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Final Report 2009-2014
USAID|Maternal & Child Centers of Excellence
Improving Health Systems and Quality of Services in the Dominican Republic



The Maternal & Child Centers of Excellence project is funded by the United States Agency for International Development and implemented by Abt Associates Inc. (Contract No. GHS-I-00-07-00003-00) in collaboration with SISPROSA, INTEC, CESEM, CES, and Cultural Practice, LLC.

FINAL REPORT 2009-2014

USAID|MATERNAL & CHILD CENTERS OF EXCELLENCE

DISCLAIMER

This report was developed by Abt Associates under contract No. GHS-I-00-07-00003-00. The opinions expressed herein are those of the authors and do not necessarily reflect the views of the United States Agency of International Development (USAID) or of the Government of the United States.

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ACRONYMS

AMTSL	Active Management of the Third Stage of Labor
CAF	Common Assessment Framework
CAH	Hospital Administration Council (<i>Consejo de Administración Hospitalaria</i>)
CLAP	Perinatal Health Information System
CoEx	Centers of Excellence
MC CoEx	Maternal-Child Centers of Excellence
DGHA	Directorate for Licensing and Accreditation (<i>Dirección General de Habilitación y Acreditación</i>)
DPS	Provincial Health Directorates (<i>Direcciones Provinciales de Salud</i>)
EmOC	Emergency Obstetric Care
E&D	Emergency and Disaster Preparedness
MCH	Maternal-Child Health
MOH	Ministry of Public Health
M&E	Monitoring and Evaluation
PAHO	Pan American Health Organization
PDCA	Plan-Do-Check-Act
POA	Annual Operational Plan (<i>Plan Operativo Anual</i>)
RHS	Regional Health Services
SIGHO	Hospital Management Information System (<i>Sistema de Información de la Gestión Hospitalaria</i>)
SRS	Regional Health Service (<i>Servicio Regional de Salud</i>)
USAID	United States Agency for International Development
VMGC	Vice-Ministry for Quality Assurance (<i>Vice Ministerio de Garantía de Calidad</i>)

ACKNOWLEDGEMENTS

The Maternal & Child Centers of Excellence Project appreciates and recognizes the support and collaboration from the United States Agency for International Development (USAID) Mission in the Dominican Republic, and the Ministry of Public Health (MOH). We worked with officials at the central-level ministry, the management teams of the ten participating hospitals and the three Provincial Health Directorates, and the Regional Health Services, ministry staff, consultants, tutors, and other collaborators, all of whom contributed to the achievement of project outcomes. We also extend thanks to the Ministry of Public Administration, the *Seguro Nacional de Salud* (the National government health insurance organization), and the *Dirección de Información y Defensa de los Afiliados* (a government protection and information agency for clients of health care services). Dominican families are well deserving of the effort of all these groups.

EXECUTIVE SUMMARY

The Maternal & Child Centers of Excellence Project is a five-year project (2009-2014) awarded by USAID to Abt Associates and its partners to assist the Government of the Dominican Republic in its efforts to reduce maternal and neonatal mortality and morbidity. Programmatic efforts focused on expanding access to and utilization of maternal and child services through improvements in the quality and efficiency of \ services. To achieve this goal, the project developed “Centers of Excellence” with integrated health systems to improve the quality of maternal and child health services in ten strategically selected hospitals and three Provincial Health Directorates (DPS). Capacity to disseminate best practices was strengthened in each of the Centers of Excellence to allow them to “multiply” these strategies and strengthen the service provision of other institutions within local health networks.

The strategies that formed the backbone for the Centers of Excellence quality improvement process included: a) a diagonal approach to combine health systems strengthening with specific programmatic improvements, b) continuous capacity building through training and coaching, c) combining improvements in work environments with change management processes, and d) focusing change management at both the individual and institutional levels. This principle drove the quality improvement processes which rendered significant contributions to the achievement of several high impact indicators and other key maternal-child health outcomes including:

- Contribution towards a reduction in maternal deaths, a 16.4% nationwide (2009-2011) and reduction by almost half (49.6%) in ten target hospitals.
- Nationwide reduction in infant deaths by 20% (2010-2012), with a 42.1% decline in ten target hospitals.
- Increase in utilization of active management of the third stage of labor from 32% (2009) to 96% (2013).
- Decrease in use of routine episiotomies from 30% (2009) to 17% (2013).

Other processes that also contributed to these outcomes include:

- All Hospitals and DPS conducted two or more self-assessments required for certification as Centers of Excellence. All achieved marked improvements in compliance with quality standards (see section 6).
- Provincial Directorates (DPS) increased vaccination coverage by 20% and timely reporting of surveillance data from 16% to 100%.
- Routine maternal audits were conducted by facilities and reviewed with Ministry of Health authorities (0% in 2009, to 68% in 2013).
- Change management teams formed and operating to assist in the management of hospitals and DPS, strengthening mid-level leadership and internal coordination between departments.

Together with National and local Ministry of Health counterparts, the Centers of Excellence Project has created a model for quality improvement which has been formally adopted by the MOH's Vice-Ministry for Quality Assurance as the model to be used nationwide for MCH quality improvement. As part of this model, tools and methods have been documented and validated by MOH counterparts and will be used to expand both quality improvement as well as the MCH Centers of Excellence certification system. This, together with the capacity created in each of the Centers of Excellence teams to replicate best practices, helps to facilitate the sustainability of the project and its interventions.

I. INTRODUCTION

The purpose of the USAID\Maternal & Child Centers of Excellence Project was to support the efforts of the Government of the Dominican Republic to improve equity and access to maternal-child health with emphasis on quality and efficiency. The project served to complement the successful achievements in maternal and child health system strengthening, supporting the gradual implementation of the subsidized Family Health Insurance scheme and strengthening the capacity of providers to deliver efficient, quality and timely care. The project was implemented in collaboration with the authorities and staff from the Ministry of Public Health (MOH) and building on the achievements and lessons learned from the Redsalud and Conecta projects in previous years.

Project Profile

Counterparts: Ministry of Public Health and other agencies that form part of the Health and Social Security System

Funding: USAID

Budget: US\$15,555,856.00

Period: February 2009–2014

Prime Contractor: Abt Associates Inc.

Sub-contractors: CESDEM, INTEC, SISPROSA, Universidad CES, and Cultural Practice, LLC.

The five year project started on February 3, 2009, following the signing of the contract between USAID and Abt Associates, Inc. as prime contractor. Abt Associates, Inc. collaborated with the following sub-contractors: Centro de Estudios Demográficos (CESDEM), el Instituto Tecnológico de Santo Domingo (INTEC), Sistemas y Procedimientos Inc. (SISPROSA), the Universidad CES from Medellin, Colombia, and Cultural Practice, LLC, Maryland, United States.

This report summarizes the work completed between February 3, 2009 and February 2, 2014. It presents the project background, approach and scope of each of the project's interventions, in addition to achievements, lessons learned and guidance for sustainability and institutionalization. In addition, documents detailing the methodology in the hospitals and DPS, the Certification System and the technical guidelines applied in each process are also included in the annexes.

I.1 THE CHALLENGE

Despite having made great improvements in maternal and child health, the Dominican Republic still faces significant challenges. According to the Demographic and Health Survey 2007¹, the maternal mortality ratio is 159 per 100,000 live births and the infant mortality rate, primarily neonatal, is 25 per 1,000 live births. Adolescent pregnancy is on the rise at 23%. These figures contrast with the high rate of institutional deliveries by qualified personnel (98%) and a prenatal coverage rate of 95%. The reasons for this disparity were studied by Dr. Suellen Miller and collaborators and were found to be associated with the quality of care, management of care, a dehumanization of services, and motivational issues among health providers and other staff.²

¹ Centro de Estudios Sociales y Demográficos (CESDEM) and Macro International Inc. 2008. *Demographic and Health Survey, 2007*. Santo Domingo, Dominican Republic: CESDEM and Macro International Inc.

² Miller et al. 2003. Quality of care in institutionalized deliveries: the paradox of the Dominican Republic. *International Journal of Gynecology and Obstetrics* 82.

1.2 THE RESPONSE

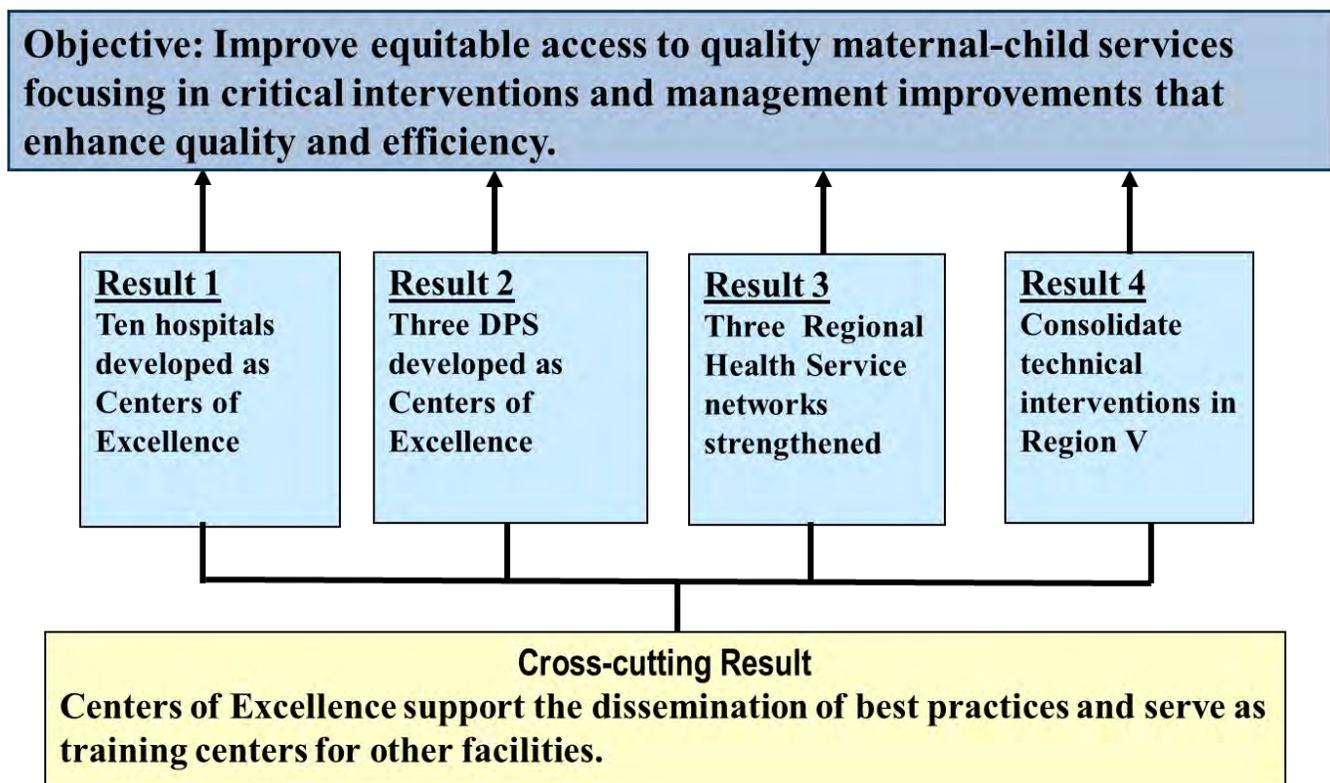
The **purpose** of the Maternal & Child Centers of Excellence Project, implemented from February 2009 through February 2014, was to assist the Government of the Dominican Republic in its efforts to reduce maternal and neonatal mortality and morbidity by expanding access to and utilization of maternal and child services through improvements in the quality and efficiency of the services. To achieve this **goal**, the project focused on developing Centers of Excellence with integrated health systems to improve the quality of maternal and child health services in ten strategically selected hospitals and three Provincial Health Directorates (DPS). By disseminating their lessons learned and best practices, the centers contribute to the country's achievement of equal access to sustainable and quality services for every mother and child.



