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CASE STUDY: MATERNAL & CHILD CENTERS OF EXCELLENCE: IMPROVING HEALTH SYSTEMS AND QUALITY OF SERVICES IN THE DOMINICAN REPUBLIC



December 2016

This publication was produced for review by the United States Agency for International Development. It was prepared by Daniela C. Rodríguez for the Health Finance and Governance Project.

The Health Finance and Governance Project

USAID's Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people's access to health care. Led by Abt Associates, the project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. The five-year, \$209 million global project is intended to increase the use of both primary and priority health services, including HIV/AIDS, tuberculosis, malaria, and reproductive health services. Designed to fundamentally strengthen health systems, HFG supports countries as they navigate the economic transitions needed to achieve universal health care.

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ACRONYMS

AMSTL	Active management of third stage of labor
CFIR	Consolidated Framework for Implementation Research
CoE	Centers of Excellence
COP	Chief of Party
HFG	Health Finance and Governance Project
HSS	Health system strengthening
IDB	Inter-American Development Bank
MCH	Maternal and child health
MCHIP	Maternal and Child Health Integrated Program
M&E	Monitoring and evaluation
MOPH	Ministry of Public Health
NHS	National Health System
PAHO	Pan-American Health Organization
PHD	Provincial health directorate
REP	Replicating Effective Programs
RHD	Regional health directorate
TAG	Technical Advisory Group
USAID	United States Agency for International Development
WHO	World Health Organization



EXECUTIVE SUMMARY

USAID's Health Finance and Governance project (HFG) contributes to USAID's assistance to countries to deliver key health services and builds the evidence base around health systems strengthening (HSS). Under HFG's research portfolio, a series of retrospective, qualitative case studies were undertaken to understand the dynamics of successful HSS interventions by focusing on how HSS projects were implemented. This report presents the results for one of the five cases: the Maternal & Child Centers of Excellence: Improving health systems and quality of services in the Dominican Republic project (CoE).

The CoE project was implemented in the Dominican Republic from February 2009 to February 2014, through a direct contract of \$15.5 million between the USAID Mission in the Dominican Republic to Abt Associates. The project was intended to address the "Dominican paradox" of high maternal and infant mortality despite high rates of prenatal care and facility deliveries by addressing issues in quality of care and the culture around service delivery. Enabling environment factors that influenced the project included prioritization by the Ministry of Public Health (MOPH) to address mortality rates, consistent support among MOPH leadership, decentralization of the health system, the early 2010 earthquake in Haiti, and USAID's broader decision to refocus maternal and child health (MCH) funding.

The CoE project worked diagonally by integrating improved health systems functions and addressing quality of care in 10 hospitals, three provincial and three regional health directorates (RHDs) across the country, and establishing the different sites as models that could replicate best practices. In each site, multi-disciplinary change management teams were established to spearhead and oversee the implementation of different activities. Following the development of the change management teams, key quality improvement activities (e.g., improving clinical records systems, hospital clean up and biosafety activities) were undertaken that engaged staff across the health facility and resulted in visible changes to service delivery in order to ensure early buy-in. Subsequent management and quality improvement efforts addressed the whole pathway of MCH services, and finally a replication system was established whereby sites could share best practices with others in their network.

Critical features of the CoE project implementation were the site selection process—a collaborative process between the project, USAID, and the MOPH—which saw potential hospitals applying to be selected as a project site; joint development CoE components between project staff and site staff; "quick win" activities that engaged entire facilities and resulted in noticeable changes; phased implementation of each CoE component with built-in learning cycles; and commitment of project staff to empowering facilities and staff to make positive changes.

Three main challenges to implementation were identified. First, several project components were not fully realized including community engagement activities, activities to address neonatal mortality and engagement with RHDs. Second, the project was unable to address root causes leading to high rates of Cesarean section, which were driven partly by patient demand/preference but also by clinician-related factors such as work hours and reimbursement rates. Third, health systems challenges arose from persistent difficulties in changing the work culture of providers and facilities to a rights-oriented approach, issues with staff mobility and turnover, and counterpart resources from the health system that did not materialize.

The CoE project contributed to significant reductions in maternal and child mortality during the project period, critical tracer indicators, such as maternal death audits and active management of third stage of labor, were significantly improved, and an evaluation of the project found that staff, management and



clinicians attitudes had shifted to be more responsive to patient needs. Further, the MOPH adopted the certification system developed through the CoE project and began to apply the system in its facilities. By the project end, three of the project hospitals had partially met the requirements for certification.

The Dominican Republic government pursued a loan from the Inter-American Development Bank, which was used in part to continue the CoE activities and expand the program after USAID support ended. Despite a lag between USAID and IDB-funded activities, the program is currently underway. It is unclear how many of the original CoE sites, both hospital and provincial/regional sites, have sustained their CoE activities outside of this additional support because the certification process that is meant to be implemented by the MOPH does not appear to be active.

Lessons learned from the implementation of the CoE project include the need for respectful engagement of local counterparts and developing activities that are responsive to country needs, the integration of project staff at the sites and in the teams led to more meaningful change, and engagement with RHDs and on activities for newborn health should have taken place earlier during the project's life to ensure better gains.

I. INTRODUCTION

USAID’s Health Finance and Governance (HFG) project helps to improve health in developing countries by expanding people’s access to health care. The project team works with partner countries to increase their domestic resources for health, manage those precious resources more effectively, and make wise purchasing decisions. HFG’s research portfolio enhances the ability of USAID to assist countries in delivering priority health services while simultaneously contributing to the global pool of knowledge on health systems strengthening (HSS).¹

Under this research portfolio, the “Understanding the Dynamics of Successful Health System Strengthening Interventions” study seeks to bring into better balance our focus on “what works” in HSS with “how HSS works” to improve the performance of future HSS efforts. Our aim is to examine the dynamics of HSS project implementation, not to examine the cases as models for HSS interventions. We are pursuing this goal by initially conducting a set of six qualitative, retrospective case studies of successful USAID-supported HSS interventions and then producing a cross-case analysis to draw common patterns across cases.

The aim of this study to address four key questions:

1. How were a range of successful HSS interventions implemented in different countries?
2. What factors facilitated and constrained the successful implementation and documented outcomes of the interventions?
3. What were important factors about implementation that emerged across the different cases?
4. What are the implications of this study for future of implementing HSS interventions?

We chose six cases to examine a small sample of successful HSS initiatives in different places under different conditions and with different features in an attempt to tease out some of the policy setting, adoption, and implementation factors and processes that matter. While we remain attentive to the range of complex factors that affect success, we seek to distinguish those factors that decision-makers and implementers can control or influence. In so doing, we hope to develop and provide recommendations for adapting and sustaining HSS reforms in low-income countries.

This report presents one of the five case studies – on the Maternal & Child Centers of Excellence: Improving health systems and quality of services in the Dominican Republic project. In Section 2, we describe the study methods. In Section 3, we present the contours of the context in which the intervention was implemented, basic information on the intervention, how it was designed, and its outcomes. In Section 4, we describe implementation process for the intervention, including implement groundwork, key features of implementation process, and how the intervention was sustained and

¹ As defined by the World Health Organization, we define HSS interventions as those that implement “changes in policy and practice in a country’s health system” and improve “one or more of the functions of the health system and that leads to better health through improvements in access, coverage, quality, or efficiency” (WHO 2011: 9). HSS interventions are horizontal approaches that can address the root causes of health system constraints and impact multiple issues, rather than vertical service- or disease-specific interventions like health system support programs (Travis et al. 2004: 903).



disseminated. Finally, in Section 5, we present our synthesis of the primary factors that influenced the intervention's implementation and contributed to its success.

2. METHODS

The study, comprised of six case studies and cross-case analysis, was conducted in several phases, each of which is briefly described in turn. For a more detailed explanation of our case selection process and methods, please see the study design.²

2.1 Design and implementation

In the first phase of the study, we finalized the design and began implementation, which involved engaging USAID and selecting the case studies.

