FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL

ANNEX 2 SUMMERY OF THE MAIN ACCESS BARRIERS

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TABLE 1. Diagnosis		
Diagnosis Barriers	**Root causes**	**Solutions/Mitigation strategies**
Heavily centralized diagnostic process	- Not enough surveillance laboratories in endemic areas - Epidemiological surveillance of Chagas, focused on care of the individual, is not a priority - Lack of political will - Chagas is an invisible disease	- Planning and dialogue with authorities for inclusion of Chagas diagnosis in functional laboratories - Awareness plan aimed at local, state and national political authorities - Generate evidence at all levels on Chagas: newsletters, situational rooms
Lack of electronic reporting and obligatory notification of chronic cases	- Lack of assigned Human Resources and/or available resources don't fulfill this function - Lack of awareness and training on the importance of Chagas disease - Lack of a training plan at the central level - Lack of economic resources for the implementation of a training plan	- Awareness-raising and training plan at local level - Monitoring and oversight plan for the fulfillment of commitments - Strengthen the POA for planned activities - Obligatory notification of chronic and acute cases: finalize the processes that have already been initiated - Promote inter-institutional projects with Ministry of Health leadership
Lack of diagnostic confirmation and other administrations of blood banks	- Blood banks' legal mandate is to screen blood components - Weak follow-up of reactive donors - Absence of a standardized protocol for follow-up of reactive/rejected donors	- Strengthen communication between the National Blood Bank Program and the National Health Laboratory for the confirmation of reactive donors - Creation of a standard national protocol for follow-up of reactive/rejected donors
Lack of a quality control program	- Lack of guidelines for quality control - Lack of a regional reference laboratory - Lack of planning to seek alternatives	- Design a comprehensive quality control program - Plan in conjunction with PAHO/other agencies/organizations/local institutions
Lack of a clear reference system for tests between local central health areas	- Lack of planning for sending tests	- Plan and coordinate a timetable for sample delivery at the local level, in conjunction with the Health Area
Lack of continuous training on diagnostic procedures by health personnel	- Chagas is not a priority in the systematic continuous training plan - Lack of political will - Chagas is not a visible disease	- Create and implement a training plan that includes Chagas disease - Awareness plan aimed at local, state and national political authorities - Generation of evidences in every level on Chagas: newsletters, situational analysis - Include Chagas in current awareness campaigns
Lack of equipment, inputs and suppliers at local level	- Lack of financing for laboratory equipment, reagents and supplies	
Lack of validation of rapid tests		- Validation study of rapid tests for chronic infection
Lack of a third test for discordant cases	- Absence of regional technical guidelines for discordant cases - There are no validation studies of other tests	- Planning in POA for acquisition of commercial IFA and immunoblot kits - Validation study of kits registered in the country

