

AT: Welcome everybody to this near Neonunet webinar. We're very pleased to have speakers from Path. I can see we've got Kiersten Israel Ballard, and Emily Njuguna who have agreed to present to us today. The background of this is I think, the presentation by Kathy Burgoine on setting up her integrated lactation support and human milk bank at Mbale Regional Hospital in Uganda. And they expressed an interest to share their work. They are part of the Maternal Newborn child health and nutrition section, and we are very excited to hear what they are doing in this area. So over to you.

Kiersten 1:55

Hi, first, I just want to make sure that you can hear me okay and see me. Yes. Are we good? All right. I will launch us in and I'm going to share my screen and Emily and I will be sharing this presentation but first, let me know that you can see this. Okay. Is that alright?

Unknown Speaker 2:19

Yeah, that's fine. Yeah. Okay.

Kiersten 2:21

Sometimes there was a delay, so apologies for that. But, um, and we will just as we even begin, we will share this deck. Maybe it already has been shared somewhere, but we'll share this out. So, acknowledging we're going to go rather quickly through some of these slides that we felt they'd be a nice resource for this group. We are so grateful to be here with this group. I think it's going to feel like we are surrounded by our people. Because you are focusing on neonatal nutrition, which is definitely the focus of this talk and our team at path. Thank you here to hear this talk about equitable access to quality care for small infant newborns and the focus is on optimizing feeding. I'm Kiersten Israel Ballard. I helped to lead our integrated Maternal Child Health and Development Team, which is where all of our neonatal and our nutrition work sets. We'd like to really emphasize that integration, which is key and very difficult to do sometimes. Path is an international NGO. Maybe you've heard of it. Maybe you haven't. But we are very country focused and decentralized. Many of you are probably partners on a number of projects or activities were brought anywhere from malaria vaccine development, innovation, and our core maternal newborn child health activities. So happy to talk to you more about that if there's curiosity or questions. I'm this team though we are very focused on this core population, looking at small and secondary **borings**. We're trying to really address neonatal mortality. And why is it that we're not moving the dial there and so we are focusing on those who are the drivers those born too soon small for gestational age, low birth weight. These babies are highly vulnerable. So, what can we do to target their care? An area that we have seen lacking and meeting, other focus has been looking at human milk. So, we know I've got a number of these guidelines here. You're all familiar with us. We know that lactation and provision of human milk is recommended by WHO a time and again, this appears whether we're talking about guidelines for preterm, guidelines for breastfeeding, and how do you truly provide human milk to these vulnerable infants? We are not talking about the healthy fat term babies and the challenges they have

with breastfeeding; we're talking about the very special needs. And so actually operationalizing these guidelines has been a massive challenge around the world. And that's what our team is focusing on. I don't need to share this graphic with you, but we'd like it because we feel like it conveys to people who haven't stopped to think about the specific challenges of small and vulnerable newborns. They're born too early. They have difficulty suckling, they're often separated from the mother staffing shortages in the NICU or, you know, the adult staff who are not lactation trained. They become reliant on cups, spoons, tubes, and then what about discharge? Are they actually being set up for success with breastfeeding, or are these babies coming back being readmitted malnourished because that mother was never set up for success? Breastfeeding directly at the breast? But there's also challenges that face that mom. She's in a traumatic situation, she's separated from her baby. This causes not only stress affecting lactation, but lactation is delayed anyway especially if this is an early baby, or she's just undergone a C section. She's dealing with insufficient volume even if she has milk, and then mothers become reliant on expressing if there are pumps available. Again, how are we setting up the moms for success at discharge, so that they're feeding at the breast? And so, what we have seen over time, and it's been rather surprising is that there are basically two different fields with the nutrition field which has really tried to advocate for breastfeeding and lactation support for the general newborn population. And they've made gains. There's also the newborn field which has made amazing gains in our planning and all of this but often trying to bring these two groups together newborn and nutrition. That's challenging whether we're talking about the policy level implementation level, the funding level, and to meet the nutrition needs for vulnerable neonates, you'd need the meeting of both of these groups, then neonatal care and then nutrition. Clearly that is why your group exists and we are so grateful to find you. Because you know that the meeting of these minds doesn't happen organically you've had to create and I'm sure it's been a massive effort, but so much done here because they've been gone.