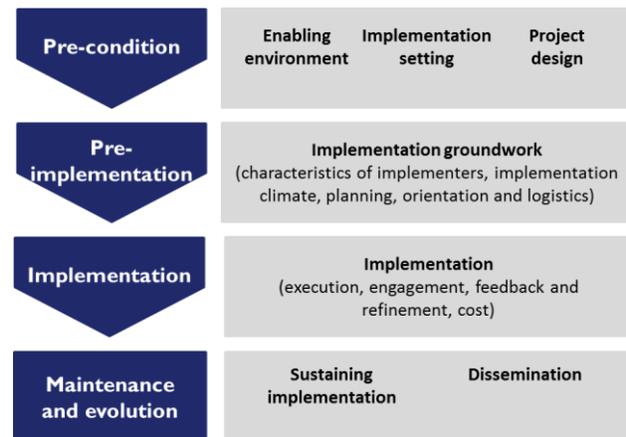
2.1.1 Design

The aim of this study was to address four key questions:

1. How were a range of successful HSS interventions implemented in different countries?
2. What factors facilitated and constrained the successful implementation and documented outcomes of the interventions?
3. What were important factors about implementation that emerged across the different cases?
4. What are the implications of this study for future of implementing HSS interventions?

To answer these questions, we designed a protocol to conduct retrospective, qualitative case studies. We used an implementation framework to guide the case studies. Our primary aim for applying the implementation framework was to determine which factors influence implementation that we needed to collect data on and consider during analysis. We combined two implementation frameworks to apply in this study – the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al. 2009) and the Replicating Effective Programs (REP) framework (Kilbourne et al. 2007). Both CFIR and REP are based on implementation theories and empirical evidence of what affects the successful implementation of health interventions. We used CFIR to more broadly frame the

Figure 1: Outline of combined implementation framework



² Conrad, Abigail, Joseph Naimoli, Sweta Saxena, Daniela Rodriguez, Catherine Connor, and Lauren Rosapep, 2016. *Understanding the Dynamics of Successful Health System Strengthening Interventions: Study Design*. Bethesda, MD: Health Finance & Governance Project, Abt Associates Inc.

intervention and we used REP as a framework that focuses on project implementation process. Figure 1 outlines the combined framework. See Annex A for detail.

As we assessed each implementation domain and factor, we also explored:

1. Decision-making processes associated with design and adoption of the intervention;
2. How the intervention was implemented, including how potential challenges or obstacles were addressed;
3. Expected and unexpected outcomes of the intervention, both positive and negative; and
4. Prospects for sustainability of the intervention, such as the degree to which the project activities have been institutionalized in the country.

Before we finalized the design, the team submitted the study design and data collection instruments to Abt's Internal Review Board (IRB) and JHSPH's IRB for review. Abt's and JHSPH's IRB exempted the study from review.

2.1.2 Implementation

To ensure that the case studies were of practical relevance, we set up a Technical Advisory Group (TAG) composed of experts and representatives from inside and outside USAID Bureau of Global Health to consult with on the study and provide expertise.

This case was selected for study from USAID's 2014 Global Call for Health System Strengthening Cases using a defined set of criteria and a systematic review and sampling process that we developed. The case was purposively selected from the available pool and the case is not representative or necessarily the most successful HSS project implemented in the region. Our objective in the case selection was to purposively select 6 cases from the 143 cases submitted to USAID's 2014 Global Call for Health System Strengthening Cases that are successful, robust examples of health system strengthening interventions.

The reviewers engaged in a multi-stage sampling process consisting of four sequential selection rounds that excluded cases that did not meet the specified criteria in each round using the identified available data and the predetermined review method. The 4 selection rounds were as follows:

1. **Round 1:** Reviewers considered only those interventions that were fully implemented before the start of the selection process.
2. **Round 2:** Reviewers accepted the submitter's self-reported definition of health systems strengthening, labeled the intervention "provisional," and sought a determination of an "effective" intervention.
3. **Round 3:** Reviewers applied criteria to determine whether a provisional, effective health system strengthening intervention could be confirmed as health system strengthening.
4. **Round 4:** Reviewers applied criteria to determine whether a confirmed, effective health system strengthening intervention was robust.

The table below shows the criteria that this case met in each round of the selection process based on the information provided by the implementer in USAID's 2014 Global Call for Health System Strengthening Cases.

Figure 2: COE HSS Criteria

Round	Criteria	Inclusion criteria	How met criteria
1 (implementation period)	Implementation completed	Submission states implementation period was completed by 10/2015	2014
2 (impact and evidence)	Effective intervention	One of 13 identified types of interventions referenced	Accountability and engagement interventions; Health worker training to improve service delivery; Pharmaceutical systems strengthening initiatives; Service integration
	Health systems outcome	One of 4 health systems outcomes referenced	Improved service provision/quality
	Health impact	Health impact referenced	Reduced morbidity and mortality
	Both health system outcome and health impact	At least one health system outcome and health impact referenced	Yes
	Verification of health impact and health system outcome achieved	One type of documentation is referenced for at least one health impact or health system outcome	Project M&E data
3 (HSS)	Multiple primary disease targets	At least 2 diseases targeted referenced	Maternal and Child Health
4 (robust HSS)	Multiple health system functions and sub-systems targeted	At least 2 HSS WHO building blocks targeted and at least 2 sub-systems functions targeted	Building blocks: Service delivery, Governance Sub-systems: Human resources for health, Information, Pharmacy, Service delivery, Governance
	Verification that intervention was successful HSS intervention	Intervention had health system outcome, health impact and targeted multiple diseases and health system functions	Yes
	Category D for HSS intervention type	Based on typology of HSS we developed, case addresses at least 2 health system functions and at least 3 sub-systems	Yes
	Category E for HSS intervention type (not inclusive of D)	Based on typology of HSS we developed, case addresses at least 2 health system functions and at least 4 sub-systems	Yes

2.2 Data collection and analysis

In the second phase, we conducted the case study research. We divided the case studies among our team members so that no team members conducted research on a project that their organization

implemented. The case teams collected both primary and secondary data on retrospective (features 1-3 above) and prospective (feature 4 above) data that are described in more detail below. As applicable, we collected primary and/or secondary data on each implementation factor and domain.

For primary data collection, we conducted individual or joint interviews with key informants who possessed in-depth knowledge of the history and workings of the HSS intervention. We followed a common semi-structured interview guide for the interviews, but adjusted the questions posed as applicable for the respondent and their role in the project (see Annex B for the interview guide). Interviews were conducted in English or Spanish, depending on the respondent's preference and comfort. We documented each interview through verbatim notes in English and audio recordings. We interviewed 10 key informants for this case study. Informants included representatives of USAID's implementing partners who sponsored the intervention, relevant Ministry of Health officials, and USAID mission staff with knowledge of the intervention.

The research team imported the interview notes into NVivo 11, qualitative data analysis software package, for coding and analysis. Analysts applied a single codebook developed prior to beginning the coding process and refined by coding a small sample of interview notes from several cases. The codes were informed by *a priori* concepts based on the domains and factors from the combined CFIR and REP implementation frameworks. To accommodate unexpected or context-bound themes and concepts emerging from the data, the codebook included a 'family' for each case to allow for inductive coding as needed for each specific country or intervention. We applied this common codebook for the purposes of reliability, quality control, and comparison across interview respondents and eventually across case and country contexts.

Once coding was complete, the analysts conducted iterative, exploratory analysis in NVivo using text analysis techniques (e.g., repetition, similarities and differences, word frequency, word co-occurrence, semantic network analysis, etc.) to explore themes, patterns, outliers, and trends, and conflicts between and among data sources.

We reviewed secondary data capture different features of the intervention and contextualize the intervention. We conducted document review of the relevant published and unpublished documents about the intervention that we were able to obtain. To review the documentation on each case, we filled out a common document abstraction template (in an Excel spreadsheet) to systematically review the documents and synthesize salient data. Abstraction categories reflected domains from our combined CFIR and REP frameworks. We also conducted a focused literature review to identify the key contextual factors (e.g. socio-cultural, political, economic, etc.) relevant to the case and existing evidence about barriers to and success of health system strengthening and reform in the country. We used the literature and document reviews to build on and verify the interview data where possible and applicable (bearing in mind that written documentation represents the official record). We analyzed the findings from the literature and document reviews in conjunction with analysis of the primary data. We uploaded the document abstraction forms in NVivo for coding and analysis with the interview data.

The research team ensured the reliability and validity (both external and internal) of our qualitative research in a several ways. We revised our semi-structured interview guide and record review forms based initial use. We used experienced researchers and held team meetings to ensure that all team members had a consistent and thorough understanding of the research goals and intent behind each question and probe. We further used consistent data documentation procedures and structured, systematic analysis techniques using qualitative analysis software (e.g., NVivo) to ensure reliability, quality control, and cross case comparisons. Further, we triangulated primary qualitative data with secondary data to improve the validity of findings from primary data. Finally, we conducted member checking by asking a key informant, usually the project's Chief of Party, to review and comment on the case

narratives regarding coherence and validity. We also had a TAG member review each case narrative to provide further expert review. We then finalized the case narratives based on this feedback.