2. RESULTS FRAMEWORK

Figure 1 presents the Results Framework for the Maternal & Child Centers of Excellence Project. The Results Framework and the Performance Monitoring Plan (PMP) were the starting point for the design, planning, and implementation of the project's technical interventions. The project activities were aimed at achieving these four results and the cross-cutting result to support the dissemination of the Centers of Excellence best practices and serve as training centers for other establishments in their respective networks.

FIGURE 1. RESULTS FRAMEWORK



3. METHODOLOGICAL APPROACH

The idea to develop "Centers of Excellence" located throughout the Dominican Republic was proposed to create a cohort of "positive deviants" with the capacity to individually achieve tangible maternal and child health outcomes and then share experiences to expand the implementation of best practices. The Centers of Excellence approach seeks to create synergy between the participating health facilities, promote exchange and healthy competition among them, and establish a common conceptual framework developed in joint participation between facilities and the project.

The design, validation, and use of the tools were based on the following methodological principles:

Diagonal approach: This refers to the integration of system and programmatic elements to address a specific challenge. According to its authors³, this strategy uses explicit intervention priorities – in our case, improvements in maternal and child health services – to drive systemic improvements that deal with issues such as human resources, financing, planning, supply chain, rational prescribing of drugs, and quality assurance.

Systemic capacity building: The Maternal & Child Centers of Excellence Project designed capacity building activities, including training and coaching activities to strengthen the skills, knowledge, and attitudes of the staff at Ministry of Public Health (MOH) facilities. This systemic approach, adapted from Potter and Brough⁴ includes components to guide the development of tools and skills, staff and facilities, structures, systems, and roles to support a true cultural shift. Joint participation is fostered to assess and address needs, and combined with coaching to ensure that counterparts are able to

Technical Approach



³ Julio Frenk, 2006. Bridging the divide: Comprehensive reform to improve health in Mexico.

⁴ Christopher Potter and Richard Brough. 2004. Systemic capacity building: a hierarchy of needs. Health Policy and Planning 19(5): 336-5. <http://heapol.oxfordjournals.org/content/19/5/336.abstract/>

apply concepts and tools to improve the quality of their daily tasks.

Continuous quality improvement: The following principles, which are central elements of the National Health Quality Policy, formed the backbone for Project interventions:

- Client-centered care as the focus and rationale of the facilities that safeguard individual and collective health.
- Humanization of care and respect for the human rights of the clients.
- Establishment of a Certification System as a starting point for an accreditation system, based on Quality Standards for hospitals and DPS.
- Use of the PDCA Cycle (Plan–Do–Check–Act) as a tool for continuous improvement that leads to process standardization and the design of indicators to track progress.
- Systematic measurement and analysis of the adherence to defined quality norms and standards.

Strategic improvement in the condition and order of the work environments: The “Broken Windows Theory”⁵ was applied in hospitals and DPS. Strategic structural and organizational improvements in the workplace were used to increase staff motivation, adherence to clinical and administrative standards, and commitment to achieving outcomes. These synergies between ‘Structure and Culture’ significantly contributed to changes in the health facility culture and the behavior of managers, providers, and clients.

Developing change management processes for the individual: The quality improvement process was proposed as a “Life Project”, meaning technical tools were developed with and for the individuals who would use the tools, not simply to comply with a norm, but to protect each person involved in the provision of care. These tools recognize that both individual and collective behaviors in the workplace have an impact on the family and social environments. This concept was thoroughly embraced by the teams in participating facilities.



Change management teams share a common purpose: to improve the health of Dominican families

⁵ James Wilson and George L. Kelling, 1982. Broken windows: The Police and Neighborhood Safety. *The Atlantic Monthly* (March).

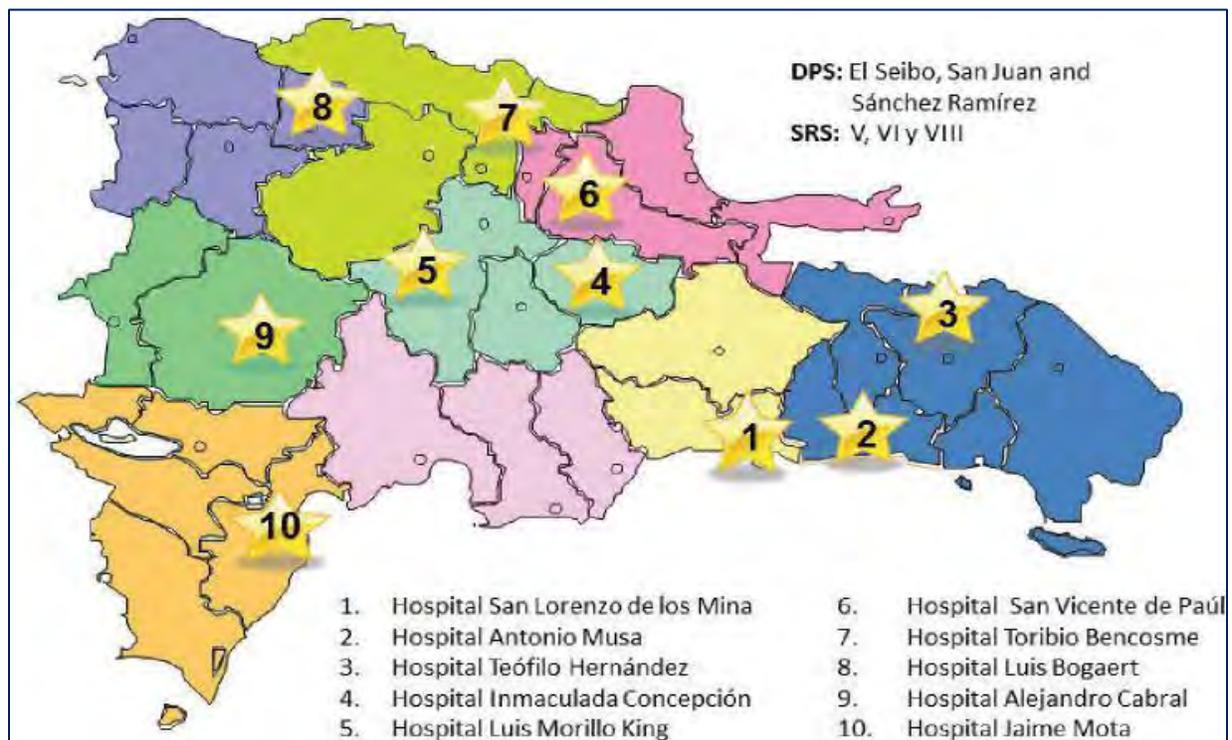
4. IMPLEMENTATION PLAN: CENTERS OF EXCELLENCE MODEL

4.1 PREPARATION PHASE

The preparation phase began with the decision to develop the Centers of Excellence Model, and continued with a needs assessment, development of work plans and the full start-up of implementation. Key activities during this phase included the following:

- *Selection of the institutions that the project would support in conjunction with the MOH.* The selection criteria were: epidemiological impact, geographic balance, evaluation of facility proposals, potential and commitment to leverage funding to address additional gaps. Ten hospitals and three DPS were selected based on this information. The selected hospitals attend to 23% of the country's deliveries. In this same manner, three DPS were also selected in the East, Center and South of the country. See **Annex I** for a list of participating facilities.
- *Creation of change management teams in the selected facilities.* These teams were trained in Change Management, the use of the Common Assessment Framework (CAF) tool for improvement planning, and to conduct Strategic and Operational Planning.

FIGURE 2. TARGET INSTITUTIONS



4.2 IMPLEMENTATION PHASE

During this phase, the change management teams took leadership of the process and motivated the rest of the facility staff to implement quality improvement strategies and work plans to generate desired changes necessary to execute each technical component. The initial interventions were cross-cutting, intended to involve and empower a large part of the facility's staff and provide a springboard for the change process. Specific strategies were then developed for each of the technical components, supported by mechanisms to foster systematic follow-up and monitoring and evaluation. The Centers of Excellence were developed based on a quality improvement framework in which the participating institutions conducted regular self-assessments and used technical tools to meet specific standards and work towards the goal of achieving certification as a Center of Excellence.

4.3 CONSOLIDATION PHASE

During this phase, mechanisms were developed to institutionalize the change processes, thus fostering their sustainability. The Maternal & Child Centers of Excellence Project worked with participating facilities (DPS and hospitals), the Regional Health Services, and MOH officials at the central level to reinforce the efforts of the change management teams and others responsible for sustaining the change processes, strengthen clinical and managerial data collection, follow-up, and analysis of information for decision making.

4.4 REPLICATION PHASE

The final phase was the replication of best practices in peer hospitals and DPS, used as a strategy to expand adoption of the centers' quality improvement processes throughout the health system. The ability to transfer knowledge to and generate change in other institutions is proof of the importance of the Maternal & Child Centers of Excellence Model and its sustainability.



Support to peer municipal hospitals in supply chain management formed part of the replication phase.

5. CERTIFICATION SYSTEM TO ENCOURAGE QUALITY PROCESSES

The Centers of Excellence Certification System in Hospitals and DPS is a key process included in the National Health Quality Policy framework. The framework is an integral part of the Dominican Republic's National Health System and serves to reinforce the supervisory role of the MOH. Certification was defined as a formal, voluntary, and routine process by which the Ministry, via the Vice Ministry of Quality Assurance, assesses and recognizes those health facilities that comply with the established management and quality standards. In the case of hospitals, certification is focused on quality standards related to health systems strengthening as well as those specific to maternal and child health services.

The Certification of Hospitals as Centers of Excellence is based on the development of eight technical components that comprise 18 standards and 90 sub-criteria that follow the Plan-Do-Check-Act (PDCA) cycle. In the case of the DPS, certification is obtained by developing six technical components that comprise seven standards and 35 sub-criteria. A scoring system is used to measure progress and recognize achievement. Participating facilities may obtain a plaque and collect up to five stars for the higher scores and fulfilling all criteria.

The **basic components** of the Maternal & Child Centers of Excellence Certification System are:

- Self-assessment and development of improvement plans for providers, based on established guidelines.
- Implementation of the improvement plans to meet quality standards.
- External assessment of providers conducted by competent and trained technical staff.
- Acknowledgment and recognition of compliance through “Plaques” and “Stars” according to the rating received through external assessments.

5.1 MAIN ACHIEVEMENTS

The collaboration between the MOH and the Maternal & Child Centers of Excellence Project established a foundation for the implementation of a Certification System as part of MOH efforts to build a culture of quality. The main achievements include:

- Development of a Certification System with its own methodology and technical tools.
- Staff training – at both the National level and in participating facilities – on the use of those tools.
- Ongoing continuous quality improvement processes and achievement of significant progress by the managerial teams in the ten hospitals and three DPS.

- Validation of the Certification System as a quality assurance model by the Vice Ministry of Quality Assurance. This included support for the creation of a Technical Unit responsible for the certification within the Vice Ministry.
- Training of a team of 30 external evaluators.

5.2 INITIAL CERTIFICATION ACKNOWLEDGEMENTS

Several participating entities were recognized for their achievements: The Regional Hospital Dr. Luis M. Morillo King in La Vega received a plaque and two stars, the DPS of Sánchez Ramírez received a plaque and three stars, and the DPS in El Seibo received a plaque and four stars. The awards – which recognize the work that the hospital and DPS have accomplished – represent a milestone towards the consolidation and institutionalization of the Certification System as a regular MOH program, implemented by the Vice Ministry of Quality Assurance.



