



Dr. Elizabeth Mateo, Epidemiologist of the Juan Pablo Pina Regional Hospital, looking for children affected by the SCaZ who were born in the hospital and did not return to the follow-up visit.

Photo Credit: Melida Núñez, ASSIST Program Officer-Region I - Valdesia de Salud

## Case Study

# ENSURING THE FOLLOW-UP OF CHILDREN AFFECTED BY ZIKA IN HEALTH REGION I, DOMINICAN REPUBLIC

### OCTOBER 2018

This case study was authored by Mérida Núñez and Dr. Viery Franco of University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) through its Applying Science to Strengthen and Improve Health Systems (ASSIST) Project, which is made possible by the generous support of the American people through USAID. The USAID ASSIST Project is managed by URC under the terms of Cooperative Agreement Number AID-OAA-A-12-00101. URC's global partners for Zika activities include: American Academy of Pediatrics; FHI 360; Institute for Healthcare Improvement; and WI-HER, LLC. For more information on ASSIST activities, please visit [www.usaidassist.org](http://www.usaidassist.org) or write [assist-info@urc-chs.com](mailto:assist-info@urc-chs.com).

## **SUMMARY**

The follow-up of children affected by Congenital Zika Syndrome and Microcephaly is one of the most important aspects in the evolution of these children. The USAID ASSIST Project has provided technical assistance to the personnel (Doctors, Nurses, Psychologists, and Educators) of the hospitals selected by the Ministry of Health and the National Health Service, for the training of Quality and Access Improvement Teams, which have been successful in improving access and follow-up of children affected by Congenital Zika Syndrome. This case study describes the process for the creation of a Service Access Improvement Team for affected children and their families in Health Region I of the Dominican Republic, and how it was possible to identify 26 cases in the three provinces that make up the region, of which 74% have received specialized care and 19% are in follow-up in the Region's units.

## **INTRODUCTION**

The Dominican Republic was one of the countries that confirmed the local transmission of the Zika virus. At the beginning of 2016, the Centers for Disease Control and Prevention reported several blood samples from an equal number of suspected cases that turned out to be positive for the Zika virus. The response to the infection by the Zika virus was implemented by the Ministry of Public Health through the General Directorate of Epidemiology, which allowed the detection of the virus in January 2016.

With the support of USAID and the PAHO, resources were mobilized for the preparation of normative instruments which were not reviewed and/or updated until the arrival of the USAID ASSIST Project in the country. The Ministry of Public Health, in its role as manager and leader of the national response to address the epidemic, and the Directorate of Epidemiology have created a technical team with which they have worked on the action lines prioritized by the Project.

Several provinces were reported where the highest number of suspected cases of Zika virus infection was clinically diagnosed, among which was San Cristóbal, which belongs to Health Region I Valdesia whose Juan Pablo Pina Regional Teaching Hospital, located in the municipality seat of the province of San Cristóbal in the south of the country, services a population of 624,820 inhabitants, although it receives patients from throughout the region which comprises three provinces and the southern coastal area of the country; it assists an average of 342 deliveries per month, and is one of the 17 hospitals selected by the Ministry of Public Health to provide assistance to the Zika cases that may arise.

## **BACKGROUND**

The USAID ASSIST Project initiated meetings with the National Health Service and the Ministry of Public Health, as well as with the Directors of the different Health Regions, to discuss the prioritization of regions and establishments to be selected; said selection was made considering certain factors, such as:

- Increase in the incidence of suspected cases of Congenital Zika Syndrome (CSaZ)
- Increase in Guillain-Barré syndrome cases
- Manifestation and incidence of Microcephaly

Taking these factors into account, awareness activities are initiated at the hospital level, through meetings with the center's management authorities, during which are presented the project's work plan and the type of assistance that it will offer to contribute to the improvement of the service offered, which would benefit the identification of cases. Training sessions for the personnel on duty in the Prenatal, Neonatal, Post-Obstetric Event, and Family Planning areas are scheduled and provided. The topics included in these training sessions provided through workshops were based on: Knowledge of Zika aspects at the World and Country Level, Counseling in the Zika context, and Implementation of the Improvement Model whose purpose is to:

- Contribute to the development of competencies in health personnel to provide quality care.
- Promote and support the health care quality improvement process in the hospitals where the ASSIST Project is having an impact through the creation of Quality Improvement Teams.
- Because of these activities, quality improvement teams are formed in the different areas of influence of the Project in order to: identify gaps and issues, contribute to closing gaps, and improve the quality of the service offered. The goal of the access improvement team is to achieve the recruitment of these children by means of the development of the applicable links to integrate said children and families into the applicable services. The network is comprised of representatives of the regional health service Valdesia or Region I, an intra-hospital case manager, and a community case manager, representatives of the Dominican Rehabilitation Association in San Cristóbal and of the different specialties that can offer care to these patients.