2.3 Cross-case analysis

In the third phase of the study, we analyzed this and the other five descriptive case study narratives from Phase 2 to help generate explanations for successful HSS interventions. The cross-narrative analysis of Phase 3 sought to build or strengthen the evidence base for the “how” and “why” of what works in HSS by determining which implementation domains and factors from the implementation framework influenced the success of the interventions. We looked for common and divergent factors that were present or absent across cases and contexts, and we tried to determine the relationships between the implementation factors and domains based on our findings. As an exploratory study, we hope these findings can provide some comment on the factors that may be associated with successful HSS implementation and inform future studies of HSS interventions.

3. FINDINGS

The report describes the implementation experience of the Maternal & Child Centers of Excellence: Improving health systems and quality of services in the Dominican Republic project (CoE) supported by USAID to improve health systems functioning and quality of care for maternal and child health (MCH) services.

In this Section, first we outline the relevant features of the context within which the intervention was implemented, including key features of the socio-economic context, political system, and health system. Second, we first describe the basic features of the intervention, including its primary goals, activities, design, and timeline. Third, we outline the main outcomes and impacts of the project. Fourth, we describe the implementation process, beginning with the implementation groundwork, implementation itself, and then how the project was sustained and disseminated.

3.1 Pre-conditions

3.1.1 Problem definition

The CoE project was meant to address the “Dominican paradox” whereby despite incredibly high rates (over 95%) of prenatal care and institutional deliveries, MCH mortality indicators were unacceptably high. In 2007, maternal mortality ratio was estimated at 159 per 100,000 live births and infant mortality was 25 per 1,000 live births, primarily driven by deaths among neonates. This challenge was a priority for the Ministry of Public Health (MOPH) as well as other stakeholders like USAID, PAHO and UNICEF. All study respondents noted that it became critical to address the issues driving this contradiction, namely challenges in the quality of care and culture of service delivery among facilities and providers.

*“The only thing we knew was that it was not going to be a training project like CONECTA [earlier USAID-supported project]. It would be like filling a tooth without fixing the root canal. We weren’t going to do more training, but instead address the structural issues and work on motivating people, making them part as drivers of this. The integration was clear, but I think our definition wasn’t to train people. Mothers are dying because of poor management, because the providers weren’t valuing women and newborns. Hospital managers weren’t being accountable and they weren’t looking at statistics. The surveillance reports were good, but no one was reading them so we put the reports in the spotlight.”
Dominican Republic 02 (Implementer)*

3.1.2 Enabling environment

There were several factors in the enabling environment affecting the CoE project:

- The MOPH was feeling pressure about reaching the Millennium Development Goals around maternal and child mortality.
- Decentralization efforts in the Dominican health system were ongoing, specifically around separating the stewardship and service delivery functions between the MOPH and the National Health System (NHS), respectively.

- Despite usual turnover of staff in high-level positions relating to political elections or shifts, the project benefitted from having the same Minister of Public Health for almost the entire project period.
- The earthquake in Haiti in early 2010 halted project activities as the staff were told by USAID to relocate to the border zone to support recovery efforts.
- The refocusing within USAID around spending for MCH to only 22 countries, which did not include the Dominican Republic, eliminated the possibility of follow-on activities to build on or extend the project's efforts.

The MOPH had issued strategies to address MCH, including one in 2005 of Zero Tolerance for preventable maternal and neonatal deaths focused on improving surveillance, mandatory death reviews and community oversight. To some extent, the CoE project was seen as critical in operationalizing those efforts.

“They [MOPH] issued a strategy to reduce maternal mortality, but they didn’t have the capabilities to identify what the issues were. I believe this project was instrumental in terms of identifying both technical issues and management issues that were impeding quality services.” Dominican Republic 01 (USAID)

“We weren’t talking about things that weren’t already priorities for the country...It [the project] made sense because we took on a national agenda and operationalized it. We did not bring a topic that was not relevant in the health system. We developed tools, methodologies, best practices, trained teams, and at the end we made state, government decisions possible. That resulted in good chemistry with the context.” Dominican Republic 07 (Implementer)

The other critical strategy the MOPH had been embarking on was decentralization where critical functions around service delivery were being devolved to regional and provincial authorities but who did not have sufficient management expertise to carry them out successfully. Once again, the CoE project helped develop those capacities.

3.1.3 Implementation setting

There were a few key factors related to the implementation setting, both the intervention sites and the MOPH as a whole. The first was related to decision-making, which had previously been centralized within the system. The entire service delivery network system was being reconfigured so that provincial and regional authorities played a greater role and, consequently, had a greater responsibility in ensuring gains in quality but which also limited the project's ability to influence outcomes.

At site level, challenges in decision-making manifested themselves in individual staff and clinicians believing that change needed to be brought about from above and that they had a little to no role in improving conditions.

“The MOH had been very centralized over time and the staff at the lower-levels were used to waiting for the decisions and solutions to come from the central level – even for the maintenance of equipment. They had to wait and now with the new reform that has been implemented for years; the idea is to decentralize the service provision to the regional level in the regional networks. These projects I think contributed somewhat to strengthening these structures.” Dominican Republic 01 (USAID)

“Afterwards, in working with the vision of change in fundamental actors and institutions, the paternalistic view that whoever is above me needs to resolve my problems persists a lot. The disbelief that you can achieve changes is an important change.” Dominican Republic 07 (Implementer)

3.1.4 Project features and design

The project's goal was to develop maternal and child "Centers of Excellence" that integrated improved health systems functioning and quality of care. The CoE were to function as models for disseminating best practices throughout the health delivery network.

The project was implemented in 10 hospitals, including one national maternity, six regional and three provincial hospitals; three provincial health directorates (PHDs) and three regional health directorates (RHDs) (see Figure 2 below). The 10 participating hospitals covered approximately 23% of institutional deliveries in the Dominican Republic and accounted for over 30% of maternal deaths nationwide³.

The project contributed to significant reductions in maternal and child mortality during this period. In 2011, maternal deaths decreased by 16.4% nationwide compared to 2010, and in the participating hospitals, the reduction was 49.6% over the same period. For child deaths, primarily among neonates, the national level decreased by 20% from 2010 to 2012, while the participating hospitals decreased by 42.1%⁴. Furthermore, critical tracer activities for MCH saw positive changes at participating facilities, including active management of third stage of labor (AMSTL), restrictive episiotomies, and women receiving key services during antenatal care visits. Notably, compliance with maternal death audits rose from 0% in 2009 to 95% by 2012. Further, a study of the "most significant change" of the project indicated that the attitudes of clinicians, staff and management had started to put obstetric patients and their babies at the center of care and shifted focus to be responsive to their needs⁵.

Other important outcomes relate to the development of the CoE model for the Dominican Republic health system. The CoE system was developed and validated to promote continuous improvement through a certification system managed by the MOPH. In April 2013, the MOPH issued an Administrative Regulation acknowledging the CoE system as a way to promote quality standards for the MOPH and National Health System, and the Vice Ministry of Quality Assurance validated and began to officially apply the CoE system to institutions within the MOPH. From a dissemination perspective, the project engaged a replication model meant to enable participating sites able to replicate their learning and best practices with other facilities in their network.

The total cost for this project reached the budget ceiling of \$15,500,000. Most respondents indicated that this budget was sufficient to meet project goals. However, one respondent noted that the project

Project Profile

Title: Maternal & Child Centers of Excellence: Improving health systems and quality of services in the Dominican Republic

Period: Feb 2009 – Feb 2014

Funding: USAID

Budget: \$15.5 million

Prime contractor: Abt Associates

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

Local implementers: None

Focus: Quality and management improvement

³ Cuellar, C. *Health Service Delivery Community of Expertise: Using the Centers of Excellence Approach to Improve Maternal & Child Health Outcomes in the Dominican Republic*. Webinar, 21 March 2012.

⁴ Abt Associates. *Final Report USAID|Maternal & Child Centers of Excellence, Executive Summary 2009-2014*. Bethesda, MD: USAID|Maternal & Child Centers of Excellence, Abt Associates Inc., November 2013.

⁵ Caro, D., Putney, P. and Moya, C. *Study of the Most Significant Changes Contributing to Decreased Maternal Mortality in Select Ministry of Health Hospitals in the Dominican Republic*. USAID|Maternal & Child Centers of Excellence, Abt Associates Inc. June 2012.

was unable to implement some components fully, such as the community engagement piece, due to time limitations. Resource constraints were faced by participating facilities who needed additional investments to improve infrastructure but were in competition internally and with other facilities for limited Ministry funds.