August 27, 2013 Ceremony to recognize Centers of Excellence with plaques and stars in the presence of Dr. Wilfredo Hidalgo Nunez, Public Health Minister (left) and James Wright, USAID Deputy Director (right) along with awardess.

6. PROGRESS TOWARDS CERTIFICATION AS A CENTER OF EXCELLENCE

An essential part of the certification process relies on each institution’s ability to conduct a self-assessment of their compliance with each of the quality standards and identification of specific activities aimed to improve identified weaknesses. Beginning in 2010, following the training of hospital and DPS teams in the certification process and use of technical tools, each institution proceeded to conduct periodic assessments, culminating in an external evaluation conducted by MOH trained evaluators. This participatory process, in which interdisciplinary change management teams conducted an extensive review of standards included in each of the quality “components” through verification of documentation, observation of processes and other methods, resulted in assignment of a score expressed as a percentage of standards met. This process served to empower teams with the information that pointed to specific areas that required immediate improvement and how to reach the ultimate goal of full compliance in all eight of the quality “components” that form part of the certification process.

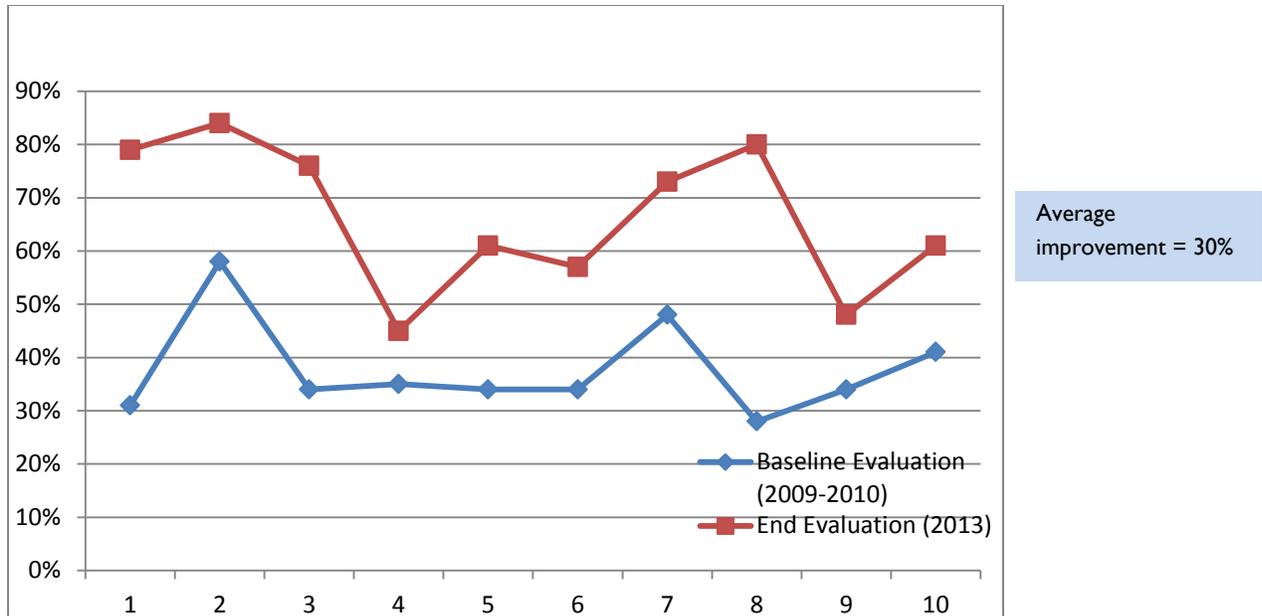
As illustrated in the table below, all of the hospitals and DPS conducted at least two self-evaluations, while some conducted as many as five throughout the duration of the project, indicating a continued effort to improve and measure their progress towards quality standards. All Hospitals and DPS showed marked improvements in compliance with these standards at the 2013 evaluation mark as compared with the baseline assessment.

TABLE 1: HOSPITALS: SCORES ON CERTIFICATION AS COEX ASSESSMENTS, BASELINE VS. FINAL EVALUATION

Target Hospitals and DPS	Baseline Evaluation	End Evaluation (2013)	Number of assessments
San Lorenzo de Los Mina	31%	79%	4
Alejandro Cabral	58%	84%	3
Antonio Musa	34%	76%	5
Inmaculada Concepción	35%	45%	3
Jaime Mota	34%	61%	2
Luis L. Bogaert	34%	57%	4
Luis Morillo King	48%	73%	3
San Vicente de Paul	28%	80%	4
Teófilo Hernández	34%	48%	3
Toribio Bencosme	41%	61%	3
El Seibo	36%	85%	5
Sánchez Ramírez	54%	85%	5
San Juan	30%	55%	2

As illustrated in the graph below, all of the Hospitals increased compliance with quality standards from baseline to the end of the project. This is evidence of the results of these ongoing quality improvement processes conducted at each site, which form part of the Center of Excellence certification system.

FIGURE 3. RESULTS OF QUALITY ASSESSMENTS IN 10 COEX HOSPITALS



7. RESULT 1: DEVELOPMENT OF CENTERS OF EXCELLENCE IN HOSPITALS

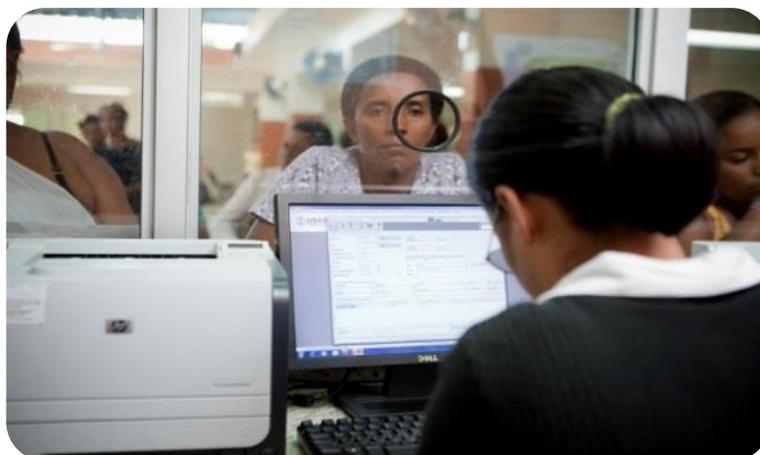
To achieve the first project result, Centers of Excellence were established in 10 hospitals. The following eight technical components guided the activities and expected outcomes that were executed in hospitals to include:

Technical Components in Hospitals
Systems and Managerial Capacity
Quality and Evidence-based Maternal and Child Health Services
Biosafety
Connection to the Health Care Network
Facility Infrastructure & Licensing
Community Participation
Training & Capacity to disseminate best practices
Emergency and Disaster Preparedness

7.1 MAIN ACHIEVEMENTS

- **Hospitals have multidisciplinary change management teams composed of staff representing key areas for quality management and improvement processes.**

Staff representatives from every department are able to collaborate to identify and analyze problems, plan improvements, and provide follow up on indicators and other technical processes in contrast to the traditional “siloeing” of services and areas. Bylaws, minutes, work plans, and mechanisms to guide staff in performing tasks served to formalize this coordinating body. In addition, staff members actively participate as members of various committees.



Client service centers at Hospitals facilitate quick access to patient records and reduced wait times.

- **A new culture of quality improvement has been instilled, which incorporates routine use of management tools.**

Facilities were supported to use the Common Assessment Framework tool for annual self-assessments, identifying areas for improvement and planning. This participatory process served to stimulate continued quality improvement processes. Seven facilities applied for the National Quality Award granted by the Ministry of Public Administration. The Hospital San Vicente de Paul in San Francisco and Regional Services VI and VIII received awards.

- **Client service/management systems make service organization and access to information more efficient in order to provide better care.**

Automation of user data, organization of clinical files to reduce wait time, and tools and methods to address complaints are all processes that facilitate more efficient access to services. Hospital Management Information Systems (*Sistema de Información de la Gestión Hospitalaria*, or SIGHO) were developed and implemented to include modules for the management of patient records, supplies, vaccines, and sub-systems for the management of births and the Perinatal Information System (*Sistema de Información Perinatal*, CLAP/PAHO). These efforts ultimately led to the standardization of the management of patient/user information and clinical files that were readily available with complete client history.

- **Strategic plans and monitoring and evaluation mechanisms developed.**

Strategic plans were developed in each of the Hospitals through participatory processes, followed by accompaniment to keep annual work plans updated. Methods and tools for monitoring and evaluation of key indicators were established with Situation Rooms displaying key indicators associated with management and delivery of maternal and child health services, monitoring and evaluation plans for tracking improvement, and progress toward goals.



Situation rooms facilitate data analysis and dissemination among teams.

- **Skills developed to conduct process design, implementation and quality audits.**

Capacity was developed to allow teams to analyze and improve processes based on a set of standard indicators. This included the use of balance scorecards, conduct process mapping and use of the cause-and-effect diagram and analysis to identify gaps in key processes and develop solutions. In select facilities, management capacity to conduct quality audit processes was also developed.

- **Human resource management processes strengthened.**

Human resource management processes were strengthened through training and standardization. Manuals and tools were developed for new staff orientation and training as they are critical to ensuring the continuity of clinical, biosafety, and administrative processes at facilities.

- Supply management system strengthened.**
Warehouses and pharmacies were upgraded, which are capable of ensuring the availability and safety of drugs and supplies. Automated information systems were established to program maximum and minimum stock, keep up-to-date on-line inventory with related costs, expiration date control, and utilization of statistics by area and by type of drug/supply.
- Emergency Obstetric Care (EmOC) strategy institutionalized, resulting in use of evidence-based practices in maternal-child service delivery.**
An Emergency Obstetric Care (EmOC) training strategy was implemented, training a team of 14 facilitators and over 600 providers. Clinical supervision guides were developed and validated together with the MOH and implemented to identify gaps in adherence to standards and to develop improvement plans for outcome indicators. Significant changes in key outcome indicators, such as the use of active management of the third stage of labor (AMTSL), reduced episiotomies, use of the partograph for decision making, and promotion of early attachment and breast feeding.
- Data to reflect the clinical history of pregnant women registered in the Perinatal Information System and used for analysis.**
Systematic basic data collection from the antenatal card was used to build a set of related indicators. Quarterly meetings were established to analyze the obstetric and neonatal indicators with the Regional Health Services responsible for supervision of health providers and decide on preventive and corrective measures.
- Hospitals and Primary Care Units (PCUs) communicate to ensure postpartum and newborn care within the first 72 hours.**
Through use of information systems, automated emails were programmed to be sent to the Regional Health Services with a “Maternal Discharge Alert” including key information on the delivery, weight of the newborn, possible complications, and follow-up notes. The alert triggers the response at the primary care level with a home visit to the new mother. This resulted in the timely detection of complications during home visits and increased client satisfaction along with establishment of true networking between hospitals, Regional Health Services, and primary care units..
- Quality improvements in newborn care in collaboration with the USAID/ Maternal & Child Health Integrated Program (MCHIP).**
In all ten participating hospitals, teams were trained and implementing “Helping Babies Breathe” practices. Six hospitals implemented the neonatal sepsis reduction program and have tools to measure the progress. Four hospitals established the Kangaroo Mother Care strategy, which has reduced morbidity and mortality among premature babies.
- Biosafety system established to prevent infections.**
Biosafety standards were developed and implemented in relevant areas including: emergency room, delivery rooms, operating rooms, and sterile processing department. Ten biosafety committees were trained and operational, to include training delivered to 3,609 clinical and support staff and new personnel were oriented on the regulations. Sixty-



Proud mother participates in the Kangaroo Mother Care program.

five risk maps were developed and published in the corresponding critical areas and select areas were renovated and improved to include signaling of restricted areas. These actions resulted in change in behaviors, such as the use of universal protection measures for circulation in critical areas which ultimately produced reduced cases of maternal and neonatal sepsis in select facilities.

