

Learning Question 2: *What conditions or factors successfully facilitate the institutionalization and/or implementation at scale of good practices that improve health system outcomes, and why? What are lessons learned regarding planning for sustainability and achieving results at scale?*

Institutionalizing evidence-based, responsive care for women and children affected by Zika

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Context

When the Zika emergency hit Latin America, health systems were not prepared to effectively detect, prevent, or treat Zika infection in pregnant women and children, despite the devastating consequences on fetal development. Health systems lacked national guidelines on how to prevent and manage Zika; health workers were not trained in how to diagnose, prevent, or manage the disease; and supply chains of Ministries of Health were not organized to provide condoms as part of prenatal care.

During 2017-2020, as part of the United States Agency for International Development (USAID) response to the Zika virus epidemic in Latin America and the Caribbean (LAC), the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, implemented by URC, applied continuous quality improvement (QI) and collaborative learning methods to strengthen prenatal care, newborn care, and care and support for women of reproductive age and children affected by the Zika virus during their mother's pregnancy. USAID chose its global health systems strengthening mechanism ASSIST as the most appropriate vehicle for USAID's Zika service delivery technical support in LAC because the project had worked previously in most of the affected countries and had established strong working relationships with local health care improvement experts; leveraging an existing mechanism also facilitate rapid mobilization.

Health systems in the affected countries faced similar challenges, which required integrated learning across all programs. ASSIST's strategy was to organize regional improvement collaboratives to test innovations, share proven methodologies, and quickly scale activities to improve prenatal care, newborn care, and Zika care within and across the participating countries.

In each supported country, the USAID Mission played a critical role in coordinating the activities of all USAID implementing partners to avoid duplication and ensure efficiency. USAID Missions and the LAC Bureau in Washington ensured that USAID Zika investments were well coordinated with those of other donors such as UNICEF and the Pan American Health Organization and that key learning, findings, and tools developed were shared regionally and in each country.

In the first phase of the work, 292 health facilities in the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua were targeted by their Ministries of Health to participate; in the second phase, activities in the original countries were expanded to new facilities and new Zika care and support improvement programs were launched in Ecuador, Paraguay, and Peru as well as in five countries in the English-speaking Caribbean. This case describes the Zika care and support improvement work in the eight Spanish-speaking countries.

Activity Description

The Zika Care and Support Collaborative engaged over 400 QI teams in the same number of health facilities in the eight assisted Spanish-speaking countries in the LAC region. Participating facilities were selected by each Ministry of Health (MOH) to focus on geographic areas in the country with the highest prevalence of Zika infection. QI teams were formed and trained by URC in partnership with the MOH in each participating country and at the regional level, to support coordination of care. These teams improved case detection and care and support for newborns and children diagnosed with microcephaly or Congenital Syndrome associated with Zika virus (CSaZ), including providing psycho-emotional support for the families.

The objectives of the Care and Support Collaborative were to:

1. Increase the identification and location of children with microcephaly or other manifestations of CSaZ beyond those infants born in health facilities and including those born in facilities but later "lost to follow-up";
2. Link those cases to appropriate health facilities and referral facilities; and
3. Provide complete and integrated care to all children affected by Zika infection and provide psycho-emotional support to families.

In addition to the facility-level QI activities, URC coordinated a regional strategy that benefitted all eight countries by identifying and training case managers to improve access, care quality, coordination of care, and completion of all recommended assessments for children affected by microcephaly and other consequences of Zika infection, including psycho-emotional support to parents and other caregivers.

In some countries, case managers were drawn from "linkage personnel" or "linkage teams" which already existed; this served to strengthen the existing health system governance structure by establishing integrated service networks. Each country established its own profile for case managers and provided training in the competencies defined for their role.

Another critical area of ASSIST's focus was to work with each MOH to strengthen inter-institutional coordination. To provide all services needed by Zika-affected children, it was necessary to establish inter-institutional coordination with all required providers (university hospitals, specialty hospitals, private physicians and clinics, religious organizations, and non-governmental organizations (NGOs)) through formal agreements to provide services and support. To enable children and families to receive grouped services, teams arranged transportation for children, mothers, and other family members.

