources. So it is important to consider these two aspects, these type of barriers. The next slide, please.

00:22:24.02 So as Carolina mentioned, maybe triangulation won't be enough to find the answers to those questions. In that case, you need to implement other field assessments, so you need to go to the field and you can have rapid field assessment, or probabilistic surveys. Here are some of the methods that you can use, and we know that many countries are using, as an example, LQA or rapid convenience monitoring, and we have a colleague from Bangladesh that is going to present the second part of this webinar. And the other thing is that this not only covers, it's important also to find answers to the whys, are those reasons related to the facility or to behavioral and social drivers? So these are two considerations that we need to take into account. The next one, please.

00:23:25.99 And finally, the last step of triangulated analysis is to interpret results for taking actions. So basically, this is what I mentioned before, is to implement vaccination activities based on that analysis, and the potential to reach the no-vaccinated and zero-dose children. As Carolina also mentioned, maybe do we need to implement different actions, considering the different contexts even within one country? And the two questions that we need to ask again before implementing the actions is, if these actions would change those barriers in a sustainable way, and what interventions are needed to reduce this population, how visible they are, what resources do you need? How can you ensure that the impact of those interventions would be sustainable, so it's not a one-time intervention? And the last slide, please.

00:24:32.32 So this is a summary of this approach. As you can see here, we have started the triangulated analysis. And if we need, based on this first step, maybe we need to implement rapid field assessment to find answers to these questions, to data quality, maybe data quality is not good enough for taking actions. Maybe we need a probabilistic survey to estimate how many zero-dose children are in the country, and what are the reason? Maybe you can estimate how many, but you don't know the whys, so maybe you need to implement field assessments to have answers, to know the reasons that they are not vaccinated. And also, if a rapid assessment would be enough, or you need targeted surveys, and also the timing. So when and how the immunization team this information. And if you implement the targeted survey, that decision is to implement the targeted survey, it's not only a targeted survey to estimate the coverage. As I mentioned before, and Carolina as well, you need to assess the whys, the reasons why they're vaccinated. Maybe they are related to community

access, or to behavioral drivers, or to facility readiness, as we mentioned before. Again, this targeted survey is not only to answer the questions, the most important thing is that we need this information for taking actions. The next one, please.

00:26:16.90 So now I am going to introduce Dr. Rajendra. He's a colleague from Bangladesh, and he's going to share with us their own experience in using these kind of combined tools.

00:26:32.53 >> Thank you. Thank you so much. Again, greetings from Bangladesh. Here it is 6:00 in the evening. I don't know, maybe many other part of countries may be morning. Anyway, greetings from Bangladesh. I'm really pleased to share what we are doing here in Bangladesh to identify and reach non and under-vaccinated children in communities. Next slide, please.

00:26:56.82 This is just a glimpse of a photograph he had, celebration World Immunization Week. So Bangladesh is generally considered as high-performing country, [GRF?] showed this more than 90 percent coverage over a decade. Additionally, more than 83 percent of children under 12 months of age receive full immunization. However, you know, despite the strong performance of the immunization program, progress remains uneven, posing a challenge in ensuring comprehensive coverage for all children across diverse socioeconomic groups and geographical regions, and especially in the [INAUDIBLE] slums. To address the challenges posed by the COVID-19 pandemic and to ensure the immunization of every child, Bangladesh organized catch-up vaccination campaign drives nationwide as a part of celebration of World Immunization Week, in all consecutive three years -- '21, '22 and '23, and we have almost two million children with all necessary antigens during this catch-up vaccination campaign. Next slide, please.

00:28:03.06 Now we had [INAUDIBLE], I mean since Bangladesh coverage is quite high. Where are these zero-dose children, and who are these zero-dose children? And how to identify these zero-dose children out there? Every year, part of the country are out there in certain areas, so we have this question in our mind, and then we talk, okay, let's use some tools to identify these zero-dose children. So we use, like, the triangulation method; I really want to thank Angela, I saw her here. We did a lot of [INAUDIBLE] back in 2019 on data triangulation with CDC U.S. So we also use rapid convenience assessment, house-to-house monitoring and data triangulation to really identify these zero-dose children. And also, it seems that maybe these zero-dose children are in [INAUDIBLE] slums, maybe Chor area, maybe Hoar area, or a geographically hard-to-reach area. We really wanted to see where are these zero-dose children. Also, we wanted to see what are the relation of these zero-dose children with private healthcare, so we said delivery relation -- is there any delivery relation with the ANC checkup, is there any relation with the Td vaccination. We also wanted to see that relation. Next slide, please.

