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Improving Hospital Performance in Guatemala, El Salvador, Costa Rica, Panama, and Belize

2010-2015

Guatemala, January 2016

Table of Contents

Analysis of Average Regional Performance	3
Analysis by countries.....	5
GUATEMALA.....	5
Table No. 1. General Performance of Hospitals in Guatemala	6
EL SALVADOR.....	10
Table No. 2. General Performance of Hospitals in El Salvador	11
COSTA RICA.....	14
Table No. 3. General Performance of Hospitals in Costa Rica	15
PANAMA	19
Table No. 4: General Performance of Hospitals in Panama	20
BELIZE	23
Table No. 5: General Performance of Hospitals in Belize	24
Conclusions.....	28
Recommendations.....	29
Challenges.....	29

Improving Hospital Performance in Guatemala, El Salvador, Costa Rica, Panama, and Belize

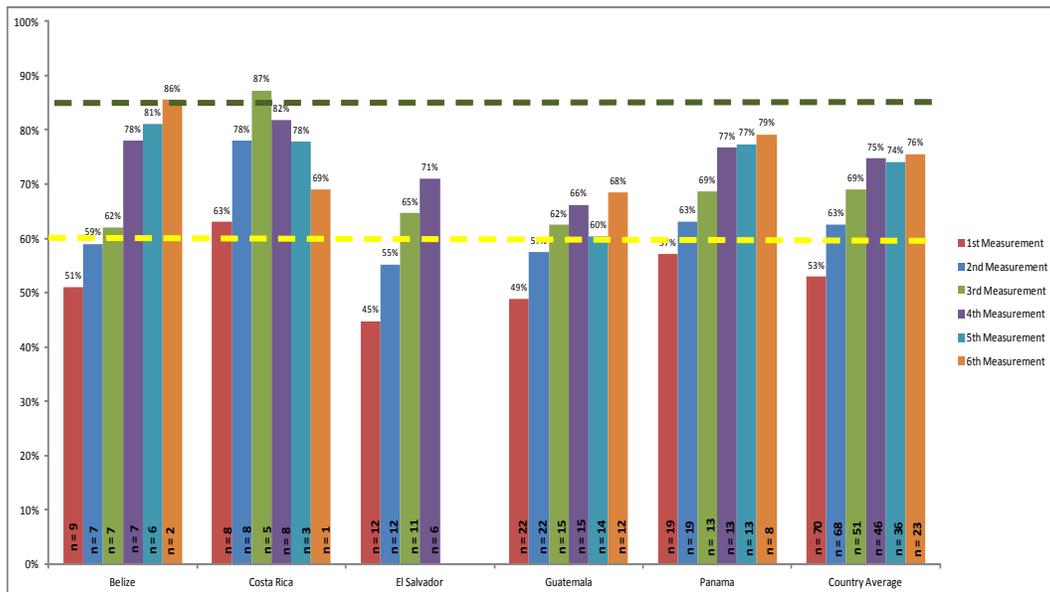
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Regional Report

The USAID | Central America Capacity Project provides technical support to the ministries of health and/or social security institutes in Guatemala, El Salvador, Costa Rica, Panama, and Belize to strengthen the technical capacity of health personnel and improve access to a continuum of comprehensive care services for people living with HIV.

The project uses the Optimizing Performance and Quality (OPQ) methodology to support a continuous quality improvement of care model and to optimize the performance of health workers, organizations, and systems. OPQ systematically and continuously applies operational standards based on good practices, evidence-based medicine, national STI/HIV/AIDS norms and protocols, and perceptions of user satisfaction. The methodology is being implemented in **76 of the region’s hospitals**, working with local multi-disciplinary teams that have acquired the technical skills to apply the OPQ¹ methodology in hospitals and HIV/AIDS comprehensive care clinics and identify the continuous performance improvements that are needed to strengthen quality service provision.

Figure 1: Aggregate Optimizing Performance and Quality Measurements for Comprehensive and Continued Care in the Region



*Source: USAID|Central America Capacity Project Monitoring Database.

¹ OPQ Guide. <http://www.intrahealth.org/opq/>

Figure 1 shows the average overall scores by country of annual hospital assessments during the period in which the project provided technical assistance to the ministries of health and/or social security institutes. The local counterpart technical teams served as the project's implementation partners from the outset to guarantee sustainability of the OPQ methodology.

Changes in hospital performance seen during this period are based on baseline values for each country in the region; the average difference from the baseline at the regional level is 20%. By the last round of assessments some countries showed a 40% to 50% average change compared to the baseline.

El Salvador, Panama, and Belize showed sustained performance improvement (Figure 1). The project's goal is for facilities to achieve an average performance score of at least 85%. Costa Rica had the highest number of facilities with scores equal to or over 85% (seven facilities); however, the hospitals that recorded high scores in the initial years saw their average scores decrease due to stock-outs in supplies and equipment, which ultimately affected the overall score. Nevertheless, all partner hospitals are committed to continuing their quality cycles to improve performance.

In Guatemala, the first four measurements showed sustained growth; however, the average overall score for hospitals decreased in year five due to a crisis in the health system brought on by labor strikes, lack of medications and equipment, and high turnover of key staff, such as the Minister and Vice-Minister of Health, hospital directors, and technical personnel. All of these factors affected the continuous improvement system. During this period, in spite of the crisis, two hospitals in Guatemala sought alliances with private entities, communities, municipal governments, and universities, leading to improved service delivery, with scores of over 85%. The overall performance score improved slightly in year six.