“I think also, we had expectations sometimes of the MOH that they would be providing counterpart funding or equipment or other things that often didn’t come through and so that was also challenging because oftentimes there were key interventions, like neonatal ventilators, and seeing that there was a huge equipment gap and the Ministry agrees that they were going to provide this equipment and not necessarily come through. Those were difficult in terms of...part of again, system challenges.” – Dominican Republic 03 (Implementer)

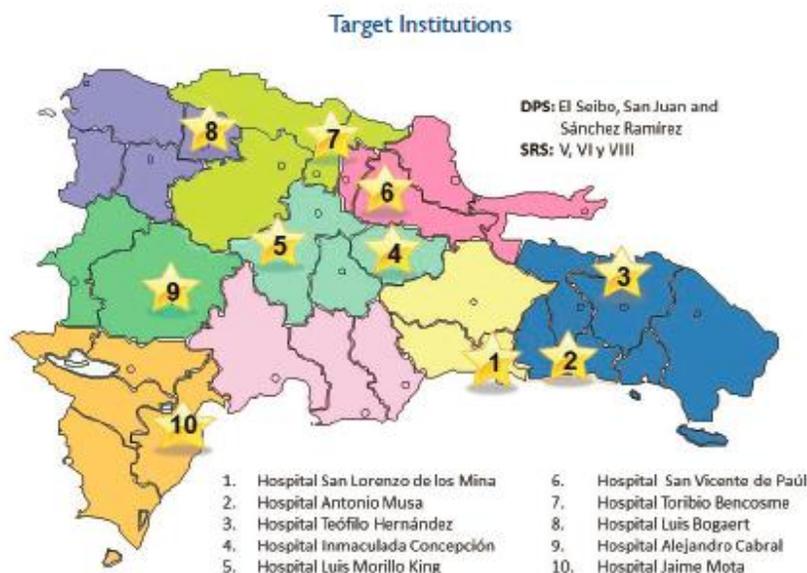
“The implementation of the project was good but there are variables you can’t control. For instance, many sites require...like El Musa. El Musa [hospital site] made its efforts but it required huge investments. No matter how much identification or the commitment among the staff, both in the management as well as the service delivery, they couldn’t do it. They couldn’t reach it.” Dominican Republic 09 (Government)

The primary objectives of the project were:

- Result 1: Ten hospitals developed as CoE have enhanced capacity managing clinical and resource management and administrative processes in support of MCH programmatic areas
- Result 2: Three Provincial Health Directorates developed as CoE have enhanced stewardship, capability for epidemiological surveillance and response, public health programs and certification/accreditation of public and private health providers

Figure 3: CoE Intervention Sites in the Dominican Republic

- Result 3: Regional network developed and tested serves to identify best approaches for development of regional networks
- Result 4: Technical interventions developed by the Redsalud and Conecta projects in Region V hospitals consolidated and serving as demonstration centers



The project took a “diagonal approach” that aimed to work on management and systems issues as well as technical/clinical issues. Overall, it adopted change management teams at each study site that brought together staff from across the site—not just managers or clinicians—to address each topic, receiving relevant training and develop a strategy for addressing the issue. Initial efforts were focused on activities that would involve the entire site, have visible results and generate quick wins for the project. The specific activities to meet the certification criteria followed later. All of the critical activities were implemented by the prime implementer, Abt Associates, with targeted support from sub-contractors for specific tasks, such as IT support.

The project took a holistic view of the intervention sites and systems improvements were intended to benefit the entire site and its service delivery, not just MCH services. For example, improvements in the medical records systems, the client reception areas, biohazard waste, and emergency preparedness where whole site improvements.

The design of the project was influenced by the following factors:

- *Intervention source:* addressing poor MCH outcome indicators were a priority for the MOH, which USAID was ready to support building on previous health projects that it had funded for the previous 10 years.
- *Identification of effective intervention:* although it is unclear how well articulated this was in the initial request for proposals from USAID, the intention was for the project to address long-standing management issues as well as technical issues. The new project was meant to build on the work from two precursor projects: RedSalud, which was a health systems oriented project, and CONECTA, which had MCH and HIV components.

Table 1: Project timeline

Year	Event
Feb 2009	Project start
May 2009	Site selection completed
Jan 2010	Haiti earthquake Project activities are halted for four months Project team is deployed to support rescue efforts in border area
2010	Project implementation
2012	Chief of Party becomes project manager in Bethesda, MD Deputy Chief of Party becomes Chief of Party
2013/14	Replication efforts
2013/14	Work with Inter-American Development Bank on designing continuation project
2014	CoE Project ends
2015	Inter-American Development Bank-funded continuation project starts

3.2 Pre-implementation

3.2.1 Implementation groundwork

The most critical aspect of the inception or planning phase mentioned by respondents was the site selection process. The process was a collaborative effort between the project and the MOPH with inputs from USAID whereby potential health facilities were judged against five criteria. The first filter focused on impact and geographic distribution, which were critical criteria for USAID, and reduced 145 hospitals offering obstetric care to 27 which had significant numbers of institutional deliveries representing different geographic regions of the country. All 27 facilities were invited to an information session about CoE and its goal to address root causes of performance issues through HSS and programmatic interventions.

The second filter of the selection process was asking the facilities to write a proposal demonstrating their commitment to joining the project, which all 27 did. Two additional criteria focused on the quality of the application and the potential for facilities to leverage other resources or projects, which reduced the number to 15 hospitals. The final filter was government's willingness to invest in specific facilities so the project recommended 10 facilities for the project, which the Minister accepted entirely.

"I believe that was where the project became legitimate because it was a technical process. They were not handpicked, they were all excited about the idea of having a COE, having this way of working. All 27 hospitals submitted a proposal and we had given very short time and we were kind of mean [laughs]. Tough love, I believe in tough love. We were very clear if they don't submit their proposal on time, same as USAID, you won't be considered. People are serious when you behave, you do your work. We were on the same page and we were not playing games." Dominican Republic 02 (Implementer)

"The selection process was also really critical because they were able to identify...leverage the intrinsic motivations of wanting to be involved in this and putting yourself out there." Dominican Republic 04 (USAID)

In terms of planning how activities would be delivered, each component or characteristic of the CoE program was developed collaboratively with sites as part of the implementation process. The design of the component and how to implement it was led by the project field managers and an expert consultant who would then select and train tutors at each institution to develop the package of activities jointly. Further, each component had a self-assessment and workplan cycle that allowed facilities to iteratively assess their progress.

"Building this whole concept of what is a COE, what are the standards that form part of a COE in each of the systems pieces along with the actual service delivery pieces in MCH. So that almost identifying the standards of success together with the Ministry counterparts and then moving down to begin implementation at each of the hospitals that aid COEs. That along with putting together a change management team and working to get people on board with the strategy and then there were different phases of implementation." Dominican Republic 03 (Implementer)

Several respondents reflected about the CoE project team and its commitment to working with the staff at the intervention sites. In addition to the Chief of Party (COP) and Deputy COP, the core staff were field managers who supported two sites each. Each manager also had a functional responsibility around their area of expertise, such as psychology, industrial engineering or coaching. The team was perceived to work closely and cohesively, with support from sub-contractors for specific tasks such as an evaluation study. Additional consultants were brought in locally or from Abt to supplement the team's

strengths. One respondent noted that the abrupt, intense work after the earthquake in Haiti contributed to the team's ties.

“When we had to delay after the earthquake in Haiti happened. We had a 4-6 month stoppage in the activities in the project, right at the beginning...Of course we gained a lot in team cohesion. That different scenario allowed us to quickly apply what we already wanted to apply to the country, like clinical records, medication supplies. That was a post-graduate degree in 4 months... We arrived 8 days after the earthquake, we felt the aftershocks, we slept on the floor. And we found a health center that had 24 beds but was performing 450 surgeries, amputations. The people were in the hallways, they didn't have patient histories, they didn't even have the proper supply chain system for medications to give to people. People were in pain even though the center had medication because they weren't organized, with good signage. That was our work. Much of what we did later at the COE, there we did quickly. Managing the amputations, managing the circuit so they weren't in the street, makes signs, make patient histories even if we had to stick it on the wall, and take control of the pharmacy to dispense, organize so people could have medications. I swear, it was an intensive course.” Dominican Republic 07 (Implementer)

Several respondents made special mention of the COP and Deputy COP and their contributions:

“Carlos Cuellar's particular style about how to deal with people was a key factor. He knew how to tell the high-level MOH officials and also the service providers at the farthest hospital that what existed in the hospital was a disaster but said it in a way that didn't hurt feelings, that came across as a constructive criticism, that would be taken as a way to contribute, not bother, and would thus result in the officials and providers received it well and with an attitude towards addressing the problems. That was one side. From another side, Carlos found interlocutors in the National Health System that were on the same page.” Dominican Republic 08 (Government)

3.3 Implementation

An overarching goal of the CoE project was to establish a quality improvement system for certification of facilities as “Centers of Excellence” focused on multiple technical components (see Box).