00:29:24.18 So initially, in Bangladesh, there are, I would say, three kinds of coverage relations, so we've done one that's covered [INAUDIBLE] that generally supported by UNICEF and [INAUDIBLE], they would also be the [INAUDIBLE] and also mixed [INAUDIBLE] and supported by UNICEF, and the other one we did was rapid convenience assessment. And when we looked at the numbers with the different surveys, and we could see, almost same picture with the zero-dose, almost 0.3 in one person, almost similar. But under-immunized children, we see very high, up to 16 percent. And similarly, all these three surveys, both coverage [INAUDIBLE] survey, BDHs, and also almost same period like the under-immunized children with the amount like up to 16 percent. So we use these different surveys as to know, what are the number of persons of children zero-dose and under-immunized children? Next slide, please.

00:30:31.54 Also, use GIS, we went to down up to the [INAUDIBLE] level to see, where was these zero-dose children? And you can see on this map, this is a map of Bangladesh, and you can see especially Dhaka, the capital, Dhaka city, very densely populated, and some area of [INAUDIBLE], Sylhet area -- we just didn't go up to the district, but we went below the subdistrict level to try to see where are these zero-dose children. I have put a link, you can go to this link and see in detail how we really try to identify zero-dose children up to that grassroot level. Next slide, please.

00:31:18.82 We also tried to triangulate, we have very good measles and rubella surveillance system into place, and also [INAUDIBLE] surveillance system into place. We also try to see what the relation between those measles outbreaks and AMR coverage, since this is a case-based surveillance, we look for each individual child, what is the mechanism, is it zero-dose or more than three dose? Also, we do a house-to-house round-out where we start to see whether there are any zero-dose children in that area, or under-immunized children, because we also do our [INAUDIBLE] around that outbreak site. So we try to triangulate those outbreak data with the zero-dose children. And similarly, also, the efficacies, because we also

take the vaccination industry of each individual efficacy and try to see, there no problem with the vaccination in those area where the cases are being reported. Next, please.

00:32:28.11 So then we talk about, okay, let's do a rapid convenience assessment, so we did three kinds of rapid convenience assessment. We started in May, 2022, then initially it was supported solely by the surveillance network of WHO. Then in [INAUDIBLE] we also brought together the other partner, like UNICEF colleagues and also government colleagues together. We did together in the third phase of rapid convenience assessment. And in that, we tried to see a minimum of 60 children per district, like [INAUDIBLE] area work, and at least one time per house when their child should be below two years. So I would not say this was scientifically approved, but let's see those areas, what is really happening. So next slide.

00:33:22.99 We also, the second thing what we -- really this is developed this real-time data visualization dashboard, we did a house-to-house monitoring outside [INAUDIBLE] network. They go house-to-house and do monitoring, and you can usually see here -- I cannot open this -- you could easily see -- can you just open that link? I don't know whether you can. Maybe if you can, otherwise, we have this dashboard, anyway, we'll be sharing this presentation with you. You can go and you can see each district [INAUDIBLE], or you want to see by division, you can see by [INAUDIBLE], slum, and all the information available about the zero-dose and under-immunized children. Next slide, please.

00:34:13.83 This rapid convenience assessment, like I told you, we visit almost 24,000 children, and then urban it was, like, 31 percent, rural it was 69 percent. And if you look boy and girl ratio, almost 53 through 47 percent. And we found zero-dose almost 1.7 person, but the 1.7 is not very high. And if you look under unvaccinated children, at least one or more zero-dose, it was, like, 5.5 percent. Received vaccine at least BCG, that was 98.3 percent fully immunized, fully immunized 12 to 23 months was almost 94 percent. And if we take MR2 as fully immunized, it was 89 percent coverage from this rapid convenient assessment. And we did this rapid convenience throughout the country, it's not particularly in one area. You can see the map here, this was done throughout the country. Next, please.

00:35:12.46 Like I told you earlier, we were wondering, how did zero-dose in this particular area, Chor, border area or ethnic community, or Hoar area, and also we tried to look those areas where there are no health workers, a [INAUDIBLE] or health worker, like [INAUDIBLE] slum. So what we found was really, we didn't find really a high zero-children, like 1 percent, you can see from here. We didn't see really, this seemed like, oh, this area is the one with highest zero-dose, our one we found about 2.5 person in one slum, but otherwise, it was almost same. And I was really surprised, because I also went some of these Chor areas, I thought I would find a high number of zero-dose in this Chor area, because these are area in middle of river, and sometimes the summers with the water when the river is big -- then again, it comes out. So I was expecting by [INAUDIBLE] in there, but it was not like that. And 2.5 zero-dose children, which is 0.06 million. Next slide, please.

