



Case Study

ENHANCING THE CONNECTIVITY AND CONFIDENCE OF HEALTHCARE OFFICERS IN JAMAICA THROUGH PROJECT ECHO

MAY 2020

This case study was authored by Gina-Anne Cameron-Turner of University Research Co., LLC (URC) and produced by the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, funded by the American people through USAID's Bureau for Global Health, Office of Health Systems. The project is managed by URC under the terms of Cooperative Agreement Number AID-OAA-A-12-00101. URC's global partners for ASSIST Zika activities included: American Academy of Pediatricians; FHI 360; Institute for Healthcare Improvement; and WILHER, LLC. For more information on the work of the USAID ASSIST Project, please visit www.usaidassist.org or write assist-info@urcchs.com.

SUMMARY

Building the capacity of healthcare providers has been central to USAID's Zika response in Jamaica, where the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project supported the Ministry of Health and Wellness in strengthening care for families affected by the virus. A cadre of Master Trainers have been provided with tools and trainings for the neurodevelopmental surveillance (NDS) and referrals of infants and young children in well-baby clinics, to increase the Zika-related knowledge and skills of healthcare providers. With support from the American Academy of Pediatrics, ASSIST facilitated ongoing engagement with these providers, through trainings and a Neurodevelopmental Surveillance Extension for Community Healthcare Outcomes (ECHO) Programme. This study describes how the Jamaica NDS ECHO facilitated knowledge sharing among Master Trainers and improved trainers' engagement with NDS training materials and content.

BACKGROUND

As part of USAID's Zika response, the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project provided support to the Jamaican Ministry of Health and Wellness (MOHW) to strengthen care for infants and families affected by the Zika virus. ASSIST uses improvement science to build the capacity of healthcare service delivery organizations. In 2018-2019, the project worked in Jamaica to support infants and families affected by Congenital Syndrome associated with Zika virus (CSaZ) by providing psychosocial support to pregnant women, neurodevelopmental surveillance (NDS) of children in well-child clinics and, when necessary, facilitating their referrals.

Since Jamaica's first confirmed case of Zika in January 2016, the need for the island to have an elaborate Zika response plan increased exponentially. Accordingly, the MOHW responded by gathering local expert clinicians to produce and distribute protocols for the clinical management of Zika virus infection and psychosocial support for pregnant women and children with Guillain-Barre syndrome and/or families affected by Zika virus, as well as a brief on microcephaly. However, the healthcare system had other needs, which the MOHW and ASSIST worked with the American Academy of Pediatrics (AAP) to address by developing a training curriculum for NDS and conducting two Training of Master Trainer workshops for a total 57 healthcare providers. The AAP has worked with the MOHW to update clinical guidelines and protocols and to introduce new and updated job aids that are being piloted in the healthcare facilities. Additionally, to provide continuing education on topics related to NDS and further support to Master Trainers in training other healthcare professionals in Jamaica, the AAP, MOHW and ASSIST jointly organized an NDS Extension for Community Healthcare Outcomes (Project ECHO) programme.

PROJECT ECHO

Project ECHO is a hub and spoke knowledge sharing programme that connects non-specialists with expert clinicians to enhance the quality of healthcare provided in low-resource settings. Using a "tele-mentoring" approach, Project ECHO distinguishes itself from telemedicine programmes which involve the remote diagnosis and treatment of patients, prioritizing instead building the capacity of the healthcare participants in attendance. It caters to populations like those in Jamaica's rural parishes, by employing affordable technologies that are accessible remotely such as the Zoom platform. This model

originated from the University of New Mexico, with the goal of creating a sustainable quality improvement medium for sharing best practices through case-based learning and master presentations from expert clinicians. To best prepare other institutions interested in running their own ECHO programmes, the ECHO Institute has designated organizations, like the AAP, as superhubs, which have the capacity to train and support budding ECHO programmes like the NDS ECHO in Jamaica.

Each ECHO session is scheduled to last one hour, beginning with introductions and housekeeping, followed by a didactic lecture. A short Q & A then gives participants the opportunity to probe the expert lecturers for further clarification on matters arising from their presentations, after which is a de-identified patient case discussion. In the days leading up to the ECHO session, the case presenter would have been in dialogue with ECHO administrators to compile the Case Presentation Form that is used to guide the discussion. This document captures the reasons for presenting the case and the case's main points, as well as the demographic information, birth, medical, developmental and social history of the patient. After the designated participant shares these details, the session's facilitator summarizes the case and opens up the floor to clarifying questions. ECHO participants proceed to further discuss the case, providing recommendations to the case presenter on how to best proceed with caring for the patient in question. ECHO sessions conclude with the facilitators summarizing the case recommendations and wrapping up the call.