- **Improved practices developed for internal and external control and final disposal of hospital solid waste.**

The interventions allowed for the classification of hazardous and non-hazardous waste, organization of a sanitary route, intermediate disposal, and coordination with local city councils for the final disposal of solid waste.



Management of hospital waste is an essential part of biosafety procedures

- **Referral and counter-referral network developed for the Eastern Region.**

The model included: a) definition and adjustment of a service portfolio that is consistent with the clients' care needs, b) creation of flowcharts for action at the different care levels, with the corresponding forms for control and follow-up, c) a follow-up information system, and d) training of the staff in hospitals and PCUs.

- **Hospitals have developed clear plans to obtain licensure.**

The ten hospitals completed their self-assessment; developed an improvement plan to bridge the gaps in infrastructure, equipment, and human resources; and were inspected by the *Dirección General de Habilitación*, the authority in charge of licensure of health facilities. Four of the hospitals were awarded their licenses.

- **Social and community participation promoted by activating the Hospital Administration Councils.**

These forums allow for the participation of community members in service management, enabling hospitals to better respond to clients' needs.

- **Training centers developed to facilitate institutionalization of training processes and the dissemination of best practices.**

Training rooms were equipped to replicate best practices and serve as “multiplying agents” in the Centers of Excellence strengthening process. Tutors were trained to facilitate teaching-learning processes and delivery of technical assistance. In six Regional facilities, “EmOC Laboratories” with anatomic models facilitate training on emergency obstetrics and neonatal care.

- **Emergency and/or disaster response capacity developed in six hospitals**

Each of these hospitals has an emergency preparedness committee, an updated action plan, a defined evacuation route, and has conducted drills.

8. RESULT 2: DEVELOPMENT OF CENTERS OF EXCELLENCE IN THE DPS

The establishment of Centers of Excellence in the three DPS involved the development of the six technical components outlined below.

Technical Components in DPS
Systems and Managerial Capacity
Public Health Programmatic Networks
Epidemiological Surveillance
Licensure Systems
Emergency Preparedness
Training Capacity

8.1 MAIN ACHIEVEMENTS

Through the ongoing quality improvement process, the three supported DPS, Sánchez Ramírez, El Seibo, and San Juan, achieved important goals in each of their components, as follows:

- **Managerial capacity strengthened, through the development and use of strategic plans, annual operational plans, and tools to provide follow up.**
Strategic plans with a complementary monitoring and evaluation manual including balance scorecards with indicators were developed with the participation of all team members and shared within the organization. Subsequent annual operational plans were developed and updated, with quarterly implementation measuring tools. Human resources orientation and on-boarding plan was also developed.
- **Timely data notification using the Epidemiological Surveillance System increased from 16% to 100%.**
The project provided training and coaching to generate improved capacity for timely decision making, particularly with the Mandatory Disease Reporting that generates alerts. Staff in public and private facilities and the Regional Health Services was also trained to use the Early Alert System online tool. “Health Situation Rooms” were established at each DPS and Provincial Epidemiological Profiles were updated.
- **Vaccination coverage in the three provinces increased by 20% as a result of a strengthened collective health network.**
The Expanded Program on Immunization (EPI) was strengthened through improved plans and training in coordination with the central MOH, to create awareness among heads of the vaccination sites and area coordinators of the need to track coverage. Partnerships were established with 20 community organizations working together to provide public health services during vaccination and

environmental cleanup campaigns. In addition, support for the structural improvement and provision of equipment generated improvements in vaccination sites in the ten hospitals, to aid in compliance with licensure standards.

- **Emergency and disaster committees created and prepared to respond to different situations.**

Effective mechanisms for coordination were established between the DPS and relief organizations including the Civil Defense, Red Cross, Fire Department, and community organizations. Provincial Plans for Emergency and Disaster Response were developed and updated. Emergency Situation Rooms were established during the hurricane season, with risk maps and tracking of a hurricane's path.



Simulations served to strengthen provincial emergency preparedness.

- **Technical assistance plans developed and implemented to assist provincial hospitals in their licensure process.**

Support was provided at the MOH National level Department for Licensure, to update and improve the applications, and automate the license generation process for facilities that meet minimum licensure requirements. DPS were trained in use of tools to facilitate licensure inspection, monitoring of improvements, and support to the centers. Training and accompaniment was provided to ensure that updated reports to indicate the licensure status of each of the health facilities that form part of the provincial network were produced and shared.

- **Capacity to share and disseminate best practices in other DPS developed.**

The DPS technical staff members supported by the Centers of Excellence Project were trained as tutors and are supporting their peers in creating teams and developing skills for change management to manage quality improvement processes in the DPS of other provinces.

9. RESULT 3: SUPPORT TO REGIONAL HEALTH SERVICES

Regional Health Services play an important role in the Dominican Health System, as they are the decentralized authority responsible for the management of health service provision within the local network. As part of this function, they are charged to ensure that key services are available at the primary, municipal, and referral level (Provincial and Regional hospitals). They manage tasks related to the hiring/firing and supervision of human resources, supply chain management and coordination of the service network.

The aim of the Centers of Excellence Project in its support to Regional Health Services was to strengthen the managerial capacity at the Regional level, so as to strengthen the coordination between different levels of care and improve access to quality health services within the local network. To this end, three Regional Health Services were selected with consideration of the following criteria: Regions that were given priority by the MOH, those that had been targeted in past USAID projects (RedSalud or Conecta) together with those who presented the strongest proposals during the competition process. As a result, Health Region V (Eastern Region), Health Region VI (El Valle) and Health Region VIII (Central Cibao) were selected.

The content of the proposals along with the interest demonstrated by the three pre-selected Regional Health Service guided the decision to implement the following activities:

- **Personnel Induction and training:** Support was provided to conduct Team Building and Change Management Trainings; implementation of a system of continuous quality improvement with the use of the CAF tool; formulation of a strategic plan and annual operating plans.
- **Different demonstrative models** in each RHS were implemented to strengthen an aspect of their ability to work as managers of their service network.
 - Region V East: Referral and counter referral system, in coordination with USAID / Community Development Project in Bateyes implemented by Save the Children / MUDE.
 - Region VI El Valle: Health service portfolio gap assessment at the regional level.
 - Region VIII Central Cibao: Human Resource Management in the RHS.

These Region-specific projects and their results are described below.

Region V East: Referral and Counter-referral system

The Project worked with RHS Region V and the USAID / Community Development project in Bateyes, implemented by Save the Children / MUDE in the design and implementation of a referral and counter-referral system focused on improving access to MCH services. This intervention included a referral and counter-referral model in two provinces, Seibo and Hato Mayor, and included an information system, adaptation of the portfolio of services, connection to the customer service offices of the participating hospitals and relevant training. The main achievements were:

- Development of a strengthened referral and counter-referral model that includes flowcharts for action at different levels of care.
- Information System to track referrals and counter-referrals.
- Development, validation and implementation of the tools between facilities and rural clinics, hospitals, and health promoters.
- Training of clinical and user support staff at the 3 rural clinics, hospitals and promoters in each of the three provinces in Region V.
- Definition of roles in the Regional Service Office to strengthening referrals and counter-referrals system
- Dissemination of lessons learned with other RHS.

Region VI El Valle: Determination of gaps in the portfolio of services of regional health

The Project supported Region VI to identify gaps in the network's portfolio of services and reorganize them to match supply in different geographic areas and hospitals. This consisted of supporting the implementation of a tool to define which health services can and should be offered to the community, taking into account their ability based on available resources (human, physical and technological) and considering the potential estimated demand for these services such as average use, a standard of performance and the type and amount of population to be served.

The achievements of this participatory process for gathering information, analysis and definition of action plans include:

- Methodologies and tools developed and teams trained to apply tools.
- Service portfolio defined at the regional level and for each of the hospitals in the network, with gaps clearly identified.
- Action plans defined with the RHS Region VI and hospitals to address the identified gaps, such as distribution of human resources, equipment, and coordination between different institutions that form part of the network.

Region VIII Central Cibao: RHS Human Resource Management

Support for Region VIII in implementing a human resource management system focused on documentation, identifying gaps and needs for hires and performance evaluation. These activities were developed at the human resources office of the Regional Service offices with representatives from the Luis Morillo King regional hospital and Bishop Noel and Immaculate Conception provincial hospitals. The main achievements were:

- A report reflecting the situational analysis of RHS and generation of three hospital human resources offices.
- Tasks and roles of key positions were defined and documented in the Human Resources Manual.
- Training of participants in use of the HR module of the Financial Management and Control tool (SIGCF).
- Personnel files organized in the HR offices of the three intervention hospitals
- Implementation of a performance evaluation system for 100% of the staff of RHS in Region VIII.
- Dissemination of process and lessons learned with other RHS.

Cross cutting accomplishments

As a result of all of the improvement processes conducted with Regional Health Services, change management teams were established and trained to use tools to facilitate planning and management. Each of the three Regional Health Service Offices developed their strategic plans and annual work plans, updating them each year based on current needs. All RHS also were trained in the use of the CAF tool, resulting in two of the three RHS applying for the National Quality Award. Regional Services VIII and VI were awarded for "Promising Practices" in 2011 and 2012 respectively.



10. RESULT 4: CONSOLIDATION OF INTERVENTIONS IN REGION V

The Project provided technical assistance to four select hospitals in Health Region V that had received technical assistance by two previous USAID-supported projects, Redsalud and Conecta between 2000 and 2008, in order to consolidate and supplement interventions to reduce maternal and child morbidity and mortality. These hospitals included: Ramón Santana and Consuelo Municipal Hospitals in San Pedro de Macoris, Yuma Municipal Hospital in La Altagracia, and the Miches Municipal Hospital in El Seibo.

Support consisted of training, supervision, provision of equipment and supplies, which rendered the following achievements:

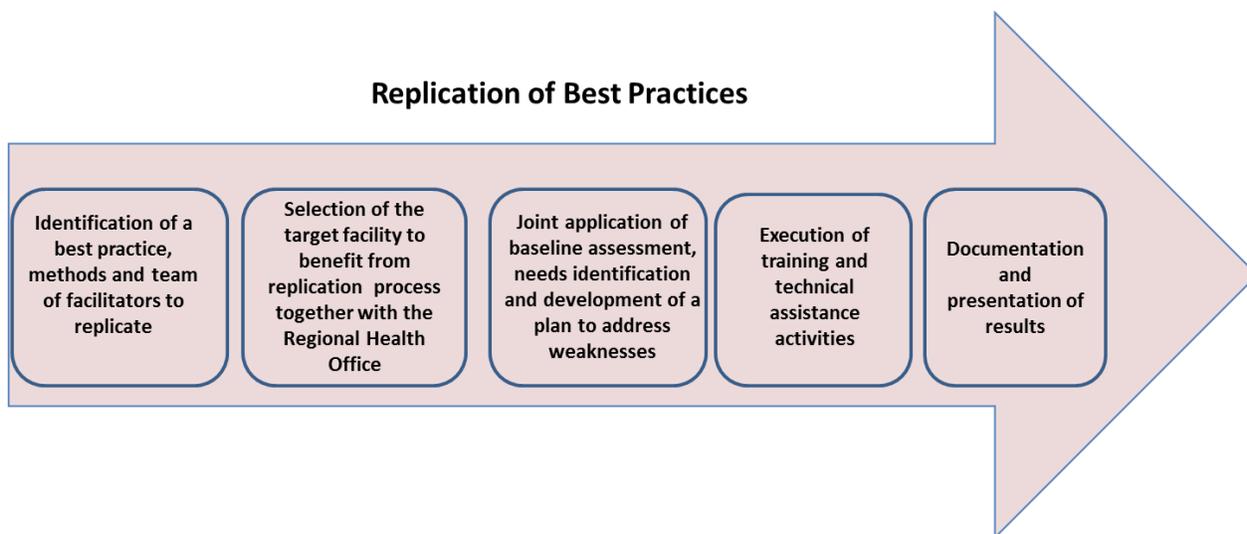
- *Annual work plans were formulated* and tools were validated to monitor progress.
- *Use of the CAF tool for quality improvement* was reactivated and implemented by local teams.
- *Biosafety System Strengthened:* This included updating needs assessments, reactivation of biosafety committees, risk mapping and sanitary disposal routes.
- *Training of medical, nursing and support staff in key MCH thematic areas* including Emergency Obstetric Care, Helping Babies Breathe, Prevention of Neonatal Sepsis and correct use of the Perinatal Information System using standardized Clinical records.
- *Standardization of client service offices* and the medical records management circuit, including updated information systems and provision of two computers in each hospital and training in the use of new software.