For hospitals, the system included 18 standards with 90 sub-criteria following a Plan-Do-Check-Act cycle. Facilities would conduct a self-assessment and develop a plan of action, implement it, be externally evaluated for meeting the standards, and receive acknowledgement of the achievement. Aside from the initial self-assessments, facilities evaluated their efforts on a semesterly basis across different quality standards and criteria and achieving a score based on percentage of standards met.

The scoring process and acknowledgement of achievements was linked to a CoE plaque with five stars representing the level of achievement of the facility. The plaque was received when a facility had reached a minimum score and as the scores increased across the standards, stars were awarded for achievement.

Centers of Excellence Technical Components

Technical components for Hospitals

- Systems and Managerial Capacity
- Quality and Evidence-based Maternal and Child Health Services
- Biosafety
- Integration into Health Care Network
- Facility Infrastructure
- Community Participation
- Training Capacity
- Emergency and Disaster Response

Technical components for PHDs

- Systems and Managerial Capacity
- Public Health Programmatic Networks
- Epidemiological Surveillance
- Licensure Systems
- Emergency and Disaster Response
- Training Capacity

The approach for implementing the project activities was focused on working through change management teams that represented many hospital departments. Since the many of the quality standards cut across different hospital units, it encouraged hospital-wide participation.

3.3.1 Project phases

The implementation of the CoE project followed four phases:

Phase 1: Preparation and Induction. Each facility is prepared to develop its vision and identify changes needed to improve service quality. The most critical component of this phase is the development of the interdisciplinary change management teams who would be the primary target for leading implementation of changes.

The change management teams, accompanied by project staff, conducted facility self-assessments across domains and developed the workplan for action. The teams were also the recipients of project tools, including checklists, methodology for trainings, etc. to be applied in the facility. Also at the institutional level, the project included participation in the National Competition for Quality for systematic quality improvement.

Phase 2: Implementation of Hospital-wide Improvements. The starting point for the implementation of the CoE certification system with key quality improvement interventions that involved the entire facility and staff to foster buy-in for the overall model and approach. Intervention areas included clean up clinical records and establishment of hospital management information systems, biosafety activities, customer service units.

Later quality improvement activities focused on specific MCH interventions such as training in emergency obstetric care, Helping Babies Breathe, Kangaroo Mother Care, and establishing automated maternal discharge alert to primary care unit, etc. Clinical observations, progress monitoring, and committees to conduct maternal and neonatal death audits were also conducted.

Phase 3: Implementation of Management Systems and Quality Improvement. Improvement of management practices and reinforcement of existing processes and procedures focused on the entire pathway of MCH services, including supply chain management and costing and budgeting.

Phase 4: Institutionalization and Sharing of Best Practices. Work with RHDs and MOPH officials to institutionalize processes, including reinforce change management teams, and strengthen data collection, analysis and follow-up. An effort was also made to set up a replication system whereby CoE facilities could share their best practices with other facilities in their network through trained facilitators from the CoE facilities.

3.3.2 Execution process

Notably, after establishing the change management teams the project began its implementation process with two activities which were visible, required involvement across the facility, benefited the hospital as a whole and were meant to convince staff that change was possible. The activities were:

- Customer service units: establish and/or upgrade customer waiting areas, deduplication of clinical records and establishment of new electronic systems, upgrading facilities, establishing customer suggestion boxes, etc.
- Infection prevention and control: massive hospital clean-up, trainings across units including janitors, cooks, clinicians, improving hospital signage, improving biohazard waste disposal, etc.

“To me one of the most impressive things they did was change management related to cleaning. So the hospitals are notoriously and if you went to hospitals that were not intervened by this project, you would find, unfortunately, filth and major causes of maternal and neonatal sepsis. This project worked with everybody from the cleaning person to the director of the hospital to make sure everybody knew that this was important and to take pride in the facility, that was one that they did that I thought was quite important.”

Dominican Republic 04 (USAID)

For the actual execution of activities, the project followed a 1-2-8 sequence where each new module was developed in one hospital in collaboration between the project field manager, the health facility, and an external consultant if applicable. The process was then critiqued, lessons learned applied at a second facility and then later rolled out to the remaining eight facilities. The role of first hospital was rotated between facilities to ensure fairness.

“We used the 1-2-8 approach...this was very intentional...With the people we trained, in the first 2 it was about doing, learning, and getting lessons to learn and making adjustments then refining the methodology and that is applied across the other 8... We want to give experience and opportunity.”

Dominican Republic 02 (Implementer)

For each component area or domain, a couple of staff members from the change management team would be responsible for implementing the work from self-assessment to developing a plan of action through executing and reporting on the plan activities. As the process progressed, meeting the standards usually become more demanding.

Another best practice sharing component of the implementation were opportunities for shared learning either through group training of “tutors” responsible for site-level implementation or through regular meetings that brought facilities together to report on their progress. These were found to incentivize facilities to progress as a form of peer pressure but also to share experiences and learnings across sites.

“The tutors began to develop in ways that they began to rotate themselves within hospitals. For example, one tutor became really good in biosecurity at hospital ‘X’ and showed advanced skills in this area. This tutor went to other hospitals to observe and get to know their system... There were some people who had never gone to other provinces. If you take 3-4 people from a certain province in hospital ‘X’ and you take them to another hospital that is one level higher and has a good experience, they see that what you are trying to teach them is feasible. They could exchange experiences within one another.”

Dominican Republic 06 (Implementer)

“This change management team was the way by which people took a look at where they were at and came together to look at improvement plans and what percentage we are at; there was a lot of quarterly cross-fertilization between these 8 (sic) facilities. We would gather all of the 8 facilities and have a meeting on how things are going with supply chain and each hospital would present their results and how they evolved and their improvement plans, what percentage of those activities they have executed, where they’re going in the future and looking at indicators that are related. I think that whole framework laid out in that continued quality improvement cycle – where am I going? What is the ideal scenario? Where are my gaps? What am I improving?”

Dominican Republic 03 (Implementer)

The project staff’s role was to support the sites, change management teams and tutors in their implementation in a collaborative way. One specific support activity was around identifying leverage points where the most change could be achieved. For example,

“Sometimes when the hospitals apply the self-assessment tool and identify priorities, some of those priorities weren’t necessarily the things that were most sensitive to the results sometimes. This clarity about what activities needed to happen and how to actually make them happen. If there were changes that needed to happen in the supply chain system or if they needed the administrator of the hospital to

buy additional supplies and those weren't getting bought, they needed someone to sit down and say 'ok let's all talk about why this isn't happening, what does the director think, and can we allocate resources to this.' A lot of those kinds [of] discussions and facilitating that process was part of the role of our managers." Dominican Republic 03 (Implementer)

There was an overarching multi-sectoral approach both within individual sites, through the change management teams, and for specific activities that required external support. Efforts for emergency preparedness, hospital clean-up and biohazard waste removal, for example, all required engagement with actors outside the hospital facility such as firefighters and police, trash collection, workers' unions, churches, etc.

A similar approach around change management and strategic planning was adopted for the PHDs but there were a few activities that were specific to the provincial level, most notably were improving immunization programs and coverage, and maternal death review committees which were mandated by law but had not been fully functioning.

3.3.3 Actor engagement

The project received significant support from officials in the MOPH, including the Minister himself. The MCH unit in the Ministry, RHDs and the health consumer advocate's office were also supportive. The NHS auditors were supportive of the clinical records work in particular because it facilitated the billing process for reimbursement from the government. USAID was also seen as a strong partner of the project, and Maternal and Child Health Integrated Program (MCHIP)—another USAID-supported project—became a partner later on around implementing activities for improving neonatal health.

None of the respondents recalled any active opposition or impediment to implementation. Although there was some resistance at hospital-level that change could be achieved through the project's methods, inevitably they became project supporters.