Kiersten 8:40

This has just continued to be a gap and we feel like it's just because it's been lost in the middle. And again, this is a graphic that we'll share. We're not going to go into it in detail, but we really emphasize luck, this mom and this baby are practically set up for failure to ensure they receive human milk, whether we're talking about labor and delivery in the maternity ward as that baby moves into the neonate board. And again, at discharge. Our systems currently do not support optimal breastfeeding, or optimal human milk feeding. There are a number of interventions that could change this so that the mother's needs are met, the baby's needs are met, and human milk is considered a priority. This all ties in later with our work around Mami's malnutrition, trying to avoid these re admitted newborns that could have been avoided if we paid more attention to first hours. Babies um, so just to reemphasize, again, I think you all are very, very familiar with these new guidelines which we were so grateful to WHO released these updated recommendations that very clearly call out the priority is eating mother's own milk. We know that for all the operational challenges that's the priority. But then following that is the provision of donor human milk and we did attend the talk. months ago, that was amazing to hear about yet another human bank opening because of this need for donor human milk. So, we're recognizing a number of you're very familiar with this. Often in the field, people are confused about what a human milk bank is. We try to really start at a one-on-one level and encourage people to understand the quality control that's needed. It's just like a blood bank. We're talking about donor milk. And so screening quality control, data tracking temperatures, pasteurizing the milk all of these steps need intensive quality control. But you know, years ago, oops. years ago, we started realizing that no one knew where milk

banks were around the world. And so, we started putting together this map which you can access. The link is here whenever you receive the slides, but we started realizing there's you know, a significant gap, right? If you look at the African continent and elsewhere, you've got milk banks clustered around the world, but in the areas that have the highest need, we don't see milk banks. Interestingly, if you see Brazil, down to the left, Brazil has been a global leader in having a national program which has been used as a model, which I'll get into in a moment, but they are an example of a middle income country who has scaled milk banking, but they've done so in an interesting way. And I really like to show this slide here because I think often milk banking is confused that oh, wait a second. Are we talking about feeding donor milk instead of breastfeeding? And absolutely not. We are talking about setting up human milk banks so they're in support of breastfeeding. That donor human milk is never used to replace or displace breastfeeding. It should only be used to displace formula. But if we don't implement a human milk bank, appropriately as an integrated part of a system, then what we have seen over and over again and I've been many milk banks, is the donor human milk can very easily be overused. It's easier to grab it off the shelf and to use that than it is to establish a system that you support a mother to have specialized lactation. That actually is the most challenging part to setting up a human milk bank. So, we started to think about, you know, years ago over a decade now what is the model that we want to promote? We are not promoting milk banks. We are promoting exclusive human milk diets, of course, fortified when needed, that exclusive human milk diets were that milk bank is a part of a system. It's a part of a system where you have breastfeeding promotion Lactation Support. Those mothers then in turn can become donors when they're healthy. And then provision of donor milk when it is safe. And appropriate, but it's part of a broader system of care. And so, we worked together with Ministries of Health and technical partners across a number of countries. South Africa, Vietnam, India, most recently Kenya, we created a phased approach for how can you do this establish a milk bank that is safe, but developed in a way that's appropriate to the local system, given all that quality control that's needed? And yet is integrated so you do not lose touch with that breastfeeding? And so, we implemented throughout these countries a phased approach and very carefully country led by both the divisions of child health and nutrition so that we had this integrated approach. And it was all about establishing ownership. I will transition to Emily shortly and I'll let her tell the story of this approach from the Kenya perspective. But just to say our model was based on what we learned in Brazil, that map remember I showed that Brazil is really considered the world leader in scale. Not only that, but they're also considered the world leader when it comes to how they integrated they actually call their milk banks "Houses of lactation" because those milk banks are used fully to support and promote breastfeeding. They tie it all together. And they do an amazing job with messaging, their communications materials, everything they do tells mothers, that it's the lactation that's most important the donor milk is just a side benefit. So that informed everything that Path has done over the years. I wanted to show this slide because what has been so incredible is watching India, India has had milk banks for 30 years now I think and they have really advanced over the last five years and that is because they not only have developed guidelines, they have an association, but most importantly, they reimagined how they could implement and integrate their milk banks. A delegation from India, we took them to Brazil so they could see firsthand how the government integrated their system. So, India, in turn established what they call lactation management centers. where the focus is on lactation. Of course, there's human milk banks where it's appropriate, but that is never the focus. And so, Path, you know, over the years, we've realized these gaps, you know, why is it that milk banks don't exist in LMI settings where the need is the greatest? Obviously, it's challenging. Yes. But And ideally, I Well, ultimately, what we realized was, there was no global guidance, there was no