Fourteen facilities in the region had performance scores above 85%, representing 20% of all hospitals. These included three hospitals in Belize, seven in Costa Rica, one in El Salvador, two in Panama, and two in Guatemala. All of these hospitals received recognition from the highest health system authorities with a commitment to expand continuous quality improvement processes.

1. Analysis by country

GUATEMALA

In Guatemala, the project provided technical assistance to the National HIV/AIDS Program and the Vice-Ministry of Hospitals to implement a comprehensive continuous quality improvement of care model in 22 hospitals. The model is based on operational performance standards for the systematic care of people living with HIV. The process is coordinated by the National HIV/AIDS Program and executed by the Vice-Minister of Hospitals at the central level. A Quality Team is implementing the model in each of the facilities where the project provides technical assistance.

Each hospital Quality Team is trained in implementing the OPQ methodology, quality manuals and operational guidelines, and develops a description of the essential responsibilities in undertaking continuous quality management, which include performing periodic internal assessments, analyzing data, identifying the root causes of problems, making decisions to close gaps (e.g., financial resource management, trainings, equipment, supplies and medicines), managing resources to close gaps, and monitoring compliance with the intervention plan.

The Quality Team is composed of the hospital director; financial manager; epidemiologist; social worker; and heads of departments such as pediatrics, obstetrics, internal medicine, surgery, medical imagery, blood bank, laboratory, pharmacy, emergency room; nursing, and logistics. Evaluation instruments are distributed for each of the technical areas that are directly or indirectly relevant to the care provided to people living with HIV, as the management of these different processes is vital to guaranteeing continuous and comprehensive care by the hospital system.

At the onset, the project provided support to the Guatemala Ministry of Health for implementation in 12 hospitals; support expanded to 22 hospitals at the request of the Ministry. Table 1 shows the aggregate annual measurements during the period in which the project provided support to the Ministry of Health.

Table 1. Overall Hospital Performance in Guatemala

Hospitals	Measurement					
	1st	2nd	3rd	4th	5th	6th
1.Antigua	34%	64%	73%	65%	57%	65%
2.Coatepeque	62%	62%	76%	81%	57%	55%
3.Cobán	34%	59%	36%	57%	54%	74%
4.Cuilapa	48%	70%	62%	65%	58%	61%
5.Escuintla	42%	65%	70%	67%	45%	64%
6.Amistad-Japón	41%	58%	48%	63%	86%	87%
7.Benito Petén	36%	54%	66%	72%	71%	75%
8.Infantil Izabal	36%	51%	67%	79%	79%	85%
9.Huehuetenango	56%	60%	69%	73%	47%	65%
10.Quetzaltenango	56%	64%	61%	70%	45%	44%
11.San Vicente	40%	55%	61%	62%	43%	63%
12.Zacapa	35%	54%	65%	67%	83%	83%
13.Suchitepéquez	28%	38%	53%	41%	51%	
14.Retalhuleu	30%	36%	63%	49%	68%	
15.Malacatán	42%	78%	67%	81%		
16.El Progreso	51%	53%				
17.Chiquimula	63%	50%				
18.Jalapa	59%	45%				
19.Jutiapa	54%	58%				
20.Poptún	81%	68%				
21.Tiquisate	73%	44%				
22.Salamá	74%	78%				
Averages	49%	57%	62%	66%	60%	68%

* Source: USAID|Central America Capacity Project Monitoring Database.

/Red: from 0% to 59%. /Yellow: from 60 to 84%. /Green: Equal to or over 85%

Table 1 shows an average score of 49% for the **first measurement (baseline)** in the 22 hospitals, with 17 hospitals (or 77%) scoring between 0% to 59%, and 5 hospitals (or 23%) scoring in the 60% to 84% category. Frequent gaps identified in this assessment included lack of standardization in care, compliance with norms, equipment and supplies to guarantee quality care, infrastructure (such as sinks, doors for privacy when providing care, bathrooms for patients and staff), human resources, and training for staff on compliance with care norms.

The **second measurement** reveals an eight percentage point increase over the previous measurement in the average score for hospitals. Thirteen hospitals (or 59%) scored in the 0% to 59% range, while nine hospitals (or 41%) achieved the 60% to 84% category. Most of the changes occurred in the pharmacy, laboratory, blood bank, and counseling technical

areas. Senior management and quality teams secured resources to close gaps, emphasizing equipment, supplies, staff hiring and training, and updating norms. The process to close some medium- and long-term gaps remained ongoing.

The **third measurement** shows a five percentage point increase in average overall hospital scores (15 hospitals were assessed). This time 80% of hospitals (12) fell into the 60% to 84% range; with the rest (3) remaining in the 0% to 59% range. Most of the changes identified in this measurement were due to improvements in the organizational systems in which quality committees perform periodic monitoring and procedures to close gaps and increased participation by hospital supervisors. Training teams were consolidated and performed in-service monitoring of trained personnel. Gaps remained in financial resources; however, some hospitals had started to undertake actions with the private sector, municipal authorities, and universities to close those gaps.

The **fourth measurement** shows a four percentage point increase over the previous average overall measurement; 15 hospitals were assessed. Three hospitals (20%) scored in the 0% to 59% range and 12 (80%) in the 60% to 84% range. While most hospitals remained in the same categories, most increased their performance in areas such as nutrition, counseling, pharmacy, laboratory, blood bank, emergency room, and outpatient clinic.