3.3.4 Challenges

There were three main areas of challenges: project-related, environmental and health systems. First, in terms of project-specific challenges the CoE project was unable to fully implement some of its strategies, including efforts around engaging the community and activities to improve neonatal outcomes. For the community engagement, one respondent noted that this was partly due to how ambitious the project was and that limitations around project staff and time prevented further achievements in these areas (*Dominican Republic 01-USAID*). To address the lag in neonatal activities, MCHIP was brought on board to support project efforts but it was difficult to scale-up the activities across all facilities. Another project-specific challenge was around monitoring and evaluation (M&E). Some respondents felt that the M&E system was not sufficient to capture the actual changes taking place in intervention sites, and the evaluation study that was commissioned was useful but did not tell the whole story of the project's efforts. Lastly, a challenge arose around sustainability and replication. The role of technical assistance and support to continue on the CoE certification process and also replicate to other sites would fall to RHDs but they were insufficiently prepared to take on this role successfully despite efforts by project staff to have a successful transition. Further, the decision by USAID to no longer support MCH activities in the Dominican Republic (outside of PEPFAR activities) meant that the USAID-funded efforts to provide technical assistance would end with the CoE project. The loan from the Inter-American Development (IDB) intended to support the CoE process ended up delayed more than one year so the planned continuity and transition between the USAID-supported efforts and IDB ones were not realized.

External to the project, the CoE activities were unable to affect the high Cesarean section rates in the country. Respondents indicated that broader environmental issues around clinician work hours and shifts, financial incentives due to higher reimbursement rates for C-sections than vaginal births, demands from Dominican women, etc. Another external challenge was related to political factors such as shifts in political leadership that resulted in staff turnover, and complicated relationships between hospital administrators and local politicians which limited some of the changes that could be made.

Health systems challenges were focused on work culture, human resources and broader resource allocations. First, the project had an underlying goal of changing the mentality of providers and health facilities to be more service oriented and focused on rights-based services. Further, there was a need to engage the whole site to work together as a team to affect change.

“The main difficulty was being able to change the human resources culture in health, which are very entrenched. It is in the DNA of service providers, it is something that is replicated and taught from medical school... The doctors and nurses are trained with that way of thinking, bad habits, and vision of what a health professional should be—not correct, obviously. They are not sensitized and not committed, not knowledgeable about things like human rights, women rights, service delivery based in rights. That the protagonist is the client, not the provider, you are here to serve the client, that you are not just an employee. The USAID projects have been confronted with this, and trying to model that change, trying to change that culture and model that behavior, to reform HR, to change that way of thinking was the most difficult because it still is difficult.” Dominican Republic 08 (Government)

“We put maternal mortality on the agenda, within the MOH. There is a place in a province in the central part of the DR that they sell handcrafted dolls without a face. I believe that was the problem. Those women that died have no face. Nobody cared about them... We need to give a name and a face to those women... I believe in changing the perspective to being an avoidable event. It’s like ‘okay women die during delivery it’s normal, why to bother, why to care about them’. This compassion fatigue is complicated with poor management. All of these ingredients. One day I used a word the lethal power of the Dominican Health system, the number of women who are killed. By not doing what they are supposed to do. You probably never thought about this, we never thought about this being our intent. But people caring about poor women... We made a revolution.” Dominican Republic 02 (Implementer)

“The major challenge was working in a team because when you are not used to pushing all in one direction, it is a little difficult. That the hospital was everyone. The success of the hospital didn’t depend on the manager, director of the hospital or administration. Each one of them had to contribute to the success of the hospital regardless. That’s why we stressed the importance of team. They needed to view themselves as a work team.” Dominican Republic 05 (Implementer)

Second, around human resources respondents mentioned several issues such as staff mobility and tensions between doctors/doctors unions and employers in the MOPH around contracts. Lastly, the project relied partially on counterpart resources, especially around equipment, at the health facility or from the health system. At times, those resources never materialized due to competing priorities or because the resource investment needed was too large.

3.4 Maintenance and evolution

3.4.1 Sustaining implementation

The continuation of specific activities in all intervention sites could not be confirmed. However, prior to the end of the CoE project, the Dominican government pursued a loan from the IDB to support many different activities and a decision was made to include CoE into that loan application. CoE project staff

advised the loan development process and it was anticipated that the field managers from the CoE project would shift to the IDB-funded project, but a delay of one year was experienced between projects. The IDB-funded project is now functioning with at least two of the previous field managers and is operating in six of the earlier intervention hospitals and about five new ones. One main difference in the approach is that the new sites were pre-selected during the application period, unlike the earlier competition. The three-year loan is intended to end in 2017/2018. Respondents also noted that two out of three PHDs supported by CoE have continued their work strategies and maintained their efforts and gains. It is worth noting that vital records statistics indicate that the number of maternal deaths has stayed consistent since the end of the CoE project, with no notable reductions⁶.

The MOPH had adopted the Certification System for CoE as part of its National Health Quality Framework. Assessment and recognition of facilities under the Certification System was to be implemented by the Vice Ministry of Quality Assurance. At the time of the project end, three of the hospital sites had partially met the requirements for certification. However, it is unclear if the implementation, assessment and certification efforts under the Vice Ministry of Quality Assurance have continued.

3.5 Lessons learned

When asked about lessons learned, respondents reflected on several themes. First, USAID respondents noted the need to be responsive of country needs and respectful of counterparts. The close linkages between CoE and MOPH during this project highlighted the benefits of such relationships, especially in dealing with complicated and intractable problems. Further, approaching health systems issues holistically, rather in compartmentalized or vertical ways, have greater potential for impact.

“First of all it needs to respond to a need that is identified by the country and have the endorsement of the MOH. They would probably need to involve other partners and stakeholders as well; we were probably short in doing that. The fact that health systems...you need to have a more holistic approach; it’s not like a specific disease or specific intervention programmatic area. Health systems provide you with that opportunity to really look bigger than either family planning or MCH or HIV, whatever the problem might be. We have made many mistakes in the past in terms of creating parts of the system, like supply chain systems for things like family planning, HIV where we should have one system that responds to all needs...The change management that was implemented was very interesting in terms of the results it provided, I think that it’s important...we always think that the staff working in MOH are not motivated because they have low salaries and that’s true, but there are other means to motivate staff and I think we were able to show some of that. Provide supervision, but not supervision the way we traditionally do, but more supportively is critical so staff felt supported.” Dominican Republic 01 (USAID)

“We’re facing some of the same challenges in [REDACTED], so we’re trying to figure out a good way of instilling change management to sustain some of the things we need...I think the single most important one [lesson] that I’ve sustained in my career is the really really really tight dialogue with government during the design, implementation, and evaluation of projects. There hasn’t been a project that I’ve been involved with since then that hasn’t been really tight involvement...it’s just second nature for me and how you’re supposed to do it. At the same time I see other people that manage projects that hardly ever meet with the DOH, only when they have to. I’m not sure why that is...That’s not to say they don’t discuss and coordinate with government, but with in-depth partner management—they’re at the same level I am and the reason I do that is because of how I saw this [CoE] project managed...I’m almost

⁶ Maternal mortality in 1990-2015: Dominican Republic. http://www.who.int/gho/maternal_health/countries/dom.pdf.

certain there was a DR [Dominican Republic] government official on the technical evaluation committee of the CoE. and so for us to do that, to have a government official on the TEC committee, it takes some extra hoops you have to go through with the contracts office because of non-disclosure agreements, perceived conflict of interest of different things...you have to foster a pretty strong relationship to make sure the government understands your limitations – what you can share and when you can share it.”

Dominican Republic 04 (USAID)

The second lesson learned was around how the project and its staff approached their relationships with the facilities and during implementation. By integrating the CoE staff into facilities and taking on a participatory approach, the project was able to engage facility staff in a more personal way leading to more meaningful (and potentially lasting) change.

“Yes, I think to believe in people. To treat them as adults, not as kids. Tough love. The role of charity, they have to want to help themselves. We have to be disciplined, not to try and replace them and do the work. Work with them not to them. I think this issue of respecting MOH, a lesson that I learned in other countries is central. All of this I am telling you, none of this is very sexy. It is common and very simple.”

Dominican Republic 02 (Implementer)

“The participatory process – so having the process that your partners like the MOH are involved from the get-go had great returns in the project throughout and at the end when you are looking to pass it on. I think the same thing with the whole dissemination strategy or building capacity in the CoE to then replicate, I think that was a really unique strategy...you find facilities that have strength in certain strategies that can show and have had peers and then replicate it. I think that was really unique and could be utilized in a lot of other contexts.”