In each of the eight countries, ASSIST supported the MOH to review, update, and develop norms and protocols, especially for the care and management of infants and children affected by Zika, psycho-emotional support, growth and development, and developmental stimulation. New registries of cases and databases were developed in each country. Country teams developed a list of all the assessments and services that a Zika-affected child needed by age through at least the first two years of life and in some countries, longer. In several countries, teams developed a special card for Zika-affected children that listed needed assessments and services to facilitate documentation and monitoring of care.

ASSIST supported numerous trainings (both in-person and using a virtual platform developed by the project) for health care providers, reviewing topics covered by the other ASSIST-sponsored improvement collaboratives on prenatal care and newborn care, such as Zika diagnostic tests in mothers and infants, correct measurement of head circumference in newborns, and QI methodology, as well as new topics such as manifestations of CSaZ, psycho-emotional and psycho-social support, growth and development, infant neurodevelopment and neurodevelopmental delays, developmental assessments, and basic infant stimulation and physical therapy. These trainings typically included MOH trainers responsible for replicating the trainings for additional personnel. As part of the collaborative improvement methodology, each ASSIST country team organized learning sessions for the Care and Support Collaborative, either as stand-alone sessions or in conjunction with the Prenatal Care and Newborn Care Collaboratives. In these sessions, teams shared effective change ideas and presented testimonial videos on the work of case managers or from families with a case of microcephaly or CSaZ to sensitize participants. These learning sessions served as the primary mechanism for identifying effective changes and scaling them up across the health system.

ASSIST also worked with the MOHs to develop job aids for health care providers in the form of flipcharts, pamphlets, cards, posters, pocket guides, and others, as well as educational materials for women and families. Flipcharts addressed care, referral, and counter-referral of Zika-affected children; the steps in psycho-emotional and psycho-social support; infant development milestones; and guidance for early stimulation by age group. The project distributed kits for developmental assessment and early stimulation to health facilities, together with instructions on use. The project also distributed early infant stimulation kits for families with Zika-affected newborns, some donated by UNICEF and others assembled by ASSIST. The project installed television sets to show Zika-related videos in health facility waiting rooms, covering topics such as Zika prevention, care in pregnancy, and the importance of early infant stimulation.

To prepare health systems to sustain the USAID investments in Zika prevention, care, and support, ASSIST facilitated a process of sustainability and transition planning in each country to ensure that processes and resources needed to sustain activities which country stakeholders identified as needing to be sustained were identified. During stakeholder meetings, ASSIST facilitated the conversation about what entities in the country would be responsible for sustaining priority activities supported by the project and identifying the resources, units, and specific individuals responsible for sustaining those activities, as well as how interventions could be incorporated into existing MOH structures and processes.

Activity Impact

The project's emphasis on ensuring complete and integrated care of children affected by Zika provided a concrete example to country health systems of how services could function as integrated networks and contributed to overall health system resiliency in the face of a health crisis.

ASSIST's work supported improvement in multiple health system components, including cross-sectoral coordination, governance, local ownership, information, human resources, integration of health system actors, and efficient use of medical products. The Zika emergency provided an opportunity for health systems to better organize and make more visible their response to children with disabilities, which was practically invisible, despite the enormous social impact. The processes established to identify, locate, register, link to care, and follow up CSaZ cases could be used in the future for other congenital conditions.

In those countries which had had recent reforms to the organization of the health system, such as El Salvador and Honduras, where the governance model was not by programs but rather by care processes and where services were organized in integrated networks, ASSIST was able to develop a concrete example of what integrated care for children affected by Zika could look like. Through the Care and Support Collaborative, teams were able to implement governance and coordination roles that had been proposed in health sector policies but never fully operationalized.

ASSIST also supported health workers to establish physical spaces for care of children through early stimulation, rehabilitation, and physical therapy, either through renovating existing areas or establishing new ones. The provision of furniture and infant stimulation equipment to health workers and therapists as well as to mothers and other family members benefitted both affected children and other children.