WHO guidelines to really outline the standards for how you establish a milk bank there. And then if you're thinking about a country where no one has even seen a milk bank, it's very intimidating to set up something like this. We're talking about biological substances being fed to vulnerable infants. And so, Path over the years we worked with the global community and Europe North America across the countries that we've been implementing South Africa, India. And we developed a toolkit that you can access at this website. That really was to foster some kind of standard built on it **has pounced** local, but this is very much a global effort, where we outlined the steps that could be taken in establishing a human milk bank. But what was key was that this was an integrated model. Always thinking about how you not only how you establish the safety quality control, but how do you link back with the breastfeeding lactation. So, what is so exciting many of you might be aware is that finally who is developing guidelines for human milk banking, this has been long and coming calls from countries, you know, asking where are these we need some kind of standard. So, this is underway. Currently, Path is assisting with this, but it's a WHO process. We hope they'll be finished late 2024, early 2025 And these will guide the safety and quality of human milk banking.

Kiersten 18:22

As I close and transition, I do want to share that you know, the field is changing. You all are very embedded in this momentum around optimizing care for small and sick, small and vulnerable newborns. It's incredible to see this shift that there's so much happening around these models of care. What we keep advocating for is don't forget nutrition. I know that's what you're advocating for. We have to make sure that as these models are developed, are there systems to support that mother? Are there systems to build capacity around lactation for appropriate human milk banks that are feasible for LMIC settings. So, a comprehensive approach Path is trying to really be vocal around this that nutrition be considered a core component. And this is what we call our mother baby friendly initiative plus now this is what we've been implementing over time. It's really comprised of a multifaceted, linked approach. You can imagine all of these agendas. They align, you know, we're talking about specialized lactation support that's targeted. Newborn feeding, aligned with appropriate growth monitoring, nurturing care, human milk systems, including the milk bank, but other areas of transport storage. Follow up. Are we truly do we have adequate follow up for these babies and mothers post discharge? And then how does treatment of malnutrition wrap into that? So, if we think about establishing and evaluating a comprehensive model, these are the components that seemed to be most needed. And with that, I will hand it over to my colleague Emily.

Emily 20:20

Thank you. Thank you so much, Kiersten. I think we start by asking that we check let me know that you can hear me and see me if you could confirm that. Yes. Great. Okay, so good afternoon, esteemed colleagues. My name is Dr. Emily Njuguna. And I am a pediatrician and the regional lead for maternal and newborn health Path. And prior to this role, I was working as the head of pediatrics at a facility in Nairobi, Kenya, one maternity hospital. And so, what I wanted to do in the next few slides is to share with you some of the work that we did in Kenya to set up this comprehensive model. And I will also share other pieces of work in other countries. So, looking at the map, as Kiersten had mentioned, we

know that globally, there are about 700 human milk banks scattered across the world. But from this map, you can see that you know, there are great disparity in this distribution, with the largest gap being in Africa and Asia where the gap, the need is greatest. And so for us in Africa, you know, we had many other milk banks in South Africa, and others in other countries, but Kenya was passed in eastern central Africa, to set up one in 2019 that utilize the mother baby friendly initiative, plus, working very closely with the Ministry of Health and Path and since then, many other human responses have been established in countries such as Uganda and Nigeria. Next slide. So, in Kenya, we utilize the phased approach that Kitson had alluded to earlier and setting up the human milk bank. We wanted to ensure that it was part of a comprehensive package of care for newborns and this employed the three phases as Kiersten had mentioned earlier. And in phase one. What we were really looking to is to set up the foundation for our so we did a lot of formative assessments, whose results I will share in the next slide. But we also did a lot of stakeholder engagement, thinking on teams to run the project. We also developed country specific guidance on human health plan. All these processes in phase one actually guided the implementation of the project. And I must mention that we rely on paths expertise, but also utilize the toolkit for human milk banking, that Path had developed because there was no other guidance available globally. Next slide.