DEVELOPING THE IMPROVEMENT STRATEGY

Between January and March 2018, a health services needs assessment was conducted by ASSIST to gauge the support needed for the MOHW's Zika response activities and, overall, aid in strengthening the country's systems to provide healthcare to Jamaican children who may have been affected by CSaZ. The assessment evaluated health workers' knowledge, attitudes, and practices about Zika transmission, the availability of related materials for providers and clients, and the perspectives that health leadership held on how health services have been adjusted in the context of Zika. It found that Zika knowledge was not consistently high across the providers interviewed and was particularly low for knowledge about modes of Zika transmission. This resulted in underinformed counselling advice given during antenatal and post-natal clinics. Additional findings revealed that while in well-child clinics, most guardians were asked about their child's learning and development and anthropometrics tended to be consistently measured, the documentation of this information in the child health records was poor.

Incorporating this feedback, activities conducted by ASSIST in Jamaica targeted the improvement of the quality of care and support services offered to children and infants potentially affected by CSaZ. Focus was placed on strengthening the capacity of the healthcare providers on the frontline of Jamaica's response to Zika for the neurodevelopmental surveillance of children and, when necessary, facilitating their referrals to the appropriate care and support services. ASSIST partnered with the AAP to implement key improvement activities in Jamaica that included updating guidelines and producing job aids (see **Figure I**), increasing Zika-related knowledge and skills of healthcare providers, and measuring



Figure I. New and updated protocols, guidelines and job aids introduced under the USAID ASSIST Project

and improving the quality of care available for children potentially affected by CSaZ. These activities have resulted in updates being made to the MOHW guideline, *Zika Virus Infection: Clinical Management Protocol for Pediatrics*, and to the milestone table in the Child Health Record for Well Child visits. A new “Classification and Treatment Guide for Neurodevelopmental Surveillance” was introduced, alongside a table-top job aid with “Milestones in a Child’s Development.”

Presenting the new and updated NDS tools to healthcare providers became a focus for ASSIST in Jamaica, and in November 2018, representatives from the 30 healthcare facilities that ASSIST supported in its first phase were trained by the AAP in neurodevelopmental surveillance. This workshop, held in St. Ann, further aimed to introduce clinical concepts for NDS in the health continuum, develop referral pathways and processes for children with risk factors or possible delays, introduce the cascade training approach, and develop the training skills of Master Trainers. Participants received additional direction on how to complete surveillance tools and appropriately classify newborns and children using the Classification and Treatment guide, Milestone Booklet, and Child Health Record Well-Child Health Visit Milestone Table.

When participants were asked in the post-training evaluation for feedback on how the workshop and content delivery could be improved, the Master Trainers expressed that they would have liked more time to be allotted to the training, by “doing more follow-up sessions with us, not just once for the year,” expressing a need for continued exposure to the content and refreshers. Participants further expressed the desire for more information on referral resources available through the MOHW. Many expressed general gratitude for the volume and content of knowledge that was shared in the training.

The AAP had identified Project ECHO as a useful strategy to address health workers’ lingering concerns about how to conduct NDS in Jamaica and provide care and support for children potentially affected by Zika by providing continued exposure to the materials delivered in training, particularly on the new tools. Thought was also given to specific concerns raised about the information available on referrals. As an ECHO SuperHub, the AAP had amassed technical expertise in coordinating ECHO sessions and was able to provide the administrative and programmatic support needed to expedite the programme’s launch. Their goal was to support the joint efforts of the MOH and ASSIST to build the knowledge and capacity of healthcare providers in Jamaica around neurodevelopmental surveillance of infants and young children in well-baby clinics and, as needed, their referrals to care and support services in accordance with MOHW guidelines.

JAMAICA NDS ECHO PROGRAMME

The Jamaica Neurodevelopmental Surveillance in the Age of Zika ECHO was launched in March 2019. Invited participants were the NDS Master Trainers from the November 2018 workshop. The biweekly sessions were designed to improve use of the updated protocols and tools introduced under ASSIST and to strengthen the neurodevelopmental knowledge and skills required for surveillance, referrals, and cascade training of other providers.