#### **Specific Objectives:**

- Identify gaps in the region's health system for access to services by the affected children and their families.
- Create an Inter-Institutional Regional Improvement Team to follow up on CSaZ cases and their families.

## **START OF WORK IN REGION I**

The Zika Project's activities in the Juan Pablo Pina Teaching Regional Hospital began on December 2016, with awareness meetings with officials and managers of the Maternal and Child areas in order to learn about the situation of the cases identified or which were born in the hospital; these meetings highlighted a lack of communication between the reference centers and the counter-reference that the hospital should receive in response to the cases referred.

22 cases were identified in the province of San Cristóbal, of which 2 died and 20 are in the process of being integrated into a network follow-up system, where patients and their families can readily have access to clinical and psycho-emotional care services. Currently, through the intrahospital manager in the Access



La COP del proyecto en reunión con la Dirección del hospital y el personal asignado a este.

Improvement Team, 5 of these cases have been located and integrated into the services, and the team's efforts are directed at achieving progress with the other 15 cases that still receive care in other health centers outside the province.

The biggest gaps identified by the team that supports the collaborative initiative of care and support are the correct identification of existing cases, as well as the creation of a registry that includes the children receiving care in the public and private health sectors, and the challenges in order to facilitate most of the services required by the children and families affected by the situation, given that the requirement is of a multidisciplinary and inter-institutional nature.

## ADDRESSING GAPS IN ACCESS TO CARE

In the hospital, several training sessions were offered to the personnel from the areas of influence in the Maternal and Child context, specifically in Prenatal Care (APN), Perinatology, Post-Obstetric Event Care (APEO), Family Planning, and the Psycho-Emotional Care and Support aspect. These training sessions covered the topics of Zika, Counseling, Quality of Service, and Neonatal Screening. During these training activities were identified existing gaps that limited the provision of a quality service, and action plans were prepared that included one or two improvement objectives which would be followed up by their own personnel, who are responsible for incorporating these improvement actions into their daily work.

At the start of the Zika epidemic in the country, several cases took place in the different provinces, and San Cristóbal was one of the locations with a high incidence of pregnant women affected by the Zika virus. As a result, several of these newborn babies were born with the complications associated with the virus. Due to the start of the actions of the USAID ASSIST Project at the Juan Pablo Pina Hospital, some cases were detected in the hospital at the time of birth, in which the mothers received emotional support, and their children were referred for care and follow-up in a specialized and national reference center, such as the Dr. Robert Reid Cabral Children's Hospital (HIDRRC), to receive initial care. However, in some cases this made it difficult for these children to attend the following medical check-up. In addition, the Juan Pablo Pina Hospital was unable to verify their attendance and to contribute in some way to the performance of the specialized studies required. They were also unable to facilitate follow-up and specialized visits in the center or through the existing institutions in the province.



Dr. María Elexia Bautista, Director of Health Region I, Valdesia, in a meeting with the members of the Regional Improvement Team highlights the importance of the follow-up of families and children affected by Microcephaly and CSaZ.



Group work in a training session.



The care offered had limitations in what concerns following the steps that have to be completed for quality care, since there was no specific roadmap of the steps to be taken by the mother when she visited the service with her child. At the beginning, the steps included the following:

- Upon admission, the child was received in the Perinatology area, where the Screening and admission was performed.
- After identification, the Perinatologist took a blood sample and the child was transferred to the Department of Epidemiology, where the records were taken and the blood sample was sent to the Provincial Directorate for them to send it to the National Laboratory. The referral was made by Perinatology, based on the need of the child. Psycho-Emotional support was included for the most critical cases.