Support to the continuity of key quality improvement processes led to further empowerment of these strategies by local teams. This less time-intensive supervision and channeling of support is evidence of how to move facilities from more direct assistance to increased sustainability over time.

II. CROSS-CUTTING RESULTS: DISSEMINATION/SHARING OF BEST PRACTICES

As part of the quality improvement process, Hospitals and DPS supported by the Project disseminated best practices to other facilities within their local health network. This peer to peer strategy is intended to build capacity, motivate staff and monitor processes to improve quality in other institutions. These teams, who were supported by the Project, are an extremely valuable resource that can be used to further improve the quality of the health system. Training centers, with a conference room and equipment, were established in each project-supported facility to provide adequate space for workshops and seminars to disseminate best practices.

The replication process involves the following steps:



The ability of the 13 Centers of Excellence facilities to share and disseminate best practices with their peers is evidence of the capacity created within the health system to support a process of continuous quality improvement. The Centers of Excellence facilities shared best practices with other local facilities in the areas of epidemiological surveillance, establishment of change management teams, filing systems and client service centers, biosafety standards, emergency obstetric care and supply management. (See details in Table 2). These efforts contributed to significant changes in these new facilities, further ensuring the sustainability and institutionalization of quality improvements.

TABLE 2: BEST PRACTICE DISSEMINATION ACTIVITIES, 2013

Dissemination Team	Recipient facility	Best Practice Area
DPS San Juan	• Hospital Federico Aybar	Epidemiologic Surveillance
DPS Sánchez Ramírez	• DPS La Vega	Change Management Team
DPS El Seibo	• DPS Hato Mayor • DPS La Altagracia	Change Management Team
Hosp. Dr. Toribio Bencosme	• Hosp. Cayetano Germosen	Client service offices and filing systems
Hosp. Teófilo Hernández	• Hosp. Hato Mayor	
Hosp. Luis Morillo King	• Hosp. Pedro E. Marchena	
Hosp. Inmaculada Concepción	• Hosp. Municipal de Cevicos	
Hosp. Jaime Mota	• Hosp. De Neiba	
Hosp. San Vicente De Paul	• Hosp. Leopoldo Pou	
Hosp. Luis L. Bogaert	• Hosp. Gral. Santiago Rodríguez	
Maternidad San Lorenzo de Los Mina	• Hosp. El Almirante	EmOC training
Hosp. Dr. Antonio Musa	• Hosp. Dr. Francisco A. Gonzalvo • Hosp. La Altagracia	
Hosp. Alejandro Cabral	• Hosp. Rosa Duarte	Biosafety management

Results of sharing of best practices:

- 2 DPS have change management teams
- 6 Hospitals have client service offices with organized filing systems for medical records
- 2 hospitals have improved systems and space for supply chain management
- 1 hospital has processes for improved biosafety.

Several factors significantly facilitated the successful replication of best practices:

- Motivation and commitment of team-driven dissemination activities.
- Methodologies and tools were available to train facilitators to disseminate best practices.
- Selection of receptor sites for replication was directly coordinated by the Regional Health Services. Selection of the receptor site in conjunction with the Regional Health Services, motivated them to get involved in these processes, visualizing it as a tool to improve hospitals within its service network.
- Facilitation of workshops by Centers of Excellence teams that come from similar facilities and share best practices based on their own experiences.

12. RESPONSE TO THE 2010 EARTHQUAKE IN HAITI

On January 12, 2010, the Republic of Haiti was struck by a powerful earthquake that devastated the lives of people in and around Port au Prince in an unprecedented manner. USAID/Dominican Republic responded to the immediate needs of the Haitian population in a variety of ways. One of those ways was to quickly reprogram \$999,777.00 from the Maternal & Child Centers of Excellence Project to address some of the emergency relief needs caused by the earthquake. The Project received USAID's approval to redirect these financial resources to support Dominican hospitals along the border with Haiti that were receiving a great influx of patients in critical health condition.

The purpose of the emergency relief support provided by the Project was to contribute to the stabilization of the situation at public health care institutions, namely border hospitals, and through this save lives, limit long-term disabilities, and mitigate suffering of the displaced populations seeking medical care. Reprogrammed funds were targeted to provide and strengthen critical services to those arriving from Haiti to Dominican hospitals; assisting maternal-child health care services through emergency obstetric care (EmOC); supplying essential medicine and other medical commodities critical to save lives and limit injuries; providing support to health care staff at the intervention sites; ensuring the implementation of bio-safety and infection control measures; strengthening the epidemiological surveillance systems at target hospitals, and providing counseling and support to patients suffering from post-traumatic stress disorders.

Project emergency relief and response activities were initiated on January 15, 2010. The operations were coordinated with the MOH (SESPAS) through its Disaster and Emergency Directorate, its General Epidemiology Directorate, the Provincial Regional Health Directorate of Independencia and the Region IV Health Service. Coordination was also established with the USAID/Santo Domingo Health Office, other USAID-funded projects, the Peace Corps and United Nations Agencies. The following activities were implemented:

- **Technical-logistics assistance:** The Project provided technical and logistics assistance to the emergency services of Hospital General Melenciano at Jimaní, transportation and per diem to mental health brigades, transportation for physicians and nurses, transportation and logistics support to the Provincial Health Directorate at Independencia and transportation of commodities within the hospital's network.
- **Biosafety measures, waste management and disposal:** The Project team conducted a rapid intervention to implement medical waste management and disposal, following a route for waste disposal at the General Hospital Melenciano in Jimaní. This intervention included a path for cleaning and disinfection as well as the provision of materials for waste collection and their final disposal in coordination with the local municipality.
- **Organization of a system for the supply of medicines and commodities:** The Project team worked on the organization of the hospital pharmacy and supported the control of incoming and outgoing inventory.

- **Provision of medicines and commodities:** Provision of medicines (mainly antibiotics, analgesics, anti-inflammatory medications and serum) and commodities to respond to the emergency (osteosynthesis material, syringes, surgical gloves, gauze, etc).
- **Provision of medical equipment:** The Project distributed, among others, equipment such as portable X-ray machines, ECGs, lab testing machines and refrigerators for blood banks. The distribution was executed in coordination with health authorities and included the Buen Samaritano center, owned by a U.S.-based NGO.
- **Provision of non-medical equipment:** The Project also delivered beds, mattresses, and tents for the provisional lodging of patients, an electric generator, refrigerator, and washing machines, among others.

Additionally, the Project obtained donations of medicines from Síntesis, a pharmaceutical distributor, and Lilly Laboratories, USA. Private sector donations of medical oxygen and drinking water were also coordinated with USAID/Santo Domingo. Donations were estimated to value US\$80,000.00.

13. OUTCOMES

The outcomes detailed below are the result of joint efforts by the MOH and the Maternal & Child Centers of Excellence Project.

- Contribution to reduction in maternal and child morbidity and mortality**
 Based on the data from the MOH Epidemiological Surveillance System, the number of maternal deaths at the national level decreased significantly, from 2009 to 2013. The project estimates that the cumulative decline will reach 21.4% by the end of 2013. The cumulative reduction was 20.4% as of 2013, as reflected in Table 4.

In 2011, the country achieved a 16.4% decrease in the number of maternal deaths in comparison with the previous year, the greatest decline since 2005, when the MOH launched the Zero Tolerance strategy to reduce avoidable maternal and child mortality. During the same period, the number of maternal deaths in the ten participating hospitals decreased by 49.6%, a significant contribution to reduce this indicator at the national level. The decline in 2011 was sustained during the periods to follow.

TABLE 4: EVOLUTION OF MATERNAL DEATHS 2009-2013 IN 10 TARGET HOSPITALS

	2009	2010	2011	2012	2013
Total number of maternal deaths nationwide	215	201	168	175	171
Reduction (%) of number of maternal deaths (2009 baseline)	n/a	-6.5%	- 21.9%	-18.6%	-20.4%
Total number of maternal deaths in 10 target hospitals	n/a	61	31	32	29
Reduction (%) in the number of maternal deaths in 10 target hospitals	n/a	n/a	- 49.2%	-47.5%	-52.5%

Likewise, the number of child deaths – mostly neonatal – reported at the national level decreased by 20.0% from 2010 to 2012. The decline in the participating hospitals in the same period was 42.1%.

- Improving Management Capacity in the 10 hospitals and 3 DPS**
 The Management Capacity Index (ICG) of the 16 institutions (10 hospitals, 3 DPS and 3 RHS) studied shows positive changes in 2013 relative to 2010. The average ICG in 2010 was 38.9% and in 2013 the rate almost doubled to 64.4%. Table 5 shows differentiated ICG rates by location and area studied.

The ICG in hospitals stands out because it increased a little over 30 percentage points between 2010 and 2013 (33 % in 2010 to 63.6 % in 2013). The ICG in DPS showed a 20% increase from 56.1% in 2010 to 64.5% in 2013.

Comparing the management capacity of the areas studied, the results highlight the following:

- Capacity Planning Index:** The overall average, improved from 43.1% in 2010 to 69.3% in 2013. Hospitals had the highest percentage growth, 29% to 67.8%.

- **Management Capacity Index, Clinical Programs and Networks:** The overall average improved from 31.6 % in 2010 to 56.6% in 2013. Again hospitals had the highest percentage growth 25.9% to 56.8%, followed by the DPS that went from 47.8% to 70.2%.
- **Human Resource Management Capacity Index:** The overall average improved from 34.8% in 2010 to 66.0% in 2013. The largest increase was observed in hospitals increasing from 30.9% in 2010 to 64.7% in 2013.
- **Information Management Capacity Index:** The overall average improved from 52.4% in 2010 to 70.5 % in 2013. Hospitals showed the greatest increase in this index rising from 49.9% to 71.1%.

Based on the above it can be concluded that the overall ICG and ICG by area show improved performance in hospitals as consistent with the higher level of effort made by the project in these establishments. These indexes also improved in the DPS and RHS, though to a lesser extent.