To further the knowledge of Zika-related content and for Master Trainers’ implementation and teaching of the NDS tools, each ECHO session corresponded with a specific section of the Training of Trainers (TOT) guide that participants were provided with during their NDS training, and this relationship was clarified at the beginning of each training session. Through a total of 11 sessions between March 1st and July 12, 2019, 29 unique participants attended the NDS ECHO series, with an average attendance of 14 healthcare providers per session. The topics covered were as follows:

- Refresher on Training of Trainer Curriculum (March 1, 2019)

This introductory session briefly reviewed the NDS TOT Guide and featured a mock case that introduced participants to the format of case presentations expected from subsequent sessions.

- Teaching about Zika (March 8, 2019)

This session emphasized the key points that Master Trainers can highlight when teaching their colleagues about the relevance of the Zika virus. The session directed Master Trainers to resources in the TOT Guide to facilitate teaching on the virus and NDS.

- Teaching Appropriate Developmental Milestones for Age (March 22, 2019)

An overview of milestones by age in the NDS surveillance tools, this session defined red flag milestones, reviewed the well-child visit schedule, and provided key guidelines that Master Trainers can use when training their colleagues on developmental milestones.

- Coaching on the NDS Tool (April 5, 2019)

To better prepare participants for their cascade trainings, this session highlighted ways that Master Trainers can facilitate knowledge sharing after the cascade session, specifically by supporting the referral and follow-up of patients and incorporating adult learning techniques on the job. This session also addressed common pitfalls and confusing themes that could potentially hinder the correct classification of children.

- Communication Milestones (April 12, 2019)

This session reviewed the communication milestones by age, with an emphasis on red flag milestones, and sought to give a better understanding of how Zika-related developmental delays can impact vision, hearing, and language.

- Gross Motor Milestones (May 3, 2019)

This review of gross motor milestones emphasized red flag milestones and aimed to give a better understanding of how Zika-related developmental delays can impact movement milestones.

- Fine Motor Milestones (May 17, 2019)

This session reviewed fine motor milestones, with an emphasis on red flag milestones, and aimed to give healthcare providers a better understanding of how Zika-related developmental delays can impact fine movement milestones.

- Social Behaviour and Play (May 31, 2019)

This session reviewed social behavior and play milestones by age, highlighting red flag milestones and giving a better understanding of how Zika-related developmental delays may impact social milestones.

- Communicating with Families (June 14, 2019)

Healthcare providers were lectured on supporting caregivers and families during difficult discussions, highlighting key components of positive provider/caregiver interactions to promote stimulation based on current and upcoming developmental milestones.

- Identifying Autism (June 28, 2019)

This session sought to improve understanding of milestones that may indicate autism spectrum disorder, increase caregivers' comfort in appropriately classifying and referring a child with suspected autism, and facilitate understanding of the use and scoring of the Q-Chat 10 for autism spectrum disorder screening.

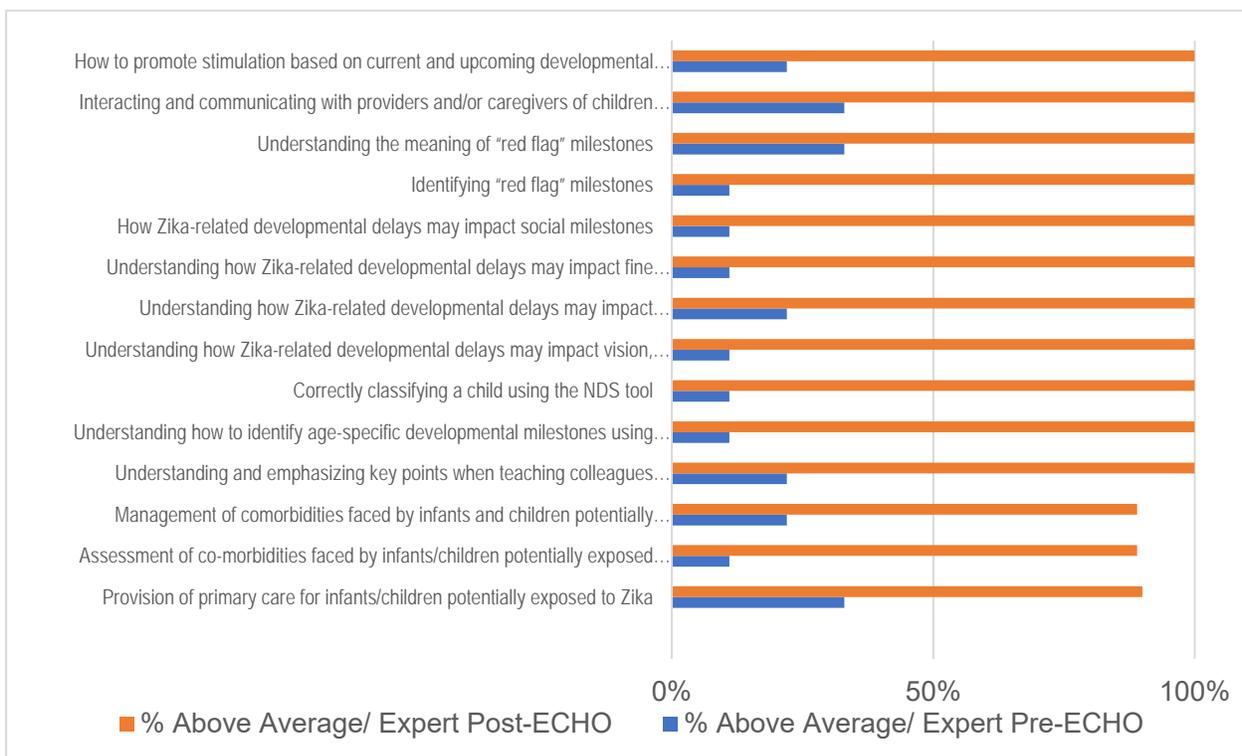
- Coordination of Care, Referrals, and Working Together/Wrap-up (July 12, 2019)