TABLE 2. Treatment and Follow-up

Treatment and follow-up barriers	Root causes	Solutions/Mitigation strategies
Outdated surveillance protocols and low implementation of clinical care guidelines	- Lack of financing - Frequent turnover of authorities - Lack of central level commitment and multidisciplinary participation - Lack of follow-up and updating - Lack of communication among different levels	- Periodic update and review (every 3 or 5 years) by the National Chagas Subprogram of the surveillance protocol, and implementation of clinical guidelines for the disease. Responsible: head of the National Chagas Subprogram. - Program heads support the stability of the Chagas subprogram heads. Responsible: head of the national Vector and Transmittable Disease program
Weakness in information systems	- Not compatible with clinical case definitions (e.g.,, CIE-10) - Lack of engagement with and knowledge of SIGSA; users are not involved in the design of the system - Chagas is not a political priority for authorities - The need to generate a parallel system to complete information - At the local level, there is no data input (non-compliance)	- Updating of SIGSA (national health information database) to assure availability of the updated information required by every user. Responsible: head of SIGSA
Lack of information, education and communication (IEC) on Chagas	- Lack of IEC materials (manuals) adapted for different levels - Difficulties in accessing communities (geographic, transportation) - Lack of interest and empowerment of health personnel (programs) - Lack of coordination between communities, local leaders and PROEDUSA - Lack of competent human resources (suitable profiles for those hired)	- Coordination among PROEDUSA and promotion departments of areas to meet the information and education needs of all communities on the Chagas issue. Responsible: PROEDUSA and coordinators of health promotion departments
Lack of patient commitment for adherence to treatment	- Side effects of nifurtimox - Lack of follow-up - Lack of interest and perception of the disease by the patient - Lack of proper nutrition during treatment	- Allocation of health personnel for care of patients with Chagas. The patient is duly informed and aware of his treatment. Responsible: Health District head. IEC and local program heads.
Lack of institutional empowerment for healthcare	- Lack of political will at every level - Lack of training of health personnel - Dependence on international funding for the subprogram - Multiple, competing staff responsibilities	- Appointment, by the Ministry, of personnel to form the Chagas committee at the national level to coordinate activities in conjunction with health areas. Urgent – Chagas subprogram - Programming training workshops, aimed at health personnel at different levels, managed by the health area - Creation of a technical assistance timetable, by the health area, to monitor the quality of healthcare for Chagas
Lack of BZN and its pediatric formulation	- Lack of administration/planning in the vector control program - There is no solicitation of BZN from the health programs - Lack of interest from international pharmaceutical companies	- Budget allocations for medicines and insecticides - Purchase of pediatric treatments - Decentralization of budget allocation - Administration and request of medicines from health area (BZN, NFX and pediatric formulation) to the central level ETV program. Urgent: Health Area
Lack of laboratory supplies, EKG and diagnostic tests	- Lack of planning and administration from the Health Area - Insufficient budget - Corruption of authorities - Lack of systematic, coordinated screening	- Planning/administration by the health area, jointly with NGOs and other institutions, to strengthen laboratory capacity in Chagas diagnostis and use of complementary tests. Urgent: Health Area

TABLE 3. Surveillance		
Surveillance Barriers	**Root causes**	**Solutions/Mitigation strategies**
Lack of information to take action on: deforestation, hygiene, water management, Chagas disease	- In the community, there is no person in charge of having information to take action - Lack of concern/interest - Other interests/priorities in the community	- Request help from the municipal governments to counter deforestation
Limited economic resources in the community	- Lack of awareness of alternatives - Lack of government interest and support - Lack of a comprehensive vision of commercialization and production	- Ask the government for help to improve the economic conditions of the communities - Recovery of traditional productive activities (manufacture, food, agricultural production) - Legal recourse to Cocodes for proposals - Promote the creation of agricultural cooperatives with a comprehensive vision of health
Lack of integration between health and environment in the schools	- Lack of teacher training - Teachers are used to teaching single topics - Lack of vision concerning the usefulness of teaching - People who come to teach do not live in the community and have no interest in developing it	- Training of teachers, Ministry of Health, Vector Control, community/ NGOs/municipal authorities on issues related to Chagas transmission (deforestation, hygiene habits, water management and family planning) - Request that the Ministry of Education integrate and utilize Chagas topics in primary and secondary curricula
Lack of knowledge among health personnel	- Low awareness of the reality and impact of Chagas by the Ministry of Health - Lack of (comprehensive) training for health personnel - There is no continuous training - Lack of will due to work overload	- Request integral and continuous training on vector control, diagnosis and treatment for all DAS personnel - Improve and control primary healthcare (posts and centres)
Lack of empowerment of health personnel in Chagas	- There is no priority by the ministry of health towards the health areas and other levels - Inequality and disinterest of health personnel towards people affected by Chagas - There is no prioritization by the ministry of health towards the health areas and other levels - Chagas affects people with few resources	- Coordinate and plan a timetable for sending samples at local level, in conjunction with the Health Area
Discrimination towards population with Chagas	- Lack of knowledge on Chagas transmission - Health personnel unaware of treatments for patients infected with Chagas - Health personnel not from the community	- Ditto
Lack of a public policy to improve housing	- Chagas is not a priority - The value of improving housing to transform the dynamic of Chagas disease is not well known - Lack of national budget - San Carlos University research doesn't have a sufficient impact on policy	- Promote decentralization in all aspects of Chagas (more laboratories and more technicians per district) - Give value to treatment of Chagas patients, in terms of costs to the Ministry of health (cost - benefit)