Likewise, hospitals expanded their coverage of patients with CSaZ with early infant stimulation services by renovating or furnishing new rooms or spaces for infant care as early stimulation and physical therapy rooms. ASSIST and UNICEF donated furniture and other materials to equip these rooms in hospitals and other facilities. Health workers were given kits for developmental evaluation and early stimulation. Kits were also provided to families in some countries to continue the same exercises at home that they learned at the health facility.

In some countries, ASSIST leveraged programs for Kangaroo Mother Care and care of premature infants, which often had specialists needed by children affected by Zika. Trainings strengthened services for growth and development of all children. Mothers, fathers, and other family members of affected children were linked to support groups and parent workshops. Client satisfaction with these services was evidenced by numerous testimonials given by parents and family members who were grateful for the attentive and respectful care received.

As a result of these interventions, health providers made efforts to explain to the families of affected children, the importance of early stimulation, emotional connection, and communication. Providers showed families how to perform stimulation and physical therapy exercises. Families began to understand the value of stimulation and were better able to manage children with microcephaly and CSaZ. Home visits were used to teach parents stimulation activities and follow up on children's progress.

Similar to the approach to early stimulation, teams arranged for simplified training in physical therapy to all staff so that they would be able to provide some support to children and families, even in the absence of professional physical therapists.

An important impact of the Zika care and support work in all countries was to elevate the issue of child disability in general and call attention to the need for integrated care to meet all of the child's needs, a largely hidden issue in most countries despite the enormous social cost of children's disability. The processes established to identify, locate, register, link to services, and follow up on delivery of required services were useful not only for cases of microcephaly and CSaZ but for other congenital defects as well.