This final session was especially interactive and sought to facilitate discussion with the MOHW regarding referral processes in Jamaica.

RESULTS

The AAP evaluated the Jamaica NDS ECHO through a participant focus group, post session and post program surveys, and iECHO, an electronic relations and resource management tool orchestrated through the ECHO Institute. **Figure 2** shows survey results for the proportion of participants who felt that their knowledge of topics related to NDS was above average or expert level before and after the ECHO programme, suggesting that the programme had a strong impact on participants' knowledge and confidence in their mastery of NDS topics.

Figure 2. NDS ECHO participants' self-reported knowledge about NDS topics before and after the Jamaica NDS ECHO programme



Source: Radecki L. Jamaica Neurodevelopmental Surveillance in the Age of Zika ECHO Evaluation. 2019. *Research and Evaluation Report*. Published by the USAID ASSIST Project. Chevy Chase, MD: University Research Co., LLC (December 2019). Available at:

https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctlID=ODVhZjk4NWQzM2YyMi00YjRmLTkxNjktZTcxMjM2NDBmY2Uy&rID=NTU3MDUx&inr=VHJlZQ%3d%3d&dc=YWRk&rrtc=VHJlZQ%3d%3d&bckToL=

AAP's evaluation estimated that 21,504 potential children have been impacted by the Jamaica NDS ECHO. This was determined by asking participants to estimate how many children, ages 4 and younger, they interact with in an average month. The average figure (128) was multiplied by the average number of ECHO participants per session (14x128= 1,792), then by 12 (months) to gauge the annual estimate.

Ensuring that participants have a solid grasp of the content of the training curriculum introduced under ASSIST is particularly important because, after participating in the AAP-led NDS training, Master Trainers were tasked with returning to their facilities to offer cascade trainings to healthcare workers in their district. For some, this leadership role seemed daunting, raising concerns about the soft skills that Master Trainers approached the role with. As a result of the ECHO sessions, participants have expressed changes in their confidence as care providers, with some who were a part of a focus group highlighting their experiences:

- *[ECHO] boosted my self-confidence for public speaking because once I'd be shy to go up and present but now I'm able to do so...with the materials that were given, everything was given to you. It's only for you to go out there and present it well, in a way that others can understand it. But once you go through it, revise it, you'll be able to put it across and it was very good and good for me. I'm now more knowledgeable, for instance, persons calling me to ask, 'Oh, I saw this baby, what do you think about it?' and I am confident to say, 'Do this' or 'Do that.'*
- *[I] feel a bit more confident as a consultant. There are pilot areas in my parish and so I'm a bit more confident with persons calling me for ideas. Now I can confidently guide the process because I understand what is expected. I'm looking for other things. I am seeing through a different eye. So when they call to ask a question, I feel much more confident answering them and guiding them.*