The **fifth measurement** saw a six percentage point decline with regard to the previous measurement. Nine hospitals (or 64%) showed decreases in their average overall scores due to lack of budgets for supplies, lack of resources, and a high human resource turnover from medical directors to operational staff. One hospital achieved a score of over 85% due to the commitment of its staff to secure funds from the municipal government, universities, the private sector, and international partners. It is important to note that four hospitals (29%) scored in the 60%-84% range and documented their efforts to secure resources from the private sector and municipal governments.

In the **sixth measurement** there is an eight percentage point increase with regard to the previous measurement; 12 hospitals were assessed. Two hospitals achieved scores above 85%. In this last year, a financial crisis occurred in the Ministry of Health that brought about a lack of financial soundness, which affected the purchase of medications, supplies, resources, and equipment, and even employees' salaries. The fact that 67% of hospitals (8) were within the 60% to 84% score range demonstrates the efforts made by hospitals to maintain the quality management processes, notwithstanding external factors. Several hospitals documented their negotiations with municipal governments and private/public organizations.

The assessments noted the following important improvements among the 18 technical service areas that were assessed:

1. Emergency Room
 - a. Sexual violence evaluations conducted, especially regarding access to immediate and comprehensive care provided by physicians, psychologists, pharmacists, and social workers; access to HIV, STI, and hepatitis tests; access to antiretroviral medications, emergency contraception, STI medications, and subsequent follow-up at comprehensive care clinics;
 - b. Steps taken to supply basic equipment to provide emergency care,
 - c. Triage implemented;
 - d. Prevention of vertical transmission of HIV in pregnant women applied;
 - e. No stigma and discrimination from health workers.
2. Obstetrics
 - a. Follow-up to the vertical transmission prevention protocol; medications used according to the protocol;
 - b. Improvements made in filling out of patient files;
 - c. Follow-up by multi-disciplinary teams for women living with HIV and their newborns during the post-partum period.
3. Nutrition
 - a. Nutritionist hired in most hospitals, since none of the hospitals had this type of provider at the beginning of the project; nutritionists incorporated into the care being provided to people living with HIV, providing outpatient and inpatient services;
 - b. Nutrition clinics equipped;
 - c. Nutrition care protocols standardized.
4. Counseling
 - a. Improved knowledge, capabilities, and skills of the staff providing counseling to people living with HIV at comprehensive care HIV units and for key services such as emergency rooms, inpatient wards, laboratories, and blood banks;
 - b. Pre- and post-test counseling standardized by means of care flows, including linkages of the comprehensive care HIV unit to other services;
 - c. Linkage of counseling issues, family planning, STIs, risk factors, and partners;
 - d. Improved private spaces to hold counseling.

5. Laboratory
 - a. Good practices implemented to maintain and calibrate laboratory measurement equipment to provide support to people living with HIV;
 - b. Bio-safety measures implemented for the staff working in laboratories;
 - c. Support tests supplied (HIV tests, supporting laboratories, basic re-agents).

6. Blood Banks
 - a. Technical staff trained on tools to identify risk factors and linkages to comprehensive care HIV units;
 - b. Training conducted on issues such as stigma and discrimination, bio-safety, customer service, and care flows.

7. Pharmacy
 - a. Training conducted on good storage practices (air conditioning, stocks, labeling medications by lots, use of shelves, and documentation of incoming and outgoing medications);
 - b. Improved tracking for antiretroviral medications and support medication (sexual violence kit);
 - c. Storage criteria standardized in pharmacies and comprehensive care units.

8. Management
 - a. Multi-disciplinary teams created with support from senior management (Medical Director and Financial Manager);
 - b. Internal assessments and resource management promoted to close gaps;
 - c. Comprehensive care unit teams integrated with the rest of hospital teams;
 - d. Staff trained on non-stigma and non-discrimination, and compliance monitored;
 - e. The situation room issue strengthened, improving bio-security and epidemiological surveillance (reporting cases of hospital-acquired infections, HIV incidence and prevalence);
 - f. Comprehensive care unit strengthened with community network participation.

EL SALVADOR

In El Salvador, the project provided technical support to the Ministry of Public Health to implement a comprehensive continuous quality improvement of care model in **12 hospitals**. The model is based on operative performance standards for the care being provided to people living with HIV, taking a systematic approach. The process is coordinated by the Quality Management Department at the Vice-Ministry of Hospitals, in coordination with the National HIV/AIDS Program.

At the central level, the Ministry of Public Health has a quality methodology that has been implemented by health facilities since 2004 and is aimed at mother-child indicators. The project's technical support to the Ministry aimed to achieve synergies and prevent quality-management duplication. Performance standards were incorporated to synergize the processes that have already been introduced for quality management, incorporating operative standards with a systems approach and with emphasis on STI-HIV issues.

Each hospital has staff trained on implementing the methodology. The Quality Team, known in El Salvador as the UOC (Spanish acronym for Quality Operative Unit), has responsibilities such as performing internal assessments, analyzing data, making decisions to close gaps (e.g., managing financial resources, training, equipment, supplies, medications) and monitoring compliance against the intervention plan.

The quality teams are composed of the hospital director, the HIV comprehensive care physicians, heads of the maternity and pediatrics departments, and nursing staff. This composition is based on technical guidelines endorsed at the central level. At the Ministry of Public Health, the methodology is led by the Quality Management Directorate, with the participation of the National HIV/AIDS Program.

Table 2 shows the results of the assessments in 12 hospitals.