TABLE 5: CHANGES IN MANAGEMENT CAPACITY INDEX, GENERAL AND BY SPECIFIC AREA PER TYPE OF FACILITY - 2010 AND 2013

		Overall average		Hospitals		DPS		RHS	
		2010	2013	2010	2013	2010	2013	2010	2013
Management Capacity Index		38.9%	64.4%	33.0%	63.6%	56.1%	74.5%	57.4%	59.9%
Study topics	Planning capacity index	43.1%	69.3%	29.6%	67.8%	75.8%	80.4%	78.1%	89.1%
	Management Capacity Index, Clinical programs and networks	31.6%	56.6%	25.9%	56.8%	47.8%	70.2%	49.6%	47.1%
	Human Resources Management Capacity Index	34.8%	66.0%	30.9%	64.7%	53.0%	73.8%	42.4%	64.2%
	Information Management Capacity Index	52.4%	70.5%	49.9%	71.1%	56.3%	78.3%	62.1%	63.9%

Source: CESDEM report, Changes in the capacity of managers from selected Ministry of Health institutions, 2010, 2013

- **Increase in Client Satisfaction**

The Client Satisfaction index (ISU) for the four services in the 10 hospitals increased slightly during the 2010-2013 period, from 64% to 66%. The most significant increase was rendered in the satisfaction of clients receiving obstetric services.

In 2013, user satisfaction for obstetric services (66.3%) was higher than that of pediatric services (64.9%). In-patient pediatric service remained the most favorable assessment in both years (68%). Prenatal care was ranked second, with an increased level of satisfaction from 63% to 66 % during the period. The level of satisfaction with outpatient pediatric care and delivery care remained the same.

The user satisfaction level for maternal and child services increased by two percentage points (ISU 64 % in 2010 to 66% in 2013) over a period of three years. This is the result of hard work at the management level, but still has not yet reached the ideal levels of satisfaction, which is expected to continue increasing in the coming years, if the intensity of work is maintained by the Ministry of Public Health.

- **Incorporation of clinical practices of proven effectiveness in the participating hospitals.**
The decline in maternal and neonatal morbidity and mortality is correlated with the increased use of proven lifesaving clinical practices that were incorporated into the routine practices of the health facilities. The table below summarizes the positive change in terms of results in key tracer indicators.

TABLE 6: EVOLUTION OF TRACER INDICATORS IN THE TEN HOSPITALS SUPPORTED BY THE MATERNAL & CHILD CENTERS OF EXCELLENCE PROJECT, 2009–2013

Tracer Indicator	2009 Baseline	2010	2011	2012	2013
AMTSL	32%	60%	82%	96%	96%
Restrictive episiotomy	30%	34%	25%	23%	17%
Pregnant women whose weight, blood pressure, and uterine height were measured during antenatal care visits	82%	83%	90%	96%	95%
Compliance with maternal death audits	0%	16%	65%	95%	68%
Cesarean section	39%	44%	42%	42%	48%

- **Creation of a methodological model for the development of Centers of Excellence in hospitals and DPS.**
As a result of this project, a Centers of Excellence Model for continuous quality improvement was created to guide management improvement and clinical care processes in hospitals and DPS. This model was developed and validated in participating institutions during the five years of project implementation and it can be rolled out to institutions across the country. According to a study by Cultural Practice, the managerial capacity of the Centers of Excellence to respond to emergency situations with lifesaving responses has made the difference in reducing maternal and child morbidity and mortality.
- **Improved Team performance in response to intrinsic motivators.**
The experience in the implementation of the Centers of Excellence Model has demonstrated that it is possible to create an environment that fosters intrinsic motivation in MOH employees. Management and technical teams from each of the target institutions responded positively to the opportunity to take ownership and direct the institutional future. Each committed and actively participated in quality improvement processes motivated by a sense of purpose in contributing to saving the lives of mothers and their babies. This intrinsic motivation resulted in tangible results (expressed by changes in indicators) as well as intangibles (culture of quality) in hospitals and DPS and allowed one to overcome certain structural limitations.
- **Development and validation of the Centers of Excellence Certification System to promote continuous quality improvement processes.**
On April 2, 2013, the MOH issued Administrative Regulation 00012 acknowledging that “the Centers of Excellence Certification System would be utilized as a proactive and functional model of the Ministry of Public Health to promote excellence in health care delivery, in line with the quality standards established by the National Health System.” The design, validation, and official application of the system by the Vice Ministry of Quality Assurance encourages institutions to promote the integration of systemic and programmatic interventions; improve sustainability of quality of care efforts; improve client satisfaction; improve staff motivation and morale; and sets the basis for an accreditation system.

- **Network of hospitals and DPS capable of replicating best practices among their peers.**
The replication of best practices in continuous quality improvement in the 13 participating institutions has shown other hospitals and DPS how the Centers of Excellence can build the capacity of their peers and of the entire health system. Client management and filing systems were replicated in six hospitals; biosafety in one hospital; a dependable supply system in two hospitals; EmOC training in two hospitals; and strengthening of change management teams in two DPS. Use of the Centers of Excellence methodology and tools by staff of participating institutions produced significant changes in leadership of teams, file organization, information systems, supply chain management, and increased knowledge and clinical practices in EmOC and biosafety.

14. LESSONS LEARNED

The process of developing and implementing the Centers of Excellence Model in the Dominican Republic has generated lessons learned that are important to consider when scaling up the model. The main lessons learned are the following:

- **Team empowerment generates a commitment to a better future and leadership.**
The first step toward change is to help change management teams believe that it is possible to incorporate improved practices in their own environment and that the outcomes not only depend on actions at a higher level but also on their own efforts. The ability to create a change management team and strengthen its leadership is the driving force behind institutional change and implementation of quality improvement processes.
- **Strategic improvement in the conditions and organization of the work environment increases adherence to norms and motivation.**
Applying the “broken windows” theory in hospitals and DPS clearly demonstrated that improving the structure and order of the work environment helps teams commit to the behavior change required to undertake quality improvement processes. These changes also resulted in increased client satisfaction.
- **Ongoing coaching combined with means to encourage accountability keeps teams motivated and focused on their targets.**
The skills and potential of human resources in health facilities can be maximized when targets are clearly defined and tools are available to facilitate task implementation. Similarly, being part of a process that includes receiving support, overcoming barriers, and being accountable through supervisory visits, progress reports, and peer discussions, acts as an intrinsic motivator that encourages staff to work toward the established goals.
- **The diagonal approach to strengthen management and quality of maternal and child care strengthens the institutional platform to achieve results.**
Time invested in strengthening managerial capacity, nurturing a culture of change, and creating leadership within change management teams provides “fertile soil” in which to grow all the other interventions aimed at improving the quality of public health in a sustainable fashion.
- **Implementation of a continuous quality improvement system provides a methodological framework for carrying out other improvement processes.**
The change management teams started with a demanding self-assessment focused on identifying areas that needed improvement and the formulation of action plans that identify responsibilities, resources, timeline and indicators. Establishing mechanisms to track indicators and creating forums for regular discussion of outcomes and level of compliance helped teams to internalize the continuous improvement methodology. The Certification System was an essential component in this process as it showed the importance of measuring the work against pre-established norms, documenting the outcomes achieved, and valuing external assessments.

- **Identification and implementation of a “Life Chain” in the hospitals is an effective means to improve mother and newborn care.**

Practices such as 24-hour change-of-shift reports, formal shift changes every six hours, shifts staffed with specialized hospital personnel, delivery room managers, extreme morbidity (near miss) committees, and orientation for new staff have created teams that assume responsibility for people’s lives and for finding timely solutions. Adherence to these practices together with strengthened support systems has yielded beneficial results and impacts.



15. RECOMMENDATIONS

The sustainability and institutionalization of the Centers of Excellence Model requires, from the Project's perspective, implementation of the following actions:

- **Strengthen the coordinated work of the health facilities through a service network.**
The Regional Health Services are meant to play an active role in the key processes associated with the coordination of a service network: referral procedures and quality, monitoring and evaluation of the service quality indicators, and other processes. Building on the country's communication and technology platform, user friendly tools can be developed, for example, to facilitate referral, counter-referral, and follow-up consultations for new mothers and newborns within the first 72 hours.
- **Strengthen change management capacity within the health system.**
Quality of care improvement processes involve profound changes in behavior and institutional culture. The processes need to be directed at the central, regional, and provincial levels of the MOH as well as the health facilities.
- **Encourage processes and systems that guarantee ongoing supervision in hospitals and DPS.**
The hospitals and DPS can benefit and maximize the use of supervisory and follow-up visits from MOH officials and the Regional Health Services. The support should provide technical assistance to support the continuity of the quality improvement processes.
- **Support the institutionalization of continuous quality improvement processes by the MOH.**
The validation of processes and tools that comprise the Centers of Excellence Model and the Certification System will encourage all the DPS and hospitals to request support in launching quality improvement processes. Other measures must be taken to ensure the stability of managers and providers capable of leading the change processes needed to transform the quality of care.
- **Prioritize and focus expansion of the model to impact maternal and child indicators.**
Accelerating the achievement of country targets for the reduction of maternal and child mortality is possible. To this end, it is important to concentrate the efforts in National and Regional Reference Hospitals, as the highest number of maternal and neonatal deaths occur in these facilities. At the same time, the service networks need to be strengthened, including being connected with the primary health care level facilities and the referral systems.

ANNEX 1: LIST OF PARTICIPATING FACILITIES

Hospitals (10):

- San Lorenzo de Los Mina Maternity Hospital
- Alejandro Cabral Regional Hospital
- Antonio Musa Regional Hospital
- Inmaculada Concepción Provincial Hospital
- Jaime Mota Regional Hospital
- Luis L. Bogaert Regional Hospital
- Luis Morillo King Regional Hospital
- San Vicente de Paul Regional Hospital
- Teófilo Hernández Provincial Hospital
- Toribio Bencosme Provincial Hospital

Provincial Health Directorates (3)

- Direccion Provincial San Juan
- Direccion Provincial El Seibo
- Direccion Provincial Sanchez Ramirez

Regional Health Services(3)

- Region V SRS East
- Region VI SRS El Valle
- Region VIII SRS Cibao Central

ANNEX 2: INVENTORY OF TECHNICAL DOCUMENTS & STUDIES

A- Conceptual Documents

- A.1 Executive Summary, Maternal & Child Centers of Excellence Project
- A.2 Centers of Excellence Certification System
- A.3 Centers of Excellence Quality Management Model in Hospitals
- A.4 Centers of Excellence Quality Management Model in Provincial Health Directorates

B- Technical Guidelines

- BI- Managerial Capacity
 - BI.1 Design and implementation of change management, leadership and team building
 - BI.2 Development of strategic plans
 - BI.3 Management of clinical records in Hospitals
 - BI.4 Implementation of the Hospital Management Information System (SIGHO)
 - BI.5 Supply Chain Management in Hospitals
 - BI.6 Hospital Emergency Room procedures
 - BI.7 Hospital processes analysis and management
 - BI.8 Hospital costing methodology

B2-Health Service Quality

- B2.1 M&E of obstetric and neonatal healthcare in hospitals
- B2.2 Clinical supervision of maternal and neonatal services

B3-Biosafety

- B3.1 Design and implementation of a risk and biosafety management system in Hospitals
- B3.2 Design and implementation of medical waste management and disposition system

B4-Certification

- B4.1 Healthcare standards for Maternal & Child Centers of Excellence Certification
- B4.2 Guidelines to develop Hospitals and Provincial Health Directorates as Centers of Excellence
- B4.3 Guidelines to evaluate Hospitals and Provincial Health Directorates as Centers of Excellence
- B4.4 Evaluation Tool for Provincial Health Directorates (MS Excel®)
- B4.5 Evaluation Tool for Hospitals (MS Excel®)

B5-Others:

- B5.1 Methodology to develop an Epidemiological Profile at the provincial level
- B5.2 Methodology to design contingency plans for emergencies and disasters
- B5.3 Methodology to define a package of services for a regional healthcare network