00:36:22.38 Then like I told you, out there we also tried to see relation of these zero-dose children with some of the primary health, so we said, delivery. Forty-percent of children, we saw induced, mothers whose delivery is at home -- again, I'm not telling you by percent really, you know, but what in the number of mothers we interviewed during this three-phase, you can see here it was quite significant, like 40 percent zero-dose, you know, we deliver it to home. Next slide.

00:36:59.59 Similarly, we also tried to see, what is the relation with ANC, Bangladesh provide [INAUDIBLE], this is quite low. We also found 23 percent zero-dose children, and those mothers who didn't receive any ANC nurse services. So that was ultimately very interesting thing for us. ANC and [INAUDIBLE] care, thank you so much. Next one, please.

00:37:26.09 And also, there is a very -- more zero-dose under-immunized increase with the mother's education. The higher the education, I would say less zero-dose are under-immunized. So especially in the, like, pre-primary, the mother's education is pre-primary, it is a little bit higher. Here you see higher secondary 1.6, more take it from the private, but usually the lower the education of the mother, the higher percent of zero-dose and under-immunized children. Next, please.

00:38:01.65 So then we started having this GIS base microplanning and mapping, we have support from WHO headquarter. I don't know [INAUDIBLE] joined here today, I don't know, otherwise, you would also give us insight, we have started in three places just to see and view this GIS, this microplanning to reach those unvaccinated children. Next slide, please.

00:38:30.56 This is just an exercise, the three levels that they are doing, it's really very interesting. There is a link here, so you can go to those link and see how it really helps, really tracking up to the lowest level to see, certainly how [INAUDIBLE] whether they are near to the community, whether they are far, you know. It's really, really interesting insights, so for those who are interested, you can go to that link and see. We have just started, and I know we'll be very happy to share once we complete this whole exercise. We have three colleagues, [INAUDIBLE] in the country to support this. And we would definitely like to share that when this is completed. Next, please.

00:39:20.22 We try to see this accessibility to healthcare, travel time analysis, and also the relation to zero-dose. We found also have some kind of relation here, although this a very plain area, it's not mountainous, only some part of area is mountainous, otherwise it's a generally plain area. But we could see some relation there between the accessibility to healthcare and travel time, and also zero-dose. And we found that kind of relation. But again, like I told you earlier, we have just started this microplanning, and we'd be very happy to share with you once this is completed, to take us another one to two months for us to complete. We have started as a pilot project in two districts and one city calibration. As soon as that is accomplished, then I will have much better idea in coming days. Next, please.

00:40:16.02 So in conclusion, with this high coverage in Bangladesh, we were really wondering to really trace these zero-dose children, so that we could have a targeted endurance in those area to achieve high coverage throughout, and really bring down those zero-dose children. We use these various methods, not only -- one method may not work, so the triangulation and the RCA, house-to-house monitoring. So various methods to find those children, because it varies from place to place. So after we complete all this use of these tools, and also GIS microplanning, we will continue to refine these tools and technologies in the future so that we can really have a good, I would say, tool in place to really identify these zero-dose, under-immunized children, and so that appropriate action and targeted action can be taken, other than just blindly going throughout the country. That will really help us in reaching those children with a minimal resources. Next slide, please.

00:41:32.58 I think this is the last slide. Again, thank you so much, and then I will be very happy to share with you GIS microplanning in future when we complete this. Again, I would like to thank everyone, and also the WHO headquarter and colleagues in the country really supporting this effort. Thank you so much.

00:42:05.03 >> Thank you very much, Rajendra, that was very, very interesting. I think we can move on to the poll question now. I'm sure Carolina is very keen to have this done. Who is projecting the poll question?

00:42:19.51 >> So remember, that we have a toolkit with no name yet, so we really want to hear, after hearing what the toolkit will do, what do you think we should name it, understanding it plays the parts that it has? So please take the poll.

00:43:24.47 >> Kindly go in and give some names. We don't have anything so far, and we really do want to hear from you. I want to move on to the discussion. So I'm giving people at least a couple more minutes.

00:43:48.95 >> Please, please, please vote. I put in the Chat the elements in the draft guide. So keep them coming, we're getting some answers, so please, please, please.

00:44:48.66 So we have many people in the webinar, so please, if you get a chance, just type some of the key words that we want -- yeah. Thank you, we see some suggestions in the Chat, but put them in the poll, if you can. Thank you. You can also send us proposals of titles after you see the slides and reflect a little more.

00:45:23.33 So Chilunga, do you think we can move on? Or do you want to give --

00:45:28.24 >> I think we can move on, giving them the option to take -- to have homework. Okay?