Table 2. Overall Hospital Performance in El Salvador

Hospital	Measurement			
	1st	2nd	3rd	4th
1.HJD San Miguel	48%	62%	72%	85%
2.H. Jorge Mazzini	46%	62%	73%	78%
3.H. Santa Gertrudis	37%	57%	72%	81%
4.HJD Santa Ana	49%	53%	68%	81%
5.H. José Saldaña	33%	37%	50%	38%
6.H. San Rafael de Santa Tecla	56%	61%	60%	64%
7.H. Luis E. Vásquez	53%	64%	51%	
8.H. Francisco Méndez	54%	56%	74%	
9.H. Benjamín Bloom	46%	61%	76%	
10.H. Rosales	48%	62%	72%	
11. H. La Unión	32%	33%	44%	
12.H. Dr Hernández	35%	55%		
Country Averages	45%	55%	65%	71%

* Source: USAID|Central America Capacity Project Monitoring Database.

/Red: from 0% to 59%. /Yellow: from 60 to 84%. / Green: Equal to or over 85%

As shown in Table 2, the **baseline average** performance score for the 12 hospitals was 45%, with 100% of the hospitals scoring in the 0% to 59% range. Most of the gaps derived from the lack of process standardization, non-compliance with norms, lack of supplies and equipment, and lack of supervision and monitoring. Factors affecting performance included training processes, with some staff who had never received initial orientations for their positions. Committees were put in charge of developing intervention plans.

The **second measurement** reflects a 10 percentage point increase with respect to the previous measurement. In general, performance improved in six hospitals that scored in the 60% to 84% category, with the other six remaining in the 0% to 59% category. The service areas with improved scores included the outpatient clinic, counseling, blood bank, pharmacy, obstetrics, solid waste management, and nutrition.

The **third measurement** shows a 10 percentage point increase in scores in comparison with the previous measurement; 11 hospitals were assessed. Hospitals with 60% to 84% scores increased to nine (82% of the hospitals assessed), with two hospitals scoring in the 0% to 59% category (18%). The performance percentages increased in the following areas: obstetrics, hospital waste management, counseling, pharmacy, nutrition, and blood bank. Gaps persisted in the areas of bio-safety, laundry, and morgue. Most changes were due to improvements in staff attitudes and empowerment to manage local processes. Persistent

gaps were evident due to the lack of a budgetary allocation to purchase personal protection equipment and repair sinks and inadequate infrastructure.

There was a six percentage point increase in the **fourth measurement** (six hospitals assessed) with regard to the previous one, owing to one hospital increasing its performance to more than 85% and four hospitals placing in the 60% to 84% category. The hospital scoring over 85% improved its infrastructure and took steps to secure resources to close gaps, promoted accountability, and recognized the efforts of the staff who improved services. At present, it is the model hospital in El Salvador.

The following service areas saw improvements:

1. Outpatient Clinic
 - a. Steps taken to supply basic equipment to clinics;
 - b. Staff trained to guarantee privacy at clinics, especially when they provide HIV pre- and post-test counseling;
 - c. Action taken to secure clinical equipment and furniture (HIV comprehensive care clinics);
 - d. Courteous treatment of patients notably improved;
 - e. HIV risk factors incorporated into patient medical backgrounds;
 - f. Informed consent forms for HIV tests standardized as part of the documentation.
2. Obstetrics
 - a. Protocols standardized, especially the use of a partogram and active management of the third stage of labor;
 - b. Improved research of obstetrics background, including venereal disease research laboratory (VDRL) test, HIV, and hepatitis;
 - c. Follow-up for women living with HIV and their newborns during the post-partum period.
3. Laboratory
 - a. Good equipment maintenance and calibration practices documented;
 - b. Sample processing protocols standardized and used;
 - c. Bio-safety procedures implemented;
 - d. Client care improved (training and privacy).
4. Blood Bank
 - a. Staff trained on risk factors;
 - b. Staff trained on stigma and discrimination;

- c. Care flow charts used and linked to comprehensive care HIV clinics;
 - d. Improved management of HIV, hepatitis, and VDRL and other rapid tests;
 - e. Improved spaces to meet privacy standards for interviews.
5. Hospital Waste Management
- a. Segregation of contaminated and non-contaminated waste improved;
 - b. Staff trained on bio-safety measures;
 - c. Contaminated route labeling improved;
 - d. Services worked with logistics to have personal protection equipment provided.
 - e. Staff trained on the occupational accident protocol.
6. Nutrition
- a. Linked to comprehensive care for people living with HIV, since this service had not been provided before;
 - b. Guidance provided on nutrition;
 - c. Actions taken to procure nutritional supplements;
 - d. Clinics have the equipment and supplies they need to guarantee comprehensive care for people living with HIV.
7. Counseling
- a. Post-test counseling improved by training providers in clinics and points of care at hospitals;
 - b. Documentation in clinical files strengthened;
 - c. Equipment and furniture provided for the clinics, including file cabinets to store files;
 - d. Services have care algorithms in visible places;
 - e. Patients are asked about their risk factors;
 - f. Family planning incorporated into comprehensive counseling;
 - g. Actions to guarantee antiretroviral supply at clinics undertaken;
 - h. Teams at comprehensive care HIV clinics integrated with the rest of the hospital care teams (including pediatricians, general practitioners, infectious disease specialists, psychologists, nutritionists);
 - i. Links to community networks made to strengthen referrals and counter-referrals.