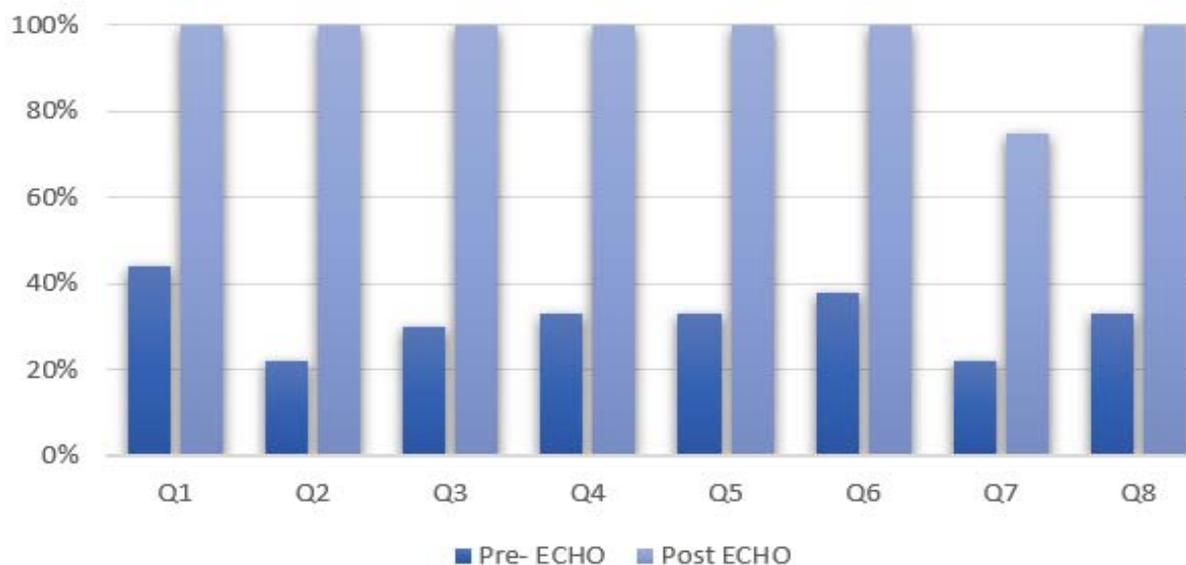
Additionally, when asked to self-report on how their confidence levels have changed over time as a result of participation in the ECHO programme, respondents demonstrated high levels of confidence in their abilities to conduct neurodevelopmental surveillance (see **Figure 3**).

COORDINATION OF CARE, REFERRALS, AND WORKING TOGETHER

Apart from training, NDS Master Trainers are viewed as experts in their field, commonly consulted by colleagues on, not only how to use the tools, but also occasionally how to handle difficult cases. The didactic lectures and case presentations provided opportunities for participants to engage with expert clinicians and specialists appointed by the AAP and other Master Trainers. When asked about how they perceived the value of case studies, participants' responses highlighted opportunities that the ECHO sessions provided for healthcare providers to connect and share resources with each other;

- *The cases were the best for me because the person is experiencing the same things that I'm seeing and it gave me a better way to assist my clients that I see. It facilitated teamwork because as a team we are closer now.*
- *Being able to hear a different person presenting, you as an individual practitioner can pick out of all of that discussion what works for you.*
- *You're also able to evaluate your thought process because when I listened to the cases, as I listen, in my head I'm working on what I think I would do. And so when you hear the experts in the group speaking, you are able to identify some things that they say should be done and you have come up with those ideas. Then you are able to evaluate yourself as if you're on par with what's happening...*

Figure 3. NDS participants' reports of changes in confidence in the following aspects of providing care before and after the Jamaica NDS ECHO



Q1- Providing primary care for infants/children potentially exposed to Zika

Q2- Knowing where to find resources in the TOT Guide to support you as you train and support your colleagues about Zika virus and neurodevelopmental surveillance

Q3- Understanding key points to emphasize when training and provide ongoing support to colleagues on appropriate milestones

Q4- Initiating action when “red flag” milestones are not met

Q5- Supporting caregiver/ families during difficult discussions

Q6- Classifying and referring a child who may have autism

Q7- Accessing community resources for referrals for children with identified or suspected neurodevelopmental disorders

Q8- Serving as a resource in my clinic/community/ locality for the care of infants/children confirmed or suspected with Zika

Source: Radecki L. Jamaica Neurodevelopmental Surveillance in the Age of Zika ECHO Evaluation. 2019. *Research and Evaluation Report*. Published by the USAID ASSIST Project. Chevy Chase, MD: University Research Co., LLC (December 2019). Available at:

https://dec.usaid.gov/dec/content/Detail_Presto.aspx?ctlID=ODVhZjk4NWQzM2YyMi00YjRmLTkxNjktZTcxMjM2NDhmY2Uy&rID=NTU3MDUx&inr=VHJlZQ%3d%3d&dc=YWRk&rrtc=VHJlZQ%3d%3d&bckToL=

- ...the cases give me an insight into what is happening in other areas and looking back I would think, 'Why didn't I think of that?' We gather all the information and I know that going back into your situation you're going to use ideas from this case and that case for the client. The discussion at the end of the case studies really, really helped me because I realized that some of things that I have been doing

can be improved...