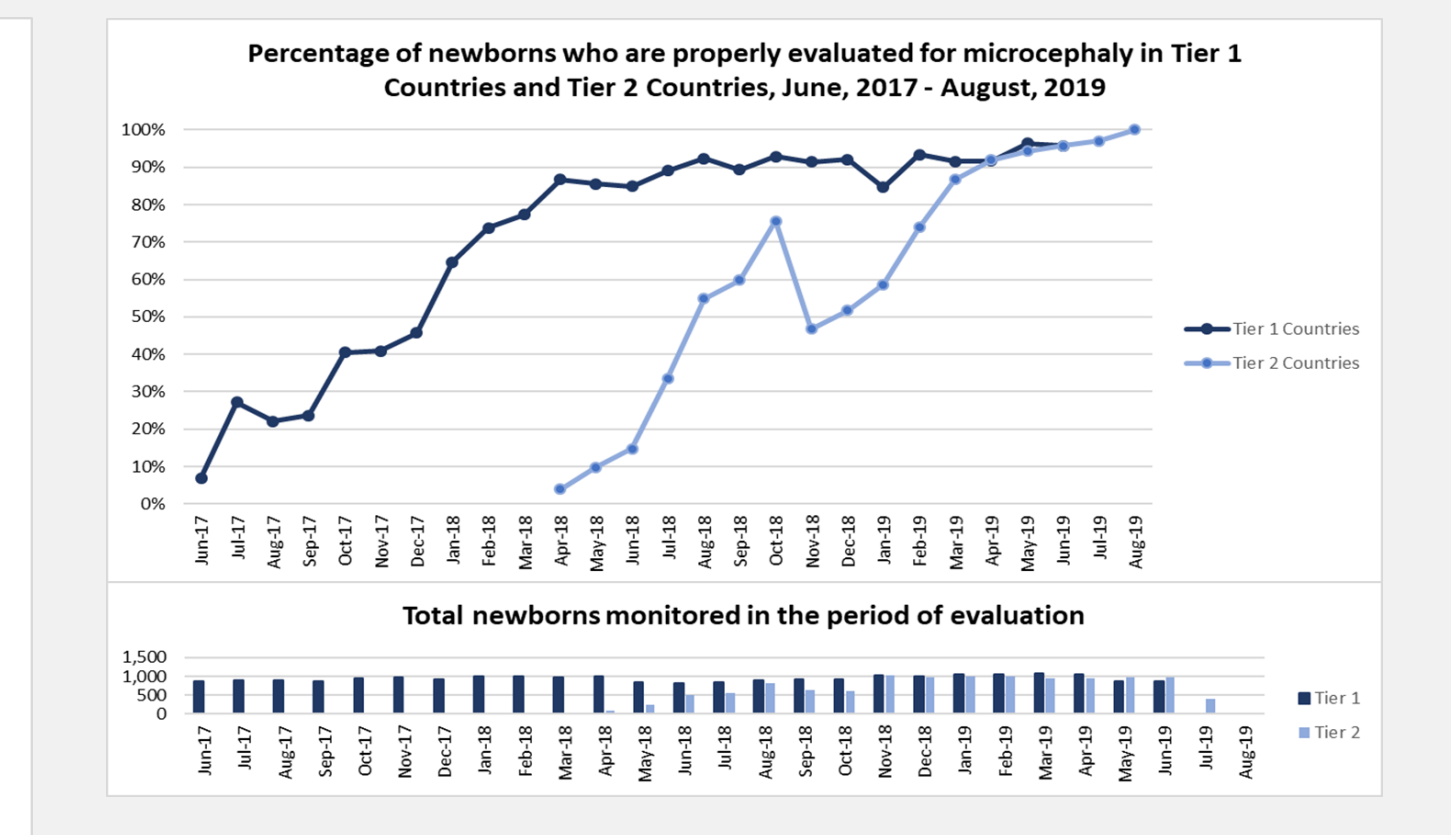
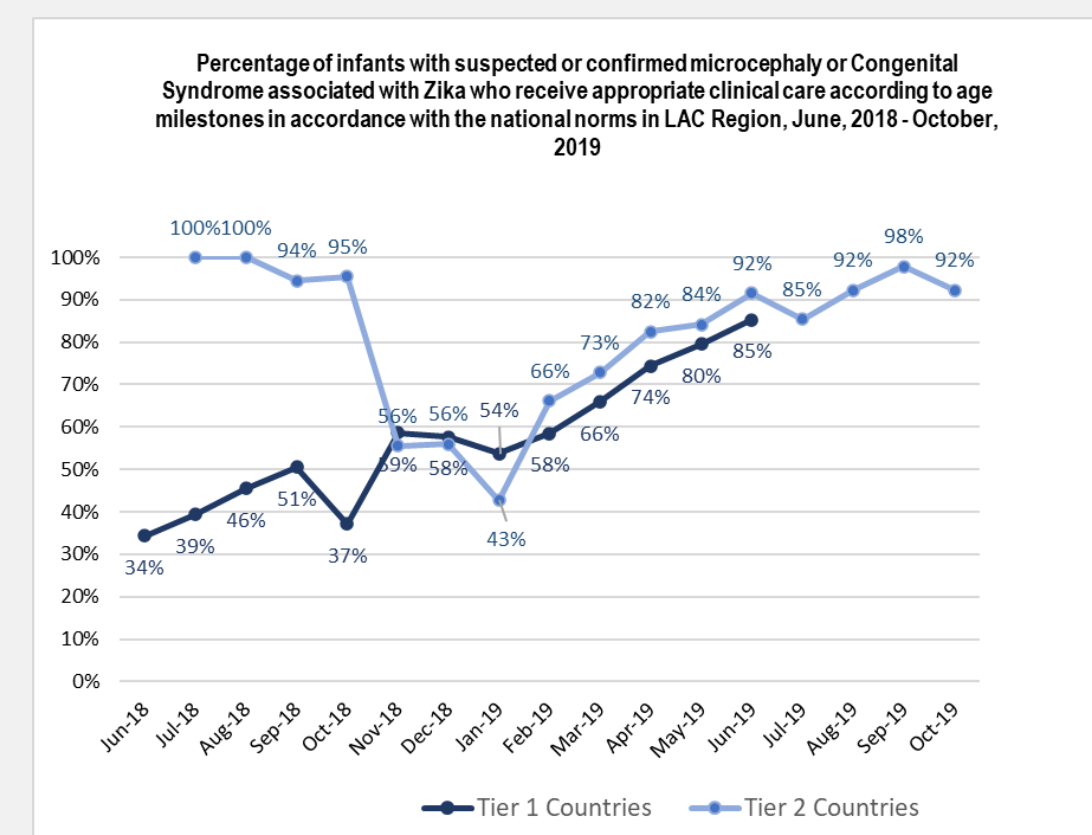
The project left behind physical spaces for the follow-up of children in terms of early stimulation, rehabilitation, and physical therapy rooms and prompted staff to renovate existing spaces and furnish new ones. These physical therapy and stimulation rooms are available for all children that seek care in these hospitals and health centers. The sharing of lessons and effective practices among those responsible for these rooms through the collaborative also served to strengthen these services.