Dominican Republic 03 (Implementer)

“Lessons learned that I will also keep with my personally is the impact of a team and that we were integrated as a part of their family...We weren't only there for technical assistance, we were so well integrated that we were involved in the emotional aspects of it as well. We learned to grow with them...I would say that seeing it from the outside is very comfortable. We would judge the hospitals for what they don't do. But being on the inside with them and getting to know their needs and limitations, it made us respect their work more, value it...But having a technical person will talk to them about what their limitations are and show them how they are performing the task wrong and how them how to do it. It is not our intention to tell them this is poorly done, but tell them they are not doing in the most adequate way. We are going to show you how to do it in this way and support you, so you have better results.”

Dominican Republic 05 (Implementer)

“I believe that ‘change is possible’ for me was an important lesson. That these interventions/projects have to be carried out from the starting point of people's life course, that they make sense in people's lives not just because a policy exists. Yes, the policy exists and you have to adhere to it but that policy also affects you. What do you lose when you don't follow biosecurity steps? For your own life particularly but also for the person whose life is in your hands. Small gains can generate impact, credibility, adherence that was important...It's amazing how people committed. Those centers working on topics of human resources with USAID and other institutions, not Abt but maybe CapacityPlus. They are working in those centers because those are the ones that moved into a management culture, of growth, of evaluation. The seed was already planted and everything else sprouts more easily. They entered into a different dynamic of self-evaluation, of moving forward, analyzing indicators, to draw curves. They learned that the number isn't as important as the directionality of the curve, up or down.”

Dominican Republic 07 (Implementer)

Lastly, respondents reflected on how CoE could have improved its implementation to achieve even greater results. Specifically, involving RHDs earlier in the project and engaging with MCHIP earlier to

support newborn health activities were seen as problematic. One respondent also noted that efforts to involve communities in accountability efforts were insufficient.

“MCHIP was our partner for a lot of the neonatal interventions and that was a really key partnership because a lot of the mother care and helping babies breathe really had an important impact on the neonatal portion, which actually came in, again among the lessons learned, later in the project and I think it probably could have had greater impact and maybe more chance of sustainability in some of the facilities had it begun a little bit earlier. I think we also as a lesson learned and something that came in later in the project was we started to have periodic meetings with the regional health offices as well and higher level Ministry people to look at maternal deaths and do analysis... I think that joint data analysis and talking about solutions is really important because a lot of times the project didn't have the authority to act on some of the areas that needed change within the hospital, so that was a key piece that was discussed. That came in a lot later and even our technical teams felt like we should have gotten more buy in from the regional offices given the decentralization process that's happening.”
Dominican Republic 03 (Implementer)

4. DISCUSSION AND SYNTHESIS

In this section we discuss our results and synthesize the key factors that led to the successful implementation of the project.

4.1 Synthesis

Here we discuss both facilitators and barriers to the success of CoE's implementation. Regarding facilitators, consistent support of high-level MOPH officials was critical, especially from a long-serving Minister of Health. In particular, it reflected the government's overall commitment to addressing the persistently high maternal and child mortality indicators. Relatedly, the complementarity of the project addressing a need that was a priority in-country also supported its success.

Other facilitators related to the project's design and execution. The diagonal approach of addressing structural/procedural problems as well as clinical concerns led to better addressing the root causes of maternal and newborn deaths. The multi-step facility selection process created a different level of expectation for participating sites since they needed to make an effort to be even be considered. Further, the entire project was designed to be a replicable model where established CoEs would serve as learning platforms and partners for other facilities. In terms of day-to-day implementation, the participatory and collaborative approaches to workplanning, module development and execution that were spearheaded by the project staff ensured that staff across each facility were engaged in project activities and committed to their success. The project's leadership and staff worked not only well and cohesively together, but were willingly embedded in the facilities they supported.

Lastly, the CoE's project to increasing visibility of maternal and child deaths among providers and facilities was a driver for the overall outcomes achieved. Changing the work culture among providers and facility staff to address their role in preventing maternal deaths, especially from a rights-based approach, and generating visibility over accomplishments, even if only between participating hospitals, led to improvements in accountability.

There were three major areas that hindered CoE's success. First, staff turnover, especially when linked to political factors and election cycles, limited the potential continuity of the efforts being made. In particular, at higher levels of the MOPH it can be problematic to sustain initiatives started under earlier administrations. Second, the project's efforts relied—to some extent—on leveraging or building on MOPH resources, and if these did not materialize, the facilities would be handtied from executing further. Lastly, how to best handle the handover of the project's activities was complicated by both USAID's decision to no longer fund MCH efforts in the Dominican Republic and by the delays in starting the IDB loan. The project handed over all of its materials and tools to the relevant authorities and attempted to support the RHDs in pursuing its technical assistance role into the future but it is unclear how successful these efforts were, especially in the interim period between the end of CoE and the start of the IDB-funded project.

4.2 Conclusion

The CoE project in the Dominican Republic is an example of a HSS program that was aimed at addressing systemic causes for poor health outcomes by engaging the target sites, their staff and higher

health systems actors to effect change within their own spheres of influence. By taking a diagonal approach combining management and quality improvement activities and addressing the entire pathway of care, the CoE project was able to empower facilities and providers to take positive action, benefit facilities not only for MCH services but also across health areas, and ultimately lead to improved health outcomes for the women delivering children in the program's hospitals.

ANNEX A: COMBINED IMPLEMENTATION FRAMEWORK

Phase	Domain	Factor	Description	Unit of analysis
I Pre-condition	Enabling environment	Wider environment	Economic, political, social, and health system context within which intervention ⁷ is implemented	National/regional context
		External policies and incentives	Strategies to spread intervention – policy, regulations (not directly implemented by project but (pre)existing) Policies that constrained implementation Other donor led initiatives that complement intervention	National/regional context
	Implementation setting	Characteristics of organization	Structural characteristics of organization such as social architecture, age, maturity, and size of organization Culture of organization such as norms, values, basic assumptions of organization	Change target/larger host organization ⁸ (identify for each case; e.g. MOH)
		Implementation climate	Climate within organization, including relative priority of project, readiness for implementation, learning climate, and policies, procedures, and reward systems that inhibit or facilitate implementation	Change target/larger host organization (identify for each case; e.g. MOH)
	Project design	Intervention source	Stakeholder perception if intervention internally or externally developed	As applicable for each case (e.g. MOH, local partners, change target)
		Identification of effective intervention	Process for deciding intervention approach and activities Stakeholder perception of quality and validity of evidence that intervention will have desired effects	As applicable for each case (e.g. MOH, local partners, change target)

⁷ The total package of activities that is implemented by the project.

⁸ Institution within which activities are being implemented; may be MOH or other local organization (will focus on larger organization like MOH rather than individual hospitals); depending on the case this organization may be more or less involved in the actual implementation.

			Perceived relative advantage and complexity/perceived difficulty of intervention		
		Adaptability	Degree to which intervention was adapted to local needs, including degree to which beneficiaries' needs were understood and design was adapted to meet their needs	Project implementers ⁹ (e.g. prime + subs)	
		Draft package	Perceived quality of how intervention is presented	As applicable for each case (e.g. MOH, local partners, change target)	
2	Pre-implementation	Implementation groundwork	Structural characteristics of implementing organization	Structural characteristics of implementing organization such as social architecture, age, maturity, and size of organization; culture of organization such as norms, values, basic assumptions of organization	Project implementers (e.g. prime + subs)
			Implementation climate	Climate within project including relative priority of project, readiness for implementation, learning climate, and policies, procedures, and reward systems that inhibit or facilitate implementation	Project implementers (e.g. prime + subs)
			Planning	Degree to which intervention is planned in advanced, quality of methods; refinement of draft package based on pilot testing, stakeholder feedback	Project activities
			Orientation and logistics	Quality of initial planning and execution of the project, including needs assessment, pilot testing, leadership engagement	Project activities ¹⁰
3	Implementation	Executing	Fidelity of implementation	Project activities	
		Engaging	How the project attracted and involved appropriate individuals throughout project: opinion leaders, formally-appointed internal implementation leaders, champions, external change agents	Project activities	
		Feedback and refinement	Qualitative and quantitative feedback about progress and quality of implementation	Project activities	

⁹ Prime contractor and sub-contractors (may include local subs) who implement the project. This does not include the change target organization.

¹⁰ Specific activities directly implemented by the project implementers. These may or may not align with other activities in the change target organizations. These individual activities make up the intervention as a whole.

		Refinement of activities based on feedback			
		Cost	Costs of total intervention - planned and actual	Intervention	
4	Maintenance and evolution	Sustaining implementation	Organizational, financial changes	Changes made to sustain the intervention	Project implementers (e.g. prime + subs); Project activities
			Re-customize delivery as need arises	Adapting the intervention delivery as circumstances change	Project implementers (e.g. prime + subs)
	Dissemination	National dissemination	Preparing refined package, training, and TA program for national dissemination; was project nationally disseminated	Project implementers (e.g. prime + subs); Change target	

ANNEX B: KEY INFORMANT INTERVIEW GUIDE

Instructions

First complete informed consent to conduct interview and ask permission to record.