Emily 23:16

So, looking at the results from our formative assessments, we were very excited to find that 91% of all mothers thought that it was okay to donate the breast milk and another 87% said it was okay to feed their children on donor human milk. And 60% said that they would consent for their own baby to receive donor human milk, but again being a new intervention, you know, we took these results as being very encouraging. Most of these mothers have never heard about the human milk banking concept. Additionally, the last graph, the one on your right, shows that mothers actually said that the baby should receive milk as the next best option if for one reason or another they didn't have access to their mothers own. And this really mirrors the current guidance that we have on why that was released in 2022. That recommended that donor human milk should be the second-best option in the absence of milk. So, in phase two, we went into implementation that was during the years 2018 and 2019. And for this phase, what we did was to choose the site for implementation looking at the infrastructure that we needed, as well as the staffing needs for this project. And Pumwani maternity hospital was chosen because one it was a public facility. We were working very closely with the Ministry of Health to identify the most appropriate facility with the highest need and this facility was chosen because it conducts 80 to 100 deliveries per day. And of the 400 Babies who are admitted into the newborn unit monthly in this facility. I found these babies are actually preterm, forming a critical mass of babies who are required to do nothing but milk. This facility also had an integrated KMC unit, and we felt that because we wanted to present a comprehensive approach, these services were key to these in this phase. Additionally, we also did a lot of capacity building to safety standards for bhi and also human banking principle and also conducted learning stages for our staff in Glasgow and South Africa. Just to understand what the different models of human will find out as well as to try and to domesticate these learnings to our setting to ensure that the project was fit for purpose for Kenya. And the culmination of all these efforts in phase two was the launch of the human milk bank and the call to action on your top right and photo of our governor, the Nairobi Governor launching the service at the hospital just to show you that there was you know, a lot of excitement and ownership of all levels of the government. Next slide.

Emily 26:23

In the second part of phase two, what we did was to continue to work through the safety and quality aspects of the project, doing lots of audits to ensure that the milk that was being dispensed within the facility was of the highest quality and additionally, we were also strengthening the policy and regulatory framework, which is also continuing even up to now to ensure that you will nutrition and human milk banking are integrated within other critical documents such as the MIYCN guidance and other critical documents including our ECD work. Next slide.

So, by working with, we believe that by working with organizations such as the African National Association, our vision is really to utilize their local leadership and linkages to establish centers of excellence and regional platforms that would enable countries to implement this comprehensive approach to newborn nutrition across various regions and across various countries. And we believe that this approach would foster learning and shared sharing of resources across countries and regions. And this would lead to visible implementation and innovation across the continent. We believe in Africa, for Africa by Africa for Africa approach and that is what we are hoping to do in the next few years. So, on this map, the African market you can see the countries indicated in gray. Those are the countries that you know, we have worked with very closely with governments and stakeholders to implement our mother baby friendly initiative plus model. And the countries in red are those with which we have been invited by governments to really work very closely together to expand this model. And again, all these processes are spearheaded by the Ministries of Health, because we believe that this local leadership is useful and also called to building sustainability and ownership for this project. Next slide.

Emily 28:43

So beyond thinking through human milk banking as of today, post initiatives for newborn nutrition. We are working on other initiatives that focus specifically on feeding of the small and sick newborns. And one of that one of those initiatives is the development of our curriculum for specialized lactation support. And this is for small and sick newborns. Because we know that supporting moms of small and sick newborns is more complex and requires many components include supporting lactation, models how to use alternative feeding methods such as cup while also supporting how to start feeding at the breast as soon as possible, but also supporting her to build her milk supply so that she has enough to support her baby even while she's at home in the community. So, this curriculum also encompasses the inclusion of other important components of care, including KMC, responsive, nurturing care, as well as increasing the capacity of healthcare workers. To communicate clearly, effectively, and in a manner that fosters family participation throughout the process. So, this one will be tested in pilot sites in Kenya Nigeria, in collaboration with USAID, but also, we have embarked on implementation research with the Addis Ababa University Ethiopia, as well as Harvard's Ariadne labs, and we are hoping that we can implement this curriculum across various countries on the clock. And we hope that this tool will be used as a global good available for healthcare workers to conduct training within the health facility because it is designed in a modular fashion that is easy to use for the healthcare workers. Next slide. So as I close, and I won't belabor the point, some of the other initiatives that we are involved in in the development of the human milk banking guidance, as Kiersten had mentioned, WHO has never developed this guidance,

it has been missing and Path is working as a coordinating entity for this project. We are also involved in a WHO consultation on feeding of at-risk infants, where Path has been contracted by WHO as a consultant. And for this project, we're hoping that we can do landscaping, just to understand what materials are available. For healthcare workers and community health care workers to support moms in the feeding of small and sick newborns, particularly those who are less than six months have difficulty feeding and also are at risk of malnutrition. So, I think with that, that is in a nutshell, what we are involved in. And we're working very closely with Ministries of Health across the continent, and we'd be very happy to collaborate with anyone on this call. So, feel free to reach out to us on those email addresses that have been shared. And then we can continue the discussion by them. So, I think at this point, I can hand it over to Allison.

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