C- Studies

- C1. Infections Associated with Health Care in 10 target Hospitals, 2010; INTEC
- C2. Baseline study: Client satisfaction with obstetric and pediatric services in select MOH Hospitals, 2010; CESDEM
- C3. Study of management capacity of select DPS and Hospitals, Baseline study, 2010, CESDEM
- C4. Study of Significant Factors in the Reduction of Maternal Mortality in Select MOH Hospitals, 2012; Cultural Practice, LLC
- C5. Improving the Access and quality of immunization in the Eastern Region, 2012; Gisela Quitero.
- C6. Humanization of perinatal care: Study of six target hospitals, July-September, 2013; Indiana Barinas & Mayra Toribio.
- C7. Study of management capacity of select DPS and Hospitals, Comparative study, 2010 -2013; CESDEM
- C8. Client satisfaction with obstetric and pediatric services in select MOH Hospitals, Comparative Study, 2010-2013; CESDEM

ANNEX 3: PROGRESS ON PROJECT INDICATORS

Indicator	Baseline (2009)	Results 2010-2013					% of total target reached
		2010	2011	2012	2013		
1	Number of Antenatal Care (ANC) visits by skilled providers from USG assisted facilities	63,758	88,824	78,580	88,756	88,413	96%
2	Number of people trained in maternal/newborn health through USG-supported programs.	0	192	865	1,628	2,059	188%
3	Number of women receiving Active Management of the Third Stage of Labor (AMSTL) through USG-supported programs	10,051	19,838	29,470	30,537	32,592	98%
3a	Percent of women receiving Active Management of the Third Stage of Labor (AMSTL) through USG-supported programs	32%	60%	82%	96%	96%	100%
4	Number of children less than 12 months of age who received DPT3 in intervened areas	13,553	13,880	13,716	11,818	n/a	n/a
4b	Number of children less than 12 months of age who received DPT3 in intervened DPS	20,552	18,429	13,716	19,155	95%	98%
5	Number of people covered by USG-supported Health Financing Arrangements	594,908	723,415	705,100	1,107,463	1,157,402	160%
6	Number of institutions with improved Management Information Systems, as a result of USG Assistance	3	10	10	13	13	100%
7	Number of special studies	0	1	3	6	7	100%
8	Percent of pregnant women who had their weight, blood pressure, and uterine height measured and recorded in their last Antenatal Care visit.	82%	83%	90%	96%	95%	98%
9	Percent of satisfied MCH users in intervened facilities (I)	64%	N/A	N/A	N/A	66%	117%
10	Number of managers and managerial teams that use management tools (I)	39%	N/A	N/A	N/A	64.4%	N/A
11	Number of improved Management Information Systems modules in intervened hospitals, DPS, and SRS, as a result of USG Assistance	0	16	30	71	79	99%

	Indicator	Baseline (2009)	Results 2010-2013					% of total target reached
			2010	2011	2012	2013		
12	Number of hospitals with functioning appointment system for MCH Services	1	1	0	10	9	188%	
13	Number of people trained as trainers, coaches, and tutors able to replicate tools in other hospitals, DPS and SRS	0	0	108	67	89	117%	
14	Number of tools replicated to other hospitals, DPS and SRS	0	N/A	0	11	48	123%	
15	Number of hospitals which have successfully completed the licensing process	2	7	8	6	5	63%	
16	Number of hospitals with updated and implemented emergency and disaster plans	1	1	3	5	8	160%	
17	Number of hospitals with trained community members participating in hospitals boards	1	1	0	3	8	80%	
18	Number of pregnant women with known HIV status (includes women who were tested for HIV and received their results)	15,492	17,128	14,854	16,244	20,530	97%	
19	Percent of women who received episiotomies	30%	34%	24.8%	25%	19%	n/a	
20	Percent of births delivered by caesarean section	39%	42%	44%	42%	48%	n/a	
21	Percent of post-partum women discharged from hospitals with a referral to primary care	0%	0%	0%	0%	37%	n/a	
22	Percent of maternal deaths audited by the Safe Motherhood Committee	0%	16%	65%	95%	68%	n/a	
23	Percent of neonatal deaths audited by the Safe Motherhood Committee (2)	0%	0%	0%	0%	10	100%	
24	Number of biosafety, medical waste management and disposition assessments completed	0	10	10	10	6	60%	
25	Number of hospitals with operating biosafety and infection control systems	2	9	10	10	9	113%	
26	Number of individuals successfully completing training in waste management, infection prevention and universal precautions	396	363	2,225	3,609	3,609	162%	
27	Number of hospitals with an operating system to manage and dispose medical waste	2	3	3	7	--	--	
28	Number of hospitals with a final disposition of medical waste that meets standards	0	0	2	2	5	63%	

ANNEX 4: SUCCESS STORIES

From Needle in a Haystack to Click of a Button

USAID Transforms Customer Service Offices in Dominican Republic Hospitals



Challenge

A crowded entrance; motorcycles blocking the way; expectant mothers walking nervously wondering when they will be admitted; a putrid smell, trash on the floor, and no signage telling you where to go. This was a typical scene for a patient entering a public hospital in the Dominican Republic. Often times, there was no such thing as a Customer Service Office. When pregnant mothers arrived for their regular check-ups, they had nowhere to sit, and waited hours to get their medical records. A typical medical records office had

hundreds of thousands of records dating all the way back to the 1970s, and organized in myriad ways making it very difficult, and sometimes impossible, to find files. The absence of customer service offices and the pervasively disorganized medical records detracted from quality care.

Initiative

As part of its Maternal and Child Centers of Excellence Project, USAID transformed the waiting areas and filing systems in 10 public hospitals thereby drastically improving a patient's experience when they first arrive. With the help of USAID, hospital staff in all these hospitals has been trained to properly file and retrieve medical records. Hospital staff went through 4-6 months of arduous work to purge, streamline, and reorganize all medical records using numerical sequencing. In addition, USAID provided computers and trained relevant staff in the use of an automated patient registration system. Waiting areas have been refurbished and re-designed to fit customer needs.

Results

USAID's 10 intervention hospitals now have functional Customer Services Offices. When patients come in, they take a ticket number and sit down in comfortable chairs – the chaos, endless waiting periods, and idle crowds are a thing of the past. All hospitals now have signage for their different departments making it easier for patients to find their way. With USAID's help, finding a needle in the haystack has become as easy as a click of a button with respect to finding medical records. More importantly, customers at these hospitals are noticing that the quality of the services they are receiving has greatly improved.

Improving Customer Service and Empowering Staff in Dominican Republic Hospitals

USAID has transformed medical records filing systems in ten hospitals



Dinorah Brito has led the medical records area within the Customer Service Department at the Luis Morillo King Hospital in La Vega on and off since 1973. Over the past six months, the 180° transformation in her office was so dramatic that she became inspired to change her mood and even her look.

When USAID's Maternal and Child Centers of Excellence Project proposed that the hospital reconfigure its medical records, Dinorah was skeptical and even resistant to change, like most of her fellow hospital colleagues. Purging, reorganizing and digitizing over 97,000

medical records in a period of no more than 6 months was a daunting task that she didn't wish for herself nor anyone else for that matter.

The small records office at Luis Morillo King Hospital was overcrowded, disorganized, and extremely hot. Filing cabinets were rusty and cumbersome, and files were organized in a variety of ways. "Though she did not notice it before, the stress from her job frequently made Dinorah moody and depressed" said one of her colleagues.

Despite being hesitant and on the verge of resigning, Dinorah accepted USAID's challenge to transform the records office. First USAID trained Dinorah and her staff on how the medical records office should be organized. Then, Dinorah rolled up her sleeves, put on her gloves and mask – and started the transformation. She and her team worked from 7am-6pm daily for six full months going through all of the medical records, purging, and relabeling incessantly. USAID also made infrastructure changes in the office including a larger, air-conditioned space, new furniture, an office for Dinorah, as well as computers and software for the automation of the patient data base.

Today, Dinorah's office is in impeccable order. "Now it only takes me 20 seconds to give a patient their medical records. This used to take me hours before the change. My team and I are much more comfortable in our office, and we are ecstatic with the new filing system" she proudly explained. "We even have the luxury of preparing the medical records that will be used the following day. That is something we could not do before" said Dinorah. With the help of the project, Dinorah and the entire Customer Service Department now have Guidelines for Customer Service, suggestion boxes, and user satisfaction surveys.

"My mood, my face, the way I dress...everything has changed because I'm so motivated now. I feel happy coming to work every day. Look at me!" she exclaimed as she stood up and did a short runway-worthy walk to show off her own transformation.

Though it may not be obvious at a glance, the bottom-up institutional changes taking place in USAID's Maternal and Child Centers of Excellence are changing lives. They are empowering and improving the lives of hospital staff like Dinorah, and - through improved customer service and quality of care – they are changing the lives of thousands of users.

USAID's Maternal and Child Excellence Project is also intervening in 9 other hospitals, and three provincial health directorates to curb maternal morbidity and mortality through a number of interventions including: EOC, biosafety, functioning customer service offices, infrastructure improvements, and overall organizational development.

Humanization of Care Improves Service Quality in Dominican Hospitals

USAID is training doctors and nurses in Emergency Obstetric Care to improve services and curb maternal mortality.



Víctor Rafael Reyes Rodríguez is a third year medical resident in obstetrics and gynecology at San Lorenzo de los Mina Hospital. Dr. Reyes is one of 69 doctors and nurses trained in Emergency Obstetric Care (EOC) and humanization of care at San Lorenzo de los Mina Hospital by USAID's Maternal and Child Centers of Excellence project. When project staff began work at his hospital, he did not understand why there was a need for those transformative interventions in biosecurity, EOC trainings, and reconfigurations of their Office of User Services. Humanization

of care was the last thing on his mind given the abundance of patients that he needed to care for on a daily basis.

After finishing the USAID-sponsored EOC training Dr. Reyes' outlook on the services he provides changed dramatically. Not only did he learn important techniques to prevent maternal deaths during labor and delivery, but he also learned that the human touch is an integral part of quality health care. He described how "one day after nearly 24 hours of duty, I was told I needed to serve three more patients in labor simultaneously. At that point, I almost threw-in the towel given my level of exhaustion but I took a few minutes to reflect on the trainings I received from the project, and found the strength to continue my duties. How did I do that? I imagined that the three patients waiting for my care were the three most important women in my life: my mother, my wife and my sister. It is my job to save these women, and treat them as my own family."

Dr. Reyes said that with USAID's help he has noticed numerous changes in his hospital. "You can feel the change in people's service-oriented attitude towards their patients; hospital staff is embracing biosafety changes; the hospital is cleaner; wait lines are shorter; and we are thrilled that the hospital's maternal mortality rates are dropping". Word has spread about these changes. Old and current users express satisfaction with the services, and first-time users are enjoying the new standard at San Lorenzo de Los Mina Hospital.

First the Mannequin, Then the Patient

USAID trains hospital personnel in Emergency Obstetric Care (EOC) to reduce maternal mortality



Challenge

Los Mina is an area outside of Santo Domingo characterized for its dense population, and deep poverty. On a typical day at San Lorenzo de Los Mina Hospital's maternity ward, doctors care for an average of 330 mothers-to-be out of which approximately 50-60 will deliver their baby in the hospital that day. In 2010 alone, staff at San Lorenzo Hospital provided care for 12,124 women representing an impressive 6,761 deliveries and 5363 cesarean sections. At this time last year however, the hospital had already had 13 maternal

deaths, 7 of which were caused by postpartum hemorrhage. The hospital needed to find a way to reduce maternal and child mortality.