00:45:35.66 Okay, thank you very, very much Carolina and Ana and -- what's the other guy's name? Our Bangladesh friend who's got millions of --

00:45:45.85 >> Rajendra.

00:45:47.02 >> -- Rajendra, who's got millions of questions in the Q A Chat. And maybe I can quickly start with those, so that I can give him a chance to answer. The first one is, the RCA in Bangladesh, how are HH and neighborhoods actually selected? Do you feel that the HH visitors convenient, and therefore likely to be a bit biased, high or with the teams

directed to areas unlike or -- something -- likely to have low coverage? So maybe representing a worst case or lower than average coverage? Can you answer that, Rajendra?

00:46:44.67 >> Okay, thank you. Thank you so much, yeah. I mean, we included all the 61 district in Bangladesh. We included -- from each district, we took [INAUDIBLE] villagers, two villagers, selected randomly, which makes total of, like, 128 villagers. And also from each villager, there's a subdistrict, [INAUDIBLE] subdistrict, and [INAUDIBLE] three unions were selected, again randomly. And from each ward, 12 children were selected. And then from city person, we selected two [INAUDIBLE] from Dhaka, south of Dhaka, these are the big city person, and random from other. Then we did this RCA randomly and selected [INAUDIBLE]. Although we tried to, when we selected, of course we tried to look those areas, like I told you earlier, the thousands of Chor areas, the Haor areas, or slums, but we selected randomly these places so that there is no bias, I would say.

00:47:49.86 For the union, 36 houses were visited, and each, like, areas with slums, how we selected those areas, especially, so that we're assuming those area would have these zero-dose and under-immunized children. So we selected those areas to know, just to make ourselves confident that they are the areas where are the zero-dose children. But that was not really the case, yes.

00:48:24.30 >> Yeah, thank you. I'll go on to another one, again it's for you, Rajendra. It's from [Zily?], what's the source of the satellite images in the Bangladesh project? Are satellite images available to all countries as through the initial that could be used for microplanning?

00:48:46.75 >> Yes, we have -- currently, we bring in two district and one city [INAUDIBLE], and we supported that, of course, our government to get those satellite images. Also, we also got a technical -- like I told you earlier, technical support from our WHO headquarters, the GIS unit. We have two international consultant currently in the country that are supporting us this GIS microplan, yes, those satellite maps, we supported the country level, and also we got some from our inter-[INAUDIBLE]. Like I told you earlier, this RCA is not a survey, so it's convenient bias, I would say, monitoring in prioritized area, earlier when I told you in the beginning, because we visited those areas that talked about that have the zero-dose children.

00:49:43.64 >> Okay, great. I think this one I'll give to Carolina. It sounds more like a Carolina question. What have you seen to be the most effective ways to communicate data to non-health and decision-makers who can provide support for reaching zero-dose children and families?

00:50:08.67 >> Thank you. I don't think I have the best answer, because I see it varies a lot by the type of user of your information, the type of audience. I think even understanding that we are not so good at getting understanding the needs of our audiences. So from what I have read in the literature, really, it has to be very short message, a very short actionable message. For example, the two concrete things that a community can do, for example, we see that mothers are saying that they cannot get to a health facility because they close too early, or they are working. So the concrete thing is, give that message, and then how can we expand hours of operation or dates of operation? So I think it really depends on in trying to keep the message simple, pointed, and really try to understand our audiences. And I would pass it to anybody else in the panel who wants to say something about this, because I think not the best, even in communicating some data to non-technical people. So anybody who wants to take it?

00:51:33.18 >> I was going to ask Angela, actually, to see if she's had any other experiences that she can share with the group. Angela?

00:51:42.81 >> Sure, thank you. No, I definitely agree with Carolina. I think it's very important for us to consider who our audience is going to be when we're presenting any sort of data triangulation type information. In our experience in trying to build the data triangulation capacity, we've also focused a lot on sort of most optimal data visualization practices. There's some great resources out there that I'll try and either share in the Chat here, or we can share with everyone that's registered after the presentations. But the European office has a great communication toolkit for immunization-related data that we can share also in the Chat. I think just like Carolina said, really making sure that we're using the most appropriate data visualizations that really drive home the point that we're trying to make, make very succinct descriptions and interpretations of the data that we're seeing, and then also be very, very clear about the ask that we have for our end

user, or our audience. What is the action that we would like to them to take -- because that's really the take-home message.