However, the procedure performed by the Provincial Health Directorate was unknown. They did not receive feedback on the cases and the tests sent, the results received were very few. The subsequent follow-up for Growth and Development was only for the longitudinal aspect, and the follow-up of the patient was interrupted. This situation, identified through the future visits of the mothers who came to the hospital due to a health condition in which the patient was admitted, but the history of the patient was unknown, since no response was received from the referral made.

After the analysis of the problem, due to this situation, coordination activities were performed to create a quality improvement team in terms of improving access to services, including psycho-emotional care and support.

## ACTIONS

The goal of the access improvement team in Region I was to: improve access and follow-up of children affected by Congenital Zika Syndrome during a period of three months, through an strategy of implementation of a critical referral path of cases from the Primary Care Units (UNAP) to the Juan Pablo Pina Hospital with the cooperation of the Area Managers and Coordinators of the Regional Health Service (SRS).

To achieve this goal, some ideas for change were implemented, which contributed to the improvement of the follow-up actions :



Work meeting with a part of the improvement team for the adjustment and socialization of the improvement objective proposed.

The ASSIST Program Officer, together with the hospital's Field Technical Facilitator, visited for 3 days the different referred centers in order to identify the geographical location, the type of services offered, and the requirements for the admission of children to set up a mapping of the institutions which offer support services in the province.

- Meetings were held with 3 institutions which provide care and support in the province: the Rehabilitation Center, the National Health Insurance, and the National Institute for the Comprehensive Care of Early Childhood. They included visits of each institution in order to

discuss and celebrate agreements to receive the referred cases and to facilitate access to the service.

- A record ledger was delivered to the Hospital Case Manager in order to log the follow-up to appointments and referrals of the children located in the follow-up.
- The active capture of cases through the tracking of the different areas in Region I was requested in order to locate the other cases in close cooperation with the Area Managers of the Regional Health Service.

For the implementation of these ideas for change, coordination meetings and follow-up actions were performed with the Regional Health Service through the Regional Maternal and Child Coordinator, the Area Managers in the province, and the Project Program Officer.

## RESULTS

The results of these activities are evidenced by the empowerment of the service providers involved in the improvement.

Through institutional mapping, it has been possible to achieve a more coordinated relationship of the existing institutions with which agreements have been reached to facilitate the follow-up of these children without being required to travel long distances to have access to the service. In addition, a commitment has been achieved to offer cost-free care in the event that the family does not have the financial resources to pay for the service, in particular in cases of physical therapy or other specialized services. By visiting the homes of these affected families to verify their situation, it has been possible to identify a cohort of real cases which would benefit immediately from the coordinated services.

The Rehabilitation Association has been integrated into the process, and will provide physical therapy to the cases that have been previously referred to the institution. The National Health Insurance (SeNaSa) has facilitated the enrollment of children and their families in the security plan, so that they can receive their services in all areas at no additional cost. The hospital's Nutrition Department has favored the children who need the nutritional supplements without cost for the supplies.

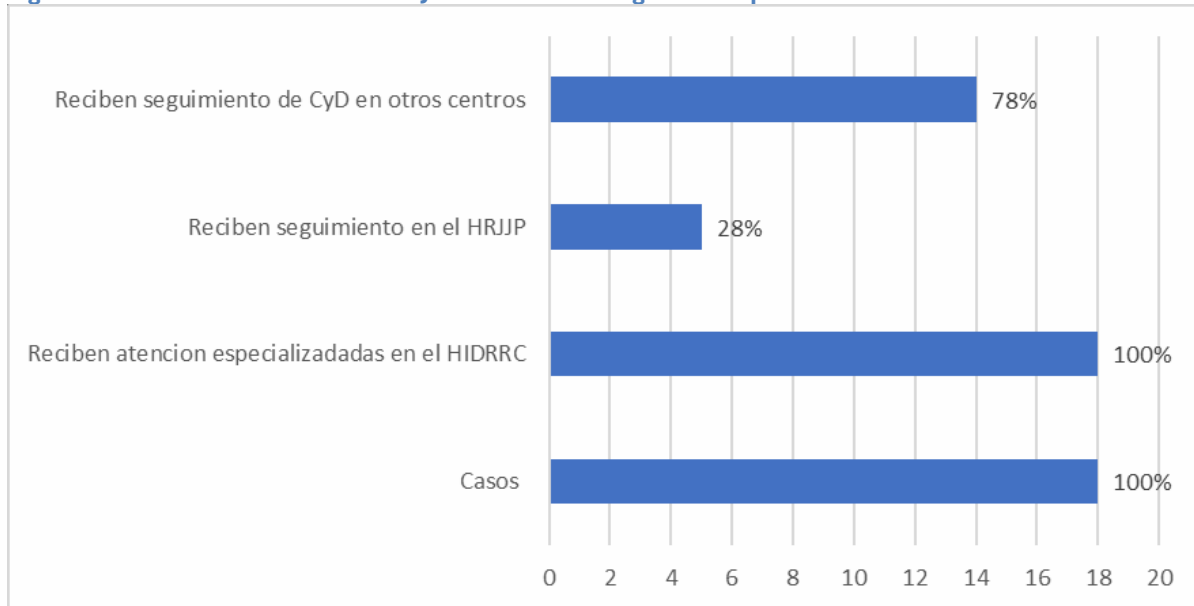
It is now possible to identify the distribution of cases for the whole of Region I, in the 3 provinces which comprise it. The region has a total of 30 cases, of which 20 belong to the province of San Cristóbal (67%), where the USAID ASSIST Project participates, 6 (20%) belong to the province of Peravia Bani, and 4 (13%) to the province of Ocoa.