8. Pharmacy

- a. Training conducted on good storage practices (air conditioning, stocks, labeling medications by lots, use of shelves, and documentation of incoming and outgoing medications);
- b. Actions for timely supply of pediatric and adult antiretroviral medications, as well as availability of sexual violence and STI kits improved;
- c. Staff trained on adherence and linkages with comprehensive care HIV clinics;
- d. Staff trained on the use and analysis of temperature logbooks.

COSTA RICA

In Costa Rica, the project provided technical support to the Social Security Institute to implement a comprehensive continuous quality improvement of care model in **14 hospitals**. The model is based on operative performance standards for care to people living with HIV, with a systematic approach. The process is coordinated by the National HIV Program under the Social Security Institute and the Health Service Coordinator at the central level, as well as the technical teams in order to optimize performance in each one of the health services under the Social Security Institute. At present, the Social Security Institute is in the process of institutionalizing the methodology and expanding it to all health facilities. The participatory methodology has empowered local teams helping to guarantee its sustainability.

Each hospital has staff trained on implementing the methodology and created a Quality Team, whose responsibilities include performing periodic internal assessments, analyzing data, making decisions to close gaps (e.g., managing financial resources, trainings, equipment, supplies, medications), and monitoring compliance with the intervention plan.

The Quality Team at the local level is known as ETOP in Spanish, which means Technical Team to Optimize Performance and Quality. It is composed of clinical staff from various departments including comprehensive care HIV clinics, internal medicine, pediatrics, obstetrics, nursing, psychology, epidemiology, social work, pharmacy, and support services.

Table 3 documents the results of the assessments in 14 hospitals.

Table 3. Overall Hospital Performance in Costa Rica

Hospitals	MEASUREMENT					
	1st	2nd	3rd	4th	5th	6th
1.Dr. Max Peralta de Cartago	76%	81%	83%	91%	78%	69%
2.Hospital Dr. Escalante Pradilla de Pérez Zeledón	65%	82%	91%	73%	69%	
3.Hospital San Rafael de Alajuela	90%	96%	91%	93%	92%	
4.H.N de Mujeres	79%	81%	87%	92%	86%	
5.Dr. Tony Facio de Limón	77%	78%	87%	84%	86%	
6.Hospital Monseñor Sanabria de Puntarenas	74%	81%	90%	85%		
7.H.N de Niños Dr. Carlos Sáenz Herrera	83%	92%	95%	96%		
8.Hospital San Carlos	62%	73%	85%	77%		
9.Hospital México	70%	89%	88%			
10.Hospital San Juan de Dios	74%	83%				
11.Heredia	56%	91%				
12.Quepos	46%	62%				
13.Liberia	52%	76%				
14.Neilly	75%					
Average	70%	82%	89%	86%	82%	69%

* Source: USAID|Central America Capacity Project Monitoring Database.

/Red: from 0% to 59%. /Yellow: from 60 to 84%. / Green: Equal to or over 85%

Table 3 shows a **baseline measurement** of **70%** for 14 hospitals. One hospital (9% of those assessed) scored over 85%, 10 (71%) scored in the 60% to 84% range, and three (21%) scored in the 0% to 59% range. It is important to mention that at the onset of project support, hospitals already had internal audit units that operated in isolation and in a non-standardized way. The central level of the Social Security Institute implemented the strategy with these teams, which performed the first measurement. They noted that there were several hospitals whose performance had to improve and congratulated only the hospitals that showed appropriate performance. This act encouraged the rest of the hospitals to implement their continuous improvement processes, supported by the Social Security Fund. The Neilly Hospital shows only one measurement, since the Fund's central level requested that support to this hospital be discontinued.

The **second measurement** (with 13 assessed hospitals) shows a 12 percentage point increase over the previous average, with four hospitals (31%) scoring over 85% and nine (69%) scoring between 60% and 84%. This measurement shows an improvement in all hospitals. The interventions supporting this increase included training, supplies, equipment and medications. Gaps focused on bio-safety, inpatient wards, waste management, and provider attitudes.

The **third measurement** (nine hospitals assessed) shows a seven percentage point increase with regard to the previous measurement, with eight hospitals (89%) scoring over 85% and one (11%) scoring in the 60% to 84% range. In this measurement, most of the services were above 85%, which is considered as adequate performance.

The **fourth measurement** only assessed eight hospitals and shows a three percentage point decrease with regard to the previous average measurement. This is due to three hospitals decreasing their averages and placements in performance score categories. Diminished performance was due to lack of supplies, equipment, and resources in some specific hospitals.

The **fifth measurement** only assessed five hospitals and shows a four percentage point decrease from the previous measurement because two hospitals decreased their scores. It is important to note that three of the five hospitals kept scores of over 85%. The hospitals that decreased their performance scores did so as a result of stock-outs of supplies, equipment, and medications. In addition, one hospital increased its service portfolio, which overloaded some services and resulted in stock-outs.

The **sixth measurement** shows only one hospital, which was the first hospital that started to implement the methodology. During implementation the hospital experienced several changes of directors, which resulted in delays in budget management and delayed input and supply purchases, leading to a score of 69%.

Out of the 18 technical areas that were evaluated, the following service areas showed improvements:

1. Emergency
 - a. The organizational system to receive patients improved, including triage (identifying danger signs and signals);
 - b. General care protocols standardized, including those caring for people living with HIV;
 - c. The vertical transmission prevention protocol applied to pregnant women;
 - d. Reduced stigma and discrimination by providers.