Evidence

The Care and Support Collaborative used as its primary indicator of effectiveness, the proportion of microcephaly or CSaZ cases that received all the necessary services as defined in each country by the MOH. The figure below shows the consolidated results for this indicator for the two groups of countries from June 2018 - June 2019 (additional data points were available for Ecuador and Peru). In the four Tier 1 countries (Dominican Republic, El Salvador, Guatemala, Honduras), the proportion of microcephaly or CSaZ cases that received adequate care gradually rose from about 35% at baseline in June 2018 to 50% by September 2018, since teams were initially focused on identifying, locating, and linking cases to health services. As the collaborative developed, ASSIST country teams began to place greater emphasis on more precisely measuring that at least 80% of required services were provided in a timely way to achieve the indicator. In Honduras, for example, verifying the dates and locations of the services received by each child proved to be difficult, and the team realized when their indicator performance seemed to be high, teams were just measuring referral to services and not receipt of comprehensive care by age.

The three Tier 2 countries (Paraguay, Ecuador, Peru) began measuring these indicators only about a month after Tier 1 countries had done so. While performance seemed initially very high, this was in fact an artifact of the small number of microcephaly and CSaZ cases initially identified in those countries. As the number of cases increased, the proportion of cases receiving adequate services dropped to 43% in January 2019 and then began to climb and surpassed performance in the Tier 1 countries.

Other evidence for the success of ASSIST's intervention in the eight Spanish-speaking countries is the increase in the proportion of all newborns properly evaluated for microcephaly. The steeper rise in improvement in the Tier 2 countries speaks to the value of shared learning. Successful change ideas and procedures developed in the Tier 1 countries over time were shared at start-up with the Tier 2 countries, allowing the latter to make more rapid improvements.



Facilitators

Key facilitators of success included:

- Adopting a QI approach to introduce new services for the prevention and management of Zika infection which facilitated rapid achievement of results.
- A multi-country, regional approach that leveraged continuous learning in the initial countries to benefit work in the later countries greatly facilitated the achievement of results and scale-up of effective practices.
- USAID's effective coordination of its partners' inputs at the regional and country levels through establishment of regular Zika coordination meetings and multiple Zika-related technical working groups made the Zika response efficient and effective. USAID's effective coordination of its response with other donor inputs to the Zika epidemic at the global and country levels also contributed to the efficiency and effectiveness of its Zika response.
- Channeling Zika emergency funds to an existing global mechanism like ASSIST, which had prior work experience in many of the affected Latin American countries, allowed for a very rapid mobilization of the Zika service delivery response.
- This was a time-limited activity that required joint planning with each MOH for sustainability from the beginning. The open discussion of resources that could be utilized by the country after the project to sustain improved service delivery practices and results achieved during the project's implementation, including ongoing support to health care worker capacity building, reproducing clinical guidelines and job aids, and documentation in medical records, were critical to sustainability.

Challenges

One unexpected challenge that the project faced in Peru was that the central level of the MOH did not recognize Zika as a national health priority, and as a result, some health workers perceived the work of the project as an additional burden rather than as part of their job. Some in the MOH argued that assuring quality care to the majority of mothers and newborns was more important than focusing only on the needs of children affected by Zika. The national MOH in Peru thus directed the project to work directly with regional health authorities in two regions which had a high prevalence of Zika infection and microcephaly, and which were interested in working with ASSIST. Peru was the only one of the eight Spanish-speaking countries in which ASSIST worked only at the regional level and not at the national level.