00:53:07.11 >> Thank you. The rest of the questions are mostly about Bangladesh, but I think I want Ana to also contribute to this one: With more than 90 percent of coverage rate, I think it was hard to find and reach ZD children. Please can you provide detail on method you used? I mean, I think it should go to Rajendra first, and then you can --

00:53:33.59 >> Yes. Thank you. I'll ask my colleague, [Hasan Ali?], to come in. Hasan Ali is our data manager there. Hassan? Hassan Ali there?

00:53:48.69 >> I think he's left.

00:53:50.86 >> Hassan? Hassan Ali there?

00:54:01.34 >> I think has left, Rajendra.

00:54:05.43 >> No, I think he said, "Yes, I am."

00:54:08.51 >> Oh, okay, I didn't hear him.

00:54:12.99 >> Hassan, are you there?

00:54:16.17 >> Yes. Yes. I am here.

00:54:18.21 >> Can you respond to the question, Hassan was the one who directly got involved in this. Hassan?

00:54:25.44 >> Yes. Actually --

00:54:26.91 >> Can you -- yes, explain the methodology of RCM? RCM.

00:54:32.55 >> Actually, the map review of RCM, we started reading the -- we tackle the sample size, and we do the sample size for the country, the sample size based on our coverage relation survey that covers last ten [INAUDIBLE] to be counted, and we [INAUDIBLE] the sample size, often getting the total sample size for one country. We figured the sample as part of doing what Dr. Rajendra said, that each district, we collect -- took two villager, and each villager, we get two union [INAUDIBLE] in each union. We collected privacy [INAUDIBLE] information. And privacy [INAUDIBLE] information, and we took for privacy. And all other information, like [INAUDIBLE] and district that were selected randomly.

00:55:46.50 Another thing, we have taken care of that priority area. We informed accumulative priority area like Haor, Chor and local area, and where [INAUDIBLE] is. So the priority area we considered, and informed them that in that union, you have to ensure both requires the [INAUDIBLE] you have there. You need to prioritize that area, and you need to select priorities also from that priority area.

00:56:31.57 And besides that, we [INAUDIBLE] data triangulation thing, you fill up the district, Dr. Rajendra think how we learned that [INAUDIBLE] data, we considered as well as immunization data as part of selecting the district-level districts. So in that way, we come up with those [INAUDIBLE].

00:57:06.77 >> Great. I think we'll move on to the next question, just because we've got so little time left. Again, it's about Bangladesh -- thank you so much, Rajendra, for that presentation. In a setting like Bangladesh, where coverage numbers are high, it seems like the percentage of zero-dose that's missing DTP1, seems small, or the numbers may be large. Are there thoughts on other definitions or indicators to define zero doze beyond DTP? I will refer this one to Ana.

00:57:49.46 >> Okay, well, that's a very interesting questions, and we always say zero-dose children, just the way to improve coverage. I think if that country, if the percentage of zero-dose children is very, very small, it's important to be more ambitious, to have other indicators so that we can improve the coverage; not only the coverage of the first basic as scheduled of immunization, but also to have fully immunized children. So I agree with that comment.

00:58:25.63 >> Thank you. Angela, would you have a few words to throw into that in the last minute?

00:58:34.05 >> No, I don't think so. I think they covered most of the points, I would say.

00:58:38.86 >> Carolina?

00:58:42.02 >> Just to thank the participants at Bangladesh and the [INAUDIBLE] Team for the invitation and for being with us. And please, please, please send your names for the toolkit. And thanks.

00:58:54.44 >> Thank you.

00:58:55.39 Okay, I think we have to call it -- come to a close, because we just have one minute left. But before we do that, can we go to the last slide? We need to have an evaluation -- oh, you're already there, good for you. We need to have an evaluation. You can either scan this QR code, or is there a link in the Chat? Is there a link in the Chat?

00:59:23.86 >> Yes.

00:59:25.18 >> Okay. Please use whatever you find easiest, we need to have an evaluation, so kindly do that. And this, it's only two minutes or so, although we are on time. So with that, I guess I just thank the excellent panelists and presenters. Thank you so much for all of you who came. We are really encouraged by your attendance. And please don't forget Carolina's name for the toolkit; we really do want a nice toolkit for this.

01:00:03.91 So in the next few days, you should be receiving an email with a link to today's recording, so you can go over it again, and you can catch those things maybe which you did not have time to do, to touch or to [INAUDIBLE], so you've got another chance to go through it.

01:00:24.80 So with those few words, I just wanted to thank everybody once again, and bring this webinar to a close. Thank you so much. This has been really nice actually, very good audience, very good questions. And a special thanks to Bangladesh. Thank you for sharing those experiences, we only want those experiences, so thank you so, so much. Thank you. Bye-bye.

01:01:02.03 >> Bye-bye, thanks.