2. Obstetrics

- a. Patient documentation and use of clinical files standardized;
- b. Comprehensive care for women living with HIV and comprehensive and immediate care for newborns standardized;
- c. Labor monitored;
- d. The vertical transmission prevention protocol applied;
- e. Follow-up and surveillance provided during the post-partum period for women living with HIV and their newborns.

3. Nutrition

- a. Dietary histories standardized for people living with HIV
- b. Nutritional guidance provided;
- c. Actions taken to procure nutritional supplements for people who come to the clinic;
- d. Clinics have the equipment and supplies they need to guarantee comprehensive care for people living with HIV.

4. Counseling

- a. Improved knowledge, capabilities, and skills of staff providing counseling to people living with HIV at comprehensive care HIV units and key services such as emergency rooms, inpatient wards, laboratories, and blood banks;
- b. Standardization by means of care flows of pre- and post-test counseling, including linkages of the comprehensive care unit with other services improved;
- c. Counseling issues linked with family planning, STIs, risk factors, partners;
- d. Improved private spaces to hold counseling sessions.

5. Laboratory

- a. Documented implementation of good practices to maintain and calibrate laboratory measurement equipment to provide support to people living with HIV who come to the hospital seeking care
- b. Human resources to ensure care better managed;
- c. Bio-safety measures implemented for staff working in laboratories;
- d. Steps taken to secure supply of support tests (HIV tests, supporting laboratories, basic re-agents).

- e. User satisfaction processes improved (including friendly and cordial care, availability of waiting rooms, and privacy for care).
6. Blood Bank
- a. Technical staff trained on tools to identify risk factors and linkages to comprehensive care HIV units;
 - b. Steps to provide HIV testing strengthened and training provided on flows of diagnoses and referrals to comprehensive care HIV clinics;
 - c. Training conducted on issues such as stigma and discrimination, bio-security, customer service, and care flow.
7. Pharmacy
- a. Training conducted on good storage practices (air conditioning, stocks, labeling medications by lots, use of shelves, and documentation of incoming and outgoing medications);
 - b. Improved steps to track pediatric and adult antiretroviral medications, and supply and support medications (sexual violence kit, STI medications, emergency contraception).
8. Management
- a. Multi-disciplinary quality teams (ETOP, technical performance optimization, and comprehensive care) created with support from senior management;
 - b. Internal assessments and resource management promoted to close gaps;
 - c. Comprehensive care HIV unit teams integrated with hospital teams;
 - d. Strengthened user satisfaction assessments, emphasizing the populations that come to the comprehensive care clinic;
 - e. Staff trained on non-stigma and non-discrimination and compliance monitored;
 - f. The situation room issue strengthened, improving bio-safety and epidemiological surveillance (reporting cases of hospital-acquired infections, HIV incidence and prevalence);
 - g. Comprehensive care HIV unit strengthened, with community network participation.

PANAMA

In Panama, the project provided technical support to the Ministry of Health to implement a comprehensive continuous quality improvement of care model in **19 hospitals**. The model is based on performance standards with a systematic approach for care to people living with HIV. The process is coordinated by the Health Service Regulation Department under the central level of the Ministry of Health, in coordination with the National HIV/AIDS Program.

Panama's Ministry of Health, at the central level, has already institutionalized the methodology by means of **Resolution No. 1498, dated November 12, 2015**, which establishes that it will expand it to all health facilities by 2016. The methodology and quality teams at the health facilities have been officially launched.

Each hospital has staff trained on implementing the methodology. Quality teams have been established, with responsibilities such as performing internal assessments, analyzing data, making decisions to close gaps (e.g., managing financial resources, training, equipment, supplies, medications), and monitoring compliance with the intervention plan.

Quality teams are composed of staff from comprehensive care HIV clinics and heads of departments such as maternity, pediatrics, internal medicine, nursing, laboratory, blood bank, psychology, social work, nutrition, medical imagery, epidemiology, and support services such as logistics.

Table 4 shows a **baseline measurement of 57%** for 19 hospitals. Of these hospitals, one (5%) scored over 85%, six (32%) scored in the 60% to 84% range, and 12 (63%) scored in the 0% to 59% range. It is important to mention that at baseline the Ministry of Health did not have a methodology to supervise health facilities. The baseline provided an initial snapshot of the services, and with the leadership of the Health Service Directorate, and in coordination with the National HIV/AIDS Program, 100% of local and central-level teams were trained and began implementing the intervention plan. Most of the gaps that were found pertained to lack of knowledge about care protocols, process standardization, and equipment and supplies to provide care.

Table 4 shows the results of the assessments in 19 hospitals.

Table 4: Overall Hospital Performance in Panama

Hospitals	Measurement					
	1st	2nd	3rd	4th	5th	6th
1.Manuel Guerrero	48%	65%	62%	83%	65%	64%
2.Santo Tomas	58%	85%	78%	87%	84%	84%
3.Arnulfo Arias Madrid	54%	72%	73%	85%	86%	79%
4.Jose Obaldía	52%	59%	79%	95%	98%	97%
5.Aquilino Tejeira	50%	53%	67%	79%	72%	63%
6.Del Niño	61%	82%	77%	85%	86%	90%
7.Nicolas Solano (Chorrera Panamá Oeste)	51%	72%	62%	71%	82%	75%
8.Rafael Hernández (David Chiriquí)	50%	56%	57%	79%	92%	81%
9.Raul Dávila, Changuinola	64%	60%	76%	72%	79%	
10.Azuero Anita Moreno	34%	35%	52%	57%	56%	
11.Pediatría Omar Torrijos	62%	70%	86%	85%	75%	
12.Cecilio Castellero	42%	34%	60%	60%	51%	
13.Luis Fabrega	41%	53%	63%	58%	74%	
14. Hospital 24 de Diciembre	59%	67%				
15.Susana Jones Cano	72%	58%				
16.San Miguel Arcángel	87%	83%				
17.Joaquin Pablo Franco	54%	49%				
18.Gustavo Nelson Collado	62%	77%				
19.Rafel Estévez	84%	68%				
Average	57%	63%	69%	77%	77%	79%

* Source: USAID|Central America Capacity Project Monitoring Database.