- *(I) learnt something new about the internet and met new colleagues.*

ADDITIONAL INFORMATION PARTICIPANTS WANTED

When asked what additional topics they would like to see addressed in future ECHO sessions, respondents highlighted their desire for additional information on communicable, non-communicable, and neurological diseases, such as autism, cerebral palsy, and sickle cell; supplementary guidance on communicating effectively; maternal issues; newborn and early childhood screening; and antenatal, perinatal, and early childhood care. Concerns were raised about organizational challenges posed by the implementation of the tools, and the need to strengthen collaboration and the adaptation of a team approach to the treatment of children and families suspected of developmental delays.

Participants further expressed the desire for additional information on referrals, including common barriers to referrals and suggestions to overcome said hinderances in low-resource contexts.

LESSONS LEARNED

The Jamaica NDS ECHO effectively met its goals of strengthening the capacity of healthcare providers to better handle the neurodevelopmental concerns linked to the Zika outbreak. The programme was designed to provide continuing education on topics related to NDS and to further support Master Trainers in training other healthcare professionals in Jamaica, and participants in AAP's evaluation have attested to the sessions doing so. The programme also served to forge novel connections with healthcare providers and boost participants' confidence in their roles as NDS Master Trainers.

Despite the provision of laptops and modems under the USAID ASSIST Project, the ECHO sessions' attendance rates were challenged by connectivity issues faced by Master Trainers, particularly in rural areas. Additional challenges emanated from the inconvenience of the scheduled meeting time for some healthcare providers, as well as the difficulty in recruiting volunteers for each respective ECHO session.

Based on the success of the NDS ECHO and other ECHO programs in Jamaica, the MOHW expressed interest in sustaining and integrating the efforts in the country by becoming a central administrative hub for ECHO programs in Jamaica. In this role, the MOHW would engage the Regional Health Authorities (RHAs), agencies, and related organizations that make up the public health system to strengthen capacity for healthcare delivery across the island. Using the ECHO platform, public sector healthcare providers throughout the country would have access to the expertise of the central MOHW and subject matter experts without having to travel and, in some cases, refer patients. Healthcare providers can connect via their Smartphones, laptops, or other computer systems. By becoming a centralized hub, the MOHW could use the ECHO platform to educate community health workers, nurses, midwives, public health nurses, and other health providers in a vast array of health topics.

In anticipation of assuming the role of ECHO Hub, the MOHW co-facilitated an ECHO Immersion Training with the AAP and ASSIST during June 25-28, 2019 in St. James, Jamaica with 37 stakeholders. The workshop aimed to teach the principles of the ECHO model, to review fundamental skills necessary for ECHO session facilitation, and to present best practices in establishing and executing the ECHO curriculum and case form development. The workshop reviewed the ECHO experience in Jamaica to date, and through interactive activities that probed participants to reflect on topical issues in their contexts, participants discussed future opportunities for the ECHO in Jamaica. In addition, the AAP provided the required immersion training and technical support required to help the MOHW sustain

the ECHO programme in Jamaica. ASSIST also procured and delivered 60 laptops to the Phase I and 2 facilities supported by the project, to facilitate the staff's participation in the NDS ECHO, as well as ECHO equipment to be utilised in the ECHO Hub. Through a loan from the Inter-American Development Bank, the MOHW has also been able to secure staff for the proposed ECHO Hub. This is a promising development for the sustainability of ECHO model in the country.

The Jamaican Ministry of Health and Wellness launched the second phase of the NDS ECHO programme in November 2019. The second phase includes a ten-session series featuring topics such as referral to specialist care, early stimulation, and team approaches to treatment. As of January 2020, there have been three successful ECHO sessions administered by the MOHW.

For more information:

USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project
University Research Co., LLC • 5404 Wisconsin Avenue, Suite 800 • Chevy Chase, MD 20815-3594, USA

This case study was made possible by the support of the American people through USAID. The contents of this case study are the sole responsibility of URC and do not necessarily reflect the views of USAID or United States Government.