The mapping of cases has made it possible to learn about the situation of each case, and to create a baseline to be able to work in the proper direction in relation to the steps that need to be taken to favor and facilitate access to the services by these children with Zika virus complications and their families.

From the 20 cases identified in Region I, 2 have died. That leaves 18 children who require follow-up; we have accomplished the goal that 100% should receive specialized care in the National Referral Hospital HIDRRC (see Figure 1). What is more important, we have accomplished the goal that 5 of the cases (28%) should go for their follow-up to the Juan Pablo Pina Regional Hospital instead of the capital.

We have also accomplished the goal that 14 out of 18 (78%) should be currently receiving grow and development follow-up in other centers in the region.

**Figure 1 Situation of the Cases in the Juan Pablo Pina Regional Hospital**



The team has systematized their experience of change, and has presented it in the national learning session for the Care and Support collaborative effort sponsored by the National Health Service and the USAID ASSIST Project in August 2018. The access improvement team, represented by Dr. Clara Quezada who is in charge of the Maternal and Child area in Region I, shared the experiences, challenges, and next steps with all the participants. At the meeting, the changes tried were explained and suggestions they considered important for implementation in other centers were made.

## **LESSONS LEARNED AND CHALLENGES**

The empowerment of the personnel and their identification with the cases found are determining factors for the success of any activity related to the improvement of the service to be offered.

The difficulties to be addressed become challenges for the follow-up of the affected children, which include:

- Regular attendance of children affected by SCaZ and/or Microcephaly.
- Inclusion of all the children affected by SCaZ to the Social Security System.
- Achieve the goal that the mothers who take their children with SCaZ to a follow-up visit in the Dr. Robert Reid Cabral Hospital and who belong to this region, should start seeking care in the hospital in their region



Dr. Clara Quezada, member of the access improvement team, SRS.

## NEXT STEPS

- Performance of follow-up visits in the hospital aimed at the development and growth of the children.
- Manage the referral of SCaZ cases which belong to Health Region I from the Dr. Robert Reid Cabral Hospital to the Juan Pablo Pina Hospital.
- Continue with the strengthening of psycho-emotional support actions in the Juan Pablo Pina Hospital, and motivate non-psychologist providers to get training on psycho-emotional support through an online or in-class course in order to be able to offer the service to the affected mothers and families.
- Prepare the providers at the Juan Pablo Pina Hospital to receive all the SCaZ cases in the Region.
- Include all the SCaZ and/or Microcephaly cases in the Growth and Development visit at the Juan Pablo Pina Hospital.
- Continue with the active search of cases in the Region through coordination with the Peravia Provincial Directorate and the Regional Health Service.
- In coordination with the person in charge of the regional Maternal and Child area, the access improvement work will be replicated in the Nuestra Sra. De Regla Provincial Hospital, which belongs to Health Region I, but is located in the province of Peravia, where the Regional Health Service has decided to extend the implementation of the improvement model for the Zika cases in said province.

*For more information:*

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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.