/Red: from 0% to 59%. /Yellow: from 60 to 84%. / Green: Equal to or over 85%

The **second measurement** saw a six percentage point increase over the previous measurement. In general, there was an upward trend in performance scores, with one hospital (5%) scoring over 85%, 10 hospitals (53%) in the 60% to 84% range, and eight hospitals (42%) scoring in the 0 to 59% category. The service areas that improved their performance included pharmacy, laboratory, ART clinic, outpatient clinic, blood bank, and nutrition.

The **third measurement** (with 13 hospitals assessed) showed a six percentage point increase in comparison with the previous measurement. For this assessment, most hospitals (10, or 77%) were concentrated in the 60% to 84% score range, with one (8%) scoring over 85% and two (15%) in the 0% to 59% range. Most improvements in service

areas were due to team management, supplies, and training processes. The ART clinics, pharmacy, nutrition, and laboratory service areas all had a trend toward improved performance.

The **fourth measurement** (with 13 hospitals assessed) showed an eight percentage point increase with regard to the previous measurement, although now five hospitals had performance scores over 85%. Most improvements in this measurement came from nutrition, ART clinic, pharmacy, management, laboratory, central supply unit, and obstetrics. One hospital remained in the 0% to 59% range due to the hospital's infrastructure, which is very old and does not meet the conditions for privacy, bathrooms, and sinks. Efforts have been made to promote a move to a new hospital.

The **fifth measurement** (with 13 hospitals assessed) showed no change since the previous measurement. It is important to note that three out of the five hospitals were able to maintain scores of 85% and above and a new hospital was able to score above 85%. Any reductions in performance scores were mostly due to stock-outs of supplies, equipment, and medications. In addition, one hospital increased its service portfolio, which overloaded some of its services and caused stock-outs.

The **sixth measurement** was only performed in eight hospitals. The average score showed a two percentage point increase with regard to the previous measurement. Two hospitals (25%) achieved a score over 85% and six hospitals (75%) scored between 60% and 84%. Two hospitals maintained scores in the 85% category for three consecutive measurements.

Out of the 19 technical service areas that were assessed, the following improved:

1. Nutrition

- a. Linkages made to comprehensive care for people living with HIV, since this service was not provided before;
- b. Guidance provided on nutrition;
- c. Actions taken to procure nutritional supplements;
- d. Clinics have the equipment and supplies they need to guarantee comprehensive care for people living with HIV.

2. ART Clinic

- a. Post-test counseling improved by training providers in clinics and points of care at hospitals;
- b. Documentation in clinical files strengthened;
- c. Equipment and furniture provided to clinics, including file cabinets;

- d. Facilities have care algorithms posted in visible places;
- e. Patients are asked about their risk factors;
- f. Family planning incorporated into comprehensive counseling;
- g. Actions undertaken to guarantee antiretroviral supply at clinics;
- h. Teams at comprehensive care HIV clinics integrated with the rest of the hospital care team (including pediatricians, general practitioners, infectious-disease specialists, psychologists, nutritionists);
- i. Links to community networks made to strengthen referrals and counter-referrals.

3. Laboratory

- a. Documented implementation of good practices to maintain and calibrate laboratory measurement equipment to provide support to people living with HIV;
- b. Human resources to ensure care better managed;
- c. Bio-safety measures implemented for the staff working in laboratories;
- d. Steps taken to secure supply of support tests (HIV tests, supporting laboratories, basic re-agents);
- e. User satisfaction processes improved (including friendly and cordial care, availability of waiting rooms, and privacy for care).

4. Blood Bank

- a. Technical staff trained on tools to identify risk factors and linkages to comprehensive care units;
- b. Steps to provide HIV testing strengthened and training provided on flows of diagnoses and referrals to comprehensive care HIV clinics;
- c. Training conducted on issues such as stigma and discrimination, bio-safety, customer service, and care flow.

5. Pharmacy

- a. Training conducted on good storage practices (air conditioning, stocks, labeling medications by lots, use of shelves, and documentation of incoming and outgoing medications);
- b. Improved steps to track pediatric and adult supplies;
- c. Antiretroviral medications and support medication available (sexual violence kit, STI medications, and emergency contraceptives).

6. Central Supply Unit
 - a. Staff trained on good practices for flow of contaminated and sterile materials in the Central Supply Unit;
 - b. Process strengthened to store sterilized products and to label them;
 - c. Staff awareness raised on the use of specific bio-safety measures, including the green and red areas;
 - d. Staff trained on bio-safety.
7. Management
 - a. Multi-disciplinary quality teams created with support from senior management (active participation of directors and financial managers);
 - b. Documentation of protocols, norms, and guidelines strengthened with the aim of standardizing processes;
 - c. Local training units created, seeking to close gaps by developing annual training plans;
 - d. Trained staff followed up to strengthen service skills;
 - e. Surveillance conducted to ascertain that there is no stigma or discrimination in health services;
 - f. High-performing teams recognized in each one of the hospitals, which encouraged services to continue their good practices;
 - g. Strengthened assessments of users' satisfaction, emphasizing the populations that come to the comprehensive care HIV clinic;
 - h. The situation room issue strengthened, improving bio-safety and epidemiological surveillance (reporting cases of hospital-acquired infections, HIV incidence and prevalence);
 - i. Strengthened comprehensive care unit with community network participation.