	- Lack of communication and cooperation among entities	
Lack of prioritization and inter-institutional coordination of Chagas by directors of health areas	- High level authorities are unfamiliar with Chagas - There are other priorities - There is no emphasis on the importance of the disease - A lack of a culture of interinstitutional collaboration	- Ditto
Decision makers unaware of the importance of Chagas	- Lack of political interest - Because there was already an achievement - Lack of advocacy by donors, technicians etc.	- Ditto
The protocols and standards are out of date, since the current epidemiological situation doesn't match the standards and protocols of 07' and 10'	- The processes are bureaucratic - Lack of budget - It's not a priority/rotation of personnel - Lack of advocacy by donors, technicians etc.	- Improve the information system in SIGSA and its respective training
Lack of procedures for intra- and interinstitutional coordination, because Chagas is commonly assigned exclusively to vectors	- Other health personnel unfamiliar with Chagas - Lack of training regarding administration and planning - Lack of emphasis on administration/planning in the training curriculum of vector personnel	- Involvement of different disciplines within the DAS (departmental health programs) for Chagas control

TABLE 4. Elimination of Mother-Child Transmission (EMTCT-PLUS; in Spanish, ETMI-PLUS, a PAHO program)

EMTCT-PLUS, relevant barriers	Root causes	Solutions/Mitigation strategies
Lack of systematic data registry/ high levels of centralization and bureaucracy	- Information/ tools are not standardized - Out of date technology - Low investment in ongoing communication - Lack of integration of different levels - Lack of human resources, and insufficient capacity in existing HR	- Adapt existing information systems to better address Chagas disease (diagnosis, treatment, follow-up of pregnant women and newborns) - Obligatory reporting/notification of Chagas - Modernization; create applications for data management, surveillance, geolocation
Chagas not included in prenatal screening/no follow-up of women and newborns	- Procedures are out of date and not well disseminated - Gaps between procedures and implementation - Lack of trained human resources - Lack of access to appropriate information for pregnant women	- Standardization of norms and clinical guidelines - Integrate services in different programs (create practical guides) - Assure comprehensive care from the first contact with pregnant mothers - Political pressure (from central government), involving all institutions (advocacy, planning, accountability)
Lack of appropriate equipment and supplies in health centers	- Poorly planned budget - Low priority for authorities (both national and local) - Low awareness - Poor coordination and fragmentation	- Perform a needs assessment and epidemiological analysis as a basis for technical and financial planning - Create a plan of continuous education to build capacity in personnel and community health promoters (comadronas) - Include EMTCT-PLUS in the budget - Assure sufficient supplies of medication and test kits in health centers
Lack of perceived risk/insufficient IEC at the community level	- Sociocultural factors - Lack of updated information (diagnosis and treatment)/standards/education (messages are not adapted to the community) - Indifference of authorities (Ministries of Education and Health) - Indifference, low availability of information in media - Lack of a multisectoral vision	- Use media to increase information - Support community organizing - Create and strengthen continuous IEC programs for community health workers to encourage behavior change - Emphasize the message that Chagas can be treated - Strengthen dialogue with community leaders - Make messages culturally appropriate - Develop an education plan using participatory methods - Empower and support comadronas (health promoters) - Strengthen inter- and intrasectoral collaboration (vector control and comadronas)