Ask as many of the primary questions as is feasible given the time constraints and as are appropriate for the respondent given their role in the project. Ask probe questions as applicable. Prioritize the most important questions if you do not have sufficient time to ask all applicable questions.

Respondent's role

1. Can you tell me about your involvement with [PROJECT]?
 - a. When were you involved with [PROJECT]?
2. Who were you working for during that time? (e.g. Implementing partner (specify); USAID Mission; USAID HQ; government counterpart; other—specify)
 - a. What was your position or title with [PROJECT]?
 - b. Did you change organizations or positions during your time on [PROJECT]?

Pre-condition

3. What problem(s) was the [PROJECT] trying to solve?
 - a. Who felt this was an issue of concern? (e.g. MOH, US Mission, other stakeholders?)
 - b. Why did they see it as a concern?

PROBE: What evidence was this based on?
 - c. Was there a country/government initiative or reform targeting this issue that the [PROJECT] was intended to support? Please describe briefly.
4. How did USAID decide to fund a project to address this problem? Who was involved in the decision?
 - a. What evidence was used to understand the issue?

PROBE: Evidence used by respondent or respondent's organization, other partners, local stakeholders, USG?
 - b. What approaches or activities did USAID specify in the RFA/RFP? (Skip if can answer from documentation)

PROBE: Did other stakeholders contribute to what was specified in the RFA/RFP?
 - c. How did USAID decide what to include in the RFA/RFP? Did other stakeholders contribute?
5. How was this [PROJECT] selected to address [ISSUE]?

- a. Who was involved in the selection?
- 6. Can you briefly describe the [PROJECT's] approach and activities?
 - a. Which do you think were the most important activities?
- 7. During the work planning process, how were the specific activities used in [PROJECT] selected?
 - a. Who contributed to these decisions?
 - PROBE: Prime or subcontractors, US Mission, MOH, hospitals, [PROJECT] participants, beneficiaries
 - b. What other information influenced the selection of the [PROJECT] interventions? (e.g. government priorities, new USAID/USG initiative, existing policies/regulations, new financing, etc.)
 - c. Were other interventions considered but not selected?
 - d. How much consensus was there between stakeholders about the design of the interventions?
- 8. How were the intervention sites identified? (e.g. hospital, school of nursing, etc.)
 - a. Who contributed to these decisions?
- 9. How were the activities designed to be appropriate for the local health system context?
 - a. How were planned activities piloted?
 - b. How were planned activities adapted to existing conditions during the [PROJECT]?

Pre-implementation

- 10. Were there any individuals or organizations who provided strong support for the [PROJECT]?
 - a. How did they promote [PROJECT] implementation?
 - PROBE: Did they promote implementation at individual sites or for particular activities?
 - b. What are the reasons they supported the [PROJECT]? (e.g. specific to [PROJECT] or supportive to larger country initiative?)
- 11. Were there any individuals or organizations who delayed or impeded implementation of [PROJECT]?
 - a. How did they impede [PROJECT] implementation?
 - b. What are the main reasons they impeded it?
- 12. Can you tell me about the dynamics of the individuals and organizations working on [PROJECT]?
 - a. How did these evolve over time?

Implementation

13. How were [PROJECT] activities implemented?
- Were all the activities implemented in all of the project sites? *(Skip if can answer from documentation)*
 - Were activities implemented in phases? *(If yes)* What were the phases? *(Skip if can answer from documentation)*
 - Did the [PROJECT] activities change over time? *(If yes)* Why? *(Skip if can answer from documentation)*
 - Were changes documented? *(If yes)* How? *(Skip if can answer from documentation)*
 - How did contextual factors affect implementation? (e.g. social, economic, political, technological, etc.)
14. Was there consensus among different partners and stakeholders about how the [PROJECT] was implemented?
15. Where did the resources for [PROJECT] implementation come from? (e.g. [PROJECT]/[PARTNER], USG, government, others) *(Skip if can answer from documentation)*
- Was there enough funding and other resources to support [PROJECT] implementation?
PROBE: financial, technical, human, technological.
 - (If there was a shortage of resources)* How was the shortage addressed?
16. What challenges were faced during day-to-day [PROJECT] implementation?
- Were there any issues with policies or regulations?
 - How did [PROJECT] address these challenges?
17. How were [PROJECT] activities monitored and/or evaluated? *(Skip if can answer from documentation)*
- Who was responsible for monitoring implementation progress? Was this part of standard implementing practices?
 - Was an evaluation conducted? By whom? Who requested it? Who paid for it?
 - How were findings from M&E incorporated into implementation?
 - What was the response to M&E findings?
18. What dissemination activities were undertaken during [PROJECT]? (e.g. small-scale meetings at [PROJECT] sites, national workshops presenting findings, feedback sessions to USG, etc.) *(Skip if can answer from documentation)*
- How was feedback disseminated throughout [PROJECT]? (e.g. [PROJECT] participants, end-of-the-line beneficiaries and policymakers)

Maintenance and evolution

19. What was done during [PROJECT] to support continuation of activities after [PROJECT] ended?

- a. What role did [PARTNER] or others have in helping to sustain the activities?
 - b. What role did others play in sustaining the activities? (e.g. US Mission, MOH, intervention sites, communities)
20. What is the current status of activities included in [PROJECT]?
- a. Who has taken responsibility for sustaining the interventions? (e.g. financial, organizational, technical responsibility)
 - b. What are the long-term prospects of the interventions?
 - c. What, if any, are the plans to scale-up/expand the interventions from [PROJECT]? (e.g. same country, other settings)

Reflections

21. What do you think were the impacts of [PROJECT]? (e.g. changes in health status, improved service delivery, increased quality of services.)
22. Were there any consequences from [PROJECT] that were unintended or unexpected?
23. What were some challenges to the overall implementation of [PROJECT]?
- a. How could have these been addressed during the implementation period?
 - b. Do these challenges remain an issue today? Why?
24. What were the key factors that led to the success of [PROJECT]?
25. What are some lessons learned from implementing this intervention that you would take forward on other projects of this nature?
26. Is there anything else we have not discussed that you would like to share about the implementation of [PROJECT]?
27. Do you have any questions for us?

ANNEX C: BIBLIOGRAPHY

- Adam, Taghreed, Justine Hsu, Don de Savigny, John N. Lavis, John-Arne Rottingen, and Sara Bennett. 2012. Evaluating health systems strengthening interventions in low-income and middle-income countries: are we asking the right questions? *Health Policy and Planning* 27:iv9-iv19.
- Bernard, Russell H. and Ryan, Gery W. 2010. *Analysing Qualitative Data: Systematic Approaches*. Los Angeles: Sage Publications.
- Damschroder, Laura J., David C. Aron, Rosalind E. Keith, Susan R. Kirsh, Jeffrey A. Alexander, and Julie C. Lowery. 2009. Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science* 4: 50.
- GHI. 2012. *Global Health Initiative Principle Paper: Health Systems Strengthening, Draft 6*. Washington, DC: Global Health Initiative, the U.S. Government.
- Hatt, Laurel, Ben Johns, Catherine Connor, Megan Meline, Matt Kukla, and Kaelan Moat. 2015. *Impact of Health Systems Strengthening on Health*. Bethesda, MD: Health Finance & Governance Project, Abt Associates.
- Kilbourne, Amy M., Mary S. Neumann, Harold A. Pincus, Mark S. Bauer, and Ronald Stall. 2007. Implementing evidence-based interventions in health care: Application of the replicating effective programs framework. *Implementation Science* 2:42.
- Miles, Matthew B. and A. Michael Huberman. 1994. *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: SAGE Publications, Inc.
- Strauss, Anselm, and Juliet M. Corbin, eds. 1997. *Grounded Theory in Practice*. Thousand Oaks, CA: SAGE Publications, Inc.
- Travis, Phyllida, Sarah Bennett, Andy Haines, Tikki Pang, Zulfiqar Bhutta, Adnan Hyder, Nancy Pielemeier, Anne Mills, and Timothy Evans. 2004. Overcoming health-systems constraints to achieve the Millennium Development Goals. *Lancet* 364:900-906.
- WHO. 2007. *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes, WHO's Framework for Action*. Geneva: World Health Organization.
- WHO. 2011. *Health Systems Strengthening Glossary*. Geneva: World Health Organization.



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