Another challenge encountered by the project was the decision by the Government of Nicaragua to suspend USAID-supported Zika technical assistance to the Ministry and MOH facilities in April 2018. ASSIST technical support had been provided to the Nicaraguan MOH starting in May 2017 and benefitted health care providers in 65 facilities located in five departments of the country (Managua, Carazo, Masaya, Granada, Nueva Segovia). ASSIST technical assistance to the MOH focused on organizing and cleaning existing data on pregnant women infected with the Zika virus, as well as babies born with microcephaly. This involved collating lists and records at epidemiology directorates, the national laboratory where the blood samples were processed for confirmation of cases, and health services where cases of pregnant women with Zika were reported; developing a pathway for management of cases of children exposed to Zika virus infection and affected by CSaZ; and preparing the national guide to provide care for pregnant women with Zika and for CSaZ surveillance and care, including the definition of quality standards and indicators to monitor compliance. While ASSIST Zika technical support to the MOH ended in April 2018, the project continued to provide technical support through June 2019 to faculty and students at seven public and private universities to integrate teaching about Zika prevention, diagnosis, care, and support in medical and nursing school curricula.

Lessons Learned

- This project demonstrated that it is possible to productively apply QI methods to enhance services in a health emergency such as Zika. Time series charts were well understood by health workers and were even seen as motivating. However, for new topic areas like care for children affected by Zika and psycho-emotional support, the indicators used were not always well understood, and stronger efforts to socialize indicators among health workers are needed. The regular visits of ASSIST coaches to health facilities were highly valued, especially at the primary care level where many health workers feel like they are alone and don't receive much system support or opportunities for continuing education. QI methods and the collaborative approach go beyond training to create a conducive environment to support good performance (coaches and facilitators, QI and access teams, case managers) and teamwork (team meetings and learning sessions).
- When introducing services for a new health condition, as was the case with Zika, develop guidelines and instruments to support referral and counter-referral between levels of care and support coordination among the different services and personnel within the same facility, including flowcharts and internal care pathways to show connections with all relevant clinical and non-clinical staff. A new service requires strengthening connections and integration between the different levels of health care to ensure access to services and continuity of care, visualized in networks, communication pathways, and documentation tools such as lists of affected children, needs plans, tables of required services by age, and booklets to track services received by individual children. Health sector reform processes can be leveraged to reinforce the organization of services in networks and support QI as a cross-cutting health sector reform strategy.
- Implement the model of access teams and case managers and take advantage of existing roles (such as network coordinators or linkage personnel) to make operational the connections between different levels of care and assure integrated care for high-risk population groups: children affected by Zika, children with other congenital abnormalities, premature infants, and others.
- Establish strategic alliances with other health and social sector actors (other ministries and state institutions, universities, NGOs, churches, and private providers) that provide services at the local level as well as with international cooperation agencies, that can support interventions needed to provide comprehensive care.
- Strengthen the development of health worker capacity through training plans for both specialized and non-specialized staff. Use virtual modalities in training, including online courses, telementoring clinics, and online discussions. Use in-person training to develop specific competencies and add new content (e.g., psycho-social support and communication, early stimulation, physical therapy) to existing workshops. Organize exchange/observation visits and rotations among health professionals who provide care to affected children, assess development, provide early stimulation, psycho-social support, and physical therapy. Design, field test, and reproduce job aids for health workers, especially on new topics.
- Involve the community and strengthen the capacity of families and not only of health workers. Elevate the model of primary health with a protagonist role for community leaders, local providers, health promoters, and personnel involved in home visits to develop their capacity to identify, locate, link, and provide follow-up to vulnerable children. Engage community organizations such as health commissions and committees, development councils, emergency committees, and others to identify the true perceptions and needs of the community for care of vulnerable children.
- Improve the knowledge of existing community workers and empower them to demand access to quality services (rights-based approach, social audit). Involve men and other family members, not just the mother, in interpersonal communication and community-based rehabilitation, such as support groups, clubs, home visits, and others. Develop strategies to sensitize, inform, communicate, educate, and change behaviors in the community, with models of social protection to support change in favor of the most vulnerable.