Initiative

With the help of USAID, San Lorenzo Hospital is improving quality of care through a number of transformative interventions, one of which is intensive training in Emergency Obstetric Care (EOC) to reduce maternal and child mortality. To date, approximately 125 hospital personnel including obstetricians, perinatologists, medical residents, general practitioners, and nurses, have been trained in EOC at San Lorenzo de los Mina Hospital. In the three-week trainings delivered by Ministry of Health staff, participants learn the evidence-based tools and practices that help reduce maternal and neonatal mortality. In addition to improving their EOC techniques, doctors and nurses at San Lorenzo Hospital have learned the importance of providing humanized care.

Result

EOC trainings have had a significant impact as evidenced by an 71% reduction in maternal mortality at San Lorenzo Hospital over the past year of project intervention. In 2011, as a result of improved EOC practices, all but seven mothers have survived their deliveries. More importantly, the behavior of hospital personnel has changed significantly as they integrate what they learned into the services they provide. All 10 intervention hospitals of USAID's Maternal and Child Centers of Excellence Project have benefited from EOC trainings. Thanks to these and other interventions, hospital personnel are now shifting paradigms, changing attitudes, embracing team work, and treating expectant mothers with appropriate measures and a human touch. Improved EOC services translate into healthier and satisfied patients that can return to their daily lives sooner than ever before.

Extreme Makeover: Hospital Biosafety Edition

USAID makes drastic changes in hospital biosafety norms and practices



Challenge

Biosafety was a foreign concept in La Vega's Luis Morillo King Hospital in the Dominican Republic due to lack of training and insufficient resources. The hospital lacked guidelines and appropriate infrastructure for disposal of biological waste thereby putting patient and hospital staff's lives in jeopardy. Exposure to biological waste was one of the culprits of infection and spread of disease. Hospital cleaning staff did not wear appropriate protective gear, waste was not adequately classified, and waste disposal routes were not clearly marked. In some cases, hospital floors and even roofs were littered with medical gloves, syringes, and other hazardous waste. Users often complained of putrid smells, and dirty walls and hallways in public hospitals.

Initiative

Through its Maternal and Child Centers of Excellence Project, USAID has carried out an extreme makeover with respect to biosafety measures in 10 public hospitals in the Dominican Republic including Luis Morillo King. To start with, the project diagnosed the biosafety situation in each hospital in order to determine its individual needs.

Secondly, they urged the hospital's director to establish or reactivate a Hospital Biosafety Committee so that it could be the steward of change. USAID trained 206 Luis Morillo King hospital staff including doctors, nurses, and cleaning staff in biosafety norms and best practices, and thus far, success has had a snowball effect. USAID also donated signage to mark the waste disposal evacuation routes.

Result

Luis Morillo King Hospital now has a Biosafety Committee that meets every two weeks. They have established their own norms, risk maps, and operational work plans following USAID's recommendations. The Committee have worked diligently to raise awareness on the importance of biosafety as evidenced by their now empowered and motivated, cleaning personnel. In addition, biosafety staff is properly equipped, and they are using their new skills by adequately disinfecting medical instruments, disposing of regular waste differently than biological waste, and making sure that every corner of the hospital is clean. USAID is making biosafety makeovers in all 10 intervention hospitals as part of its Maternal and Child Centers of Excellence Project. Active biosafety committees, enhanced immunization coverage, proper signage of waste evacuation routes, adequate disposal of placentas, and motivated personnel are becoming the norm and not the exception in these hospitals. A deeply-rooted change in hospital staff behavior with respect to biosafety, coupled with more hygienic environments, is contributing to improved quality of care in Dominican hospitals.

Jump, or You'll Miss the Train

Transforming Public Institutions to Improve Maternal and Child Health Services



When USAID's Maternal and Child Centers of Excellence Project approached Dr. Juan de la Cruz, Director of Luis Morillo King Hospital in La Vega, he was skeptical and even resistant to the interventions they proposed. Dr. de la Cruz knew that the hospital was by no means perfect, but he did not think it needed improvements in customer service, biosafety, infrastructure and management to name a few. In fact, initially, he would not participate in meetings or diagnoses relevant to project activities. With respect to his management, Dr. de la Cruz was very directive and delegated very little.

Once he noticed transformations in the Customer Service Office, medical records, and biosafety, Dr. de la Cruz knew that he too needed to make the jump on the "change train" with the rest of the hospital staff before he missed it.

Today, Dr. Juan de la Cruz has become one of the project's main advocates. "Thanks to USAID, this is a different hospital. Before, we were not adequately responding to the needs and demands of our population, and the hospital was reactionary rather than proactive" he explained. "Now, USAID has trained us in strategic planning so we have a strategic 5-year operational plan".

USAID has transformed the hospital in a variety of ways, all of which ultimately translate into better services for the hospital users. First, USAID invested in a new Customer Service Office and the accompanying medical records area which were previously disorganized and inefficient. Second, USAID has made important infrastructure improvements in the maternity ward and neonatal care units of the hospital. Third, hospital staff has been trained in biosafety thereby making strides in protecting their lives as well as those of their patients.

"One of the most important changes that have taken place since the start of the project is that now I feel like I'm working as part of a team" said Dr. de la Cruz. "Before, I was heading most initiatives but now, with the project's help, I have come to appreciate the value of teamwork". Dr. de la Cruz has become an expert delegator which has greatly increased hospital staff's morale, and self-esteem.

"With respect to our figures, in 2008 our hospital had 6 maternal deaths, but in 2011, with the help of USAID, we have had zero until September" he proudly explained. Similarly, in 2008 they experienced 35 child deaths out of 10,000 children born alive. This number has decreased to 18 child deaths in 2011. Furthermore, as a result of the Emergency Obstetric Care trainings financed by USAID, today only 34% of women who give birth at Luis Morillo King Hospital get episiotomies whereas 72% of women got them in 2008.

By changing the outlook of hospital Directors and staff, like Dr. Juan de la Cruz, USAID is promoting institutional and behavioral changes that help improve the quality of maternal and child health services in Dominican Republic.

Improving Health at the Provincial Level



The challenge of coordinating public health activities in one of the poorest provinces in the Dominican Republic, El Seibo, has not gotten in the way of the Provincial Health Directorate's (DPS) ability to generate important changes and become a model for its peers. When the DPS made the decision to implement quality improvement strategies in 2009, they faced multiple challenges including: low vaccination coverage, delays in case notification for epidemiological surveillance and difficulties with the link between communities and key public health services. As a result of the team's effort and commitment to

improve the provincial public health response from 2009-2013, the El Seibo DPS received a plaque with four stars in recognition for their induction as one of the first Centers of Excellence by the Ministry of Health.

This recognition is the result of an array of efforts, including a 50% improvement in overall compliance with quality standards and 30% increase in vaccination coverage from 2011 to 2013. In addition, over 90% of required data is reported to the epidemiological surveillance system on time, reflecting vast improvements in data management.

Strategic institutional strengthening activities focused on developing the talent of team members, improving systems to generate up-to-date information for decision making, improving the efficiency of administrative and financial management systems as well as generating health promotion initiatives.

"The empowerment of our team combined with the use of the pragmatic tools focusing on standards for quality provided by the Centers of Excellence Certification System to measure progress towards our goals has made all the difference".

Dr. Miguel Ángel Peralta, Director of the PHD, El Seibo province

The commitment, dedication, and ability of each DPS team member to apply skills learned in their day to day work have led them to become examples for their peers. The team has been asked to share their experiences with other DPSs in their Region, serving as mentors to assist their own quality improvement processes. The proven capacity of the health system staff to motivate their peers to engage in quality improvement is evidence of the potential that exists for sustainability and expansion of these best practices nationwide.

Improving the Quality of Care to Save the Lives of Mothers and Infants



Josefina Duran, 35 years old and the mother of a healthy 2 year old daughter, is grateful for the care she received from personnel at the Jaime Mota Regional Hospital in Barahona, who helped save her life and that of her daughter. In 2011, Josefina gave birth and suffered severe post-partum hemorrhaging, which put her life at risk. As she fought for her life, the team of health care providers never left her side, providing timely care to ensure her speedy recovery. Thanks to the quality of care received by the team at the Jaime Mota Hospital, a Hospital supported

by the USAID Maternal-Child Excellence initiative, Josefina is a living testimony to the fact that lives can be saved with quality, timely care.

Unfortunately, there are many women like Josefina that are not able to be saved due to compromised quality of care in the Dominican Republic, which inhibits a timely and effective response by health facilities when complications occur. An interesting paradox exists in the Dominican Republic where 98% of women give birth in hospitals and are attended to by qualified health personnel; yet, maternal and infant mortality rates are among the highest in Latin America at 159 maternal deaths per 100,000 live births and 25 infant deaths per 1,000 live births respectively.

In response to this challenge, the Ministry of Public Health and USAID jointly supported the implementation of the Maternal & Child Centers of Excellence in ten hospitals designed to generate changes and create the conditions to save the lives of mothers and newborns. The Centers of Excellence focused on strengthening management systems, combined with efforts to improve the quality of maternal-child health services. Activities included reinforcement of emergency obstetric care practices, clinical supervision, and mentoring to improve the way care is delivered and ensure that women and their newborns are at the center of the provision of services.

As a result of these efforts, the USAID/Maternal & Child Centers of Excellence Project has contributed to reducing maternal and neonatal mortality from 2009-2013. In 2011, a remarkable reduction was achieved, with a 16.4% reduction in maternal deaths nationwide and a 49.6% reduction at USAID/MOH-supported Centers of Excellence. Also notable, infant deaths, largely neonatal, were reduced by 20% from 2010-2012. These results were sustained through 2013.

The positive result from these interventions is evidence that it is possible to improve the quality of maternal-child health by placing the mother and newborn at the center of care. With further reinforcement of health facilities and expansion of best practices by the Centers of Excellence, there is great potential to share more stories like that of Josefina.

Maternal & Child Centers of Excellence Certification System to form part of the Dominican Ministry of Health's system to measure quality

Ensuring sustainability and impact to benefit mothers and children



In November of 2013, the Minister of Public Health in the Dominican Republic, Dr. Wilfredo Hidalgo, and the Acting U.S. Ambassador, Daniel Foote, presented the accomplishments of the USAID/Maternal-Child Centers of Excellence Project. The Project helped to improve the quality of care and reduce maternal and neonatal mortality in 10 hospitals, which attend to 23% of births nationwide. During its implementation, which began in 2009, project-supported hospitals reduced maternal

deaths by 46% and infant deaths, mostly neonatal, by 42.1%.

These results are product of the joint efforts of the Ministry of Health (MOH) and USAID, who developed the Maternal & Child Centers of Excellence Certification system to improve the management of health systems and quality of services. This process involved the definition of quality standards, development of technical manuals and tools and the training of a cohort of external evaluators.

In April of 2013, the MOH took an important step to institutionalize this system by issuing an Administrative Decree to incorporate the Centers of Excellence system as the official model to be utilized for quality assurance. Ms. Maria Villa, Vice Minister for Quality Assurance, affirmed the importance of this step by stating: "The first certification process of health institutions as Centers of Excellence marks a precedent in the Dominican Republic, given that it fosters motivation for increased involvement in quality improvement processes".

In August of 2013, three institutions were recognized as the first Centers of Excellence by the MOH, which marks an important moment and progress towards the institutionalization of this system and its transformation to a routine program executed by the Vice Ministry of Quality Assurance.

Apart from the results obtained, the exceptional part of this initiative is the decision of the Dominican government to expand the Centers of Excellence model in six additional hospitals through resources from the Inter-American Development Bank (IDB). The scaling up of this model would serve to benefit two-thirds of the country's births. The transition of a project initiative to a public health program has become a reality that will allow the benefits to be extended to many more Dominican families.



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