BELIZE

In Belize, the project provided technical assistance to the Ministry of Health to implement a comprehensive continuous quality improvement of care model in **nine hospitals**. The model is based on performance standards for care to people living with HIV, with a systematic approach. The process is coordinated by the Health Service Regulation Department at the central level of the Ministry of Health, as a Unit for Health Service Accreditation and Licensing, in coordination with the National HIV/AIDS Program.

The Ministry of Health Central Level has a quality and prevention policy for infections associated with health care. It has an official organizational chart that includes a quality and infection surveillance unit that provides support to the administration and management of each hospital. The Ministry will ratify the implementation of the continuous quality improvement methodology and will expand it to all facilities by February 2016. At present, the Ministry's Legal Department is undertaking the final technical consultations.

Each hospital has staff trained on implementing the methodology. Quality teams have been created with responsibilities such as performing internal assessments, analyzing data, making decisions to close gaps (e.g., managing financial resources, training, equipment, supplies, medications), and monitoring compliance with the intervention plan.

Quality teams are composed of staff from comprehensive care HIV clinics and heads of departments such as maternity, pediatrics, internal medicine, nursing, laboratory, blood bank, psychology, social work, nutrition, medical imagery, epidemiology, and support services such as logistics.

Table 5 presents the results of the assessments in 9 hospitals.

Table 5: Overall Hospital Performance in Belize

Hospitals	MEASUREMENT					
	1st	2nd	3rd	4th	5th	6th
1. Corozal Community Hospital	37%	60%	55%	81%	84%	91%
2. Northern Regional Hospital, Orange Walk	57%	62%	74%	86%	85%	90%
3. Cleopatra White Polyclinic II	37%	40%	43%	83%	75%	
4. Karl Husener Memorial Hospital (KMHM)	44%	48%	56%	69%	77%	
5. Punta Gorda Community Hospital	49%	57%	73%	79%	85%	
6. Belize Family Life Association (BFLA)	60%	57%	61%	65%	78%	
7. Southern Regional Hospital, Dangriga	49%	58%	74%	80%		
8. San Ignacio Community Hospital	61%	76				
9. Western Regional Hospital	67%	73%				
Average	51%	57%	62%	78%	81%	90%

* Source: USAID|Central America Capacity Project Monitoring Database.

/Red: from 0% to 59%. /Yellow: from 60 to 84%. / Green: Equal to or over 85%

Table 5 shows a **baseline measurement of 51%** for nine hospitals, with six hospitals (67%) scoring in the 0% to 59% range and three (33%) in the 60% to 84% category. The performance gaps, mostly centering on organizational systems, included lack of standardized processes; equipment, supplies, and resources to provide comprehensive care

to patients; and continuous staff training. An intervention plan was developed aimed at improving efforts to close these performance gaps.

The **second measurement** (for eight hospitals) shows a six percentage point increase over the previous measurement. In general, performance increased for seven hospitals. Improvements to technical service areas included pharmacy, obstetrics, and intensive care. Senior management undertook the procedures necessary to secure financial resources to purchase equipment and supplies. In addition, staff were trained on the issues that were identified as knowledge gaps (stigma and discrimination, pre- and post-test counseling, among others).

The **third measurement** (for seven hospitals) shows a five percentage point increase in the average score, when compared to the previous measurement. There was a shift in score categories, with four hospitals (57%) scoring in the 60% to 84% range and three (43%) scoring between 0% and 59%. Most improvements occurred in technical areas, including outpatient clinic, obstetrics, internal medicine, pediatrics, hospital waste management, laboratory, blood bank, and management. This improvement was due to training and resource management to close gaps. Local teams were motivated and shared lessons learned with other teams; they documented local management processes, such as procedures to secure equipment and furniture for blood banks, and the linkage between this service and the comprehensive care HIV unit.

The **fourth measurement** (for seven hospitals) shows a 16 percentage point increase with regard to the previous measurement, due to one hospital improving its performance score to 86%. The other six hospitals also increased their performance. Technical service areas such as obstetrics, counseling, outpatient clinic, and waste management all increased their performance, scoring over 85%.

In the **fifth measurement** (with six hospitals assessed), there was a four percentage point increase over the previous measurement, with two hospitals scoring over 85% and four hospitals scoring in the 60% to 84% range. The technical service areas that improved included obstetrics, intensive care, blood bank, laboratory and pharmacy. Counseling, internal medicine, nutrition, diagnostic imagery, and bio-safety scored in the 60% to 84% category. This measurement shows that quality teams had been consolidated and were supported by regional supervisors.

The **sixth measurement** shows only two hospitals being measured, both scoring over 85%, with a 90% average. Most of the areas measured at these hospitals scored over 85%. Only two technical areas showed scores averaging between 60% and 84%: diagnostic imagery and bio-safety.

Out of the 18 technical areas that were evaluated, the following improved:

1. Outpatient Clinic
 - a. Steps taken to equip clinics;
 - b. Courteous treatment of patients improved considerably;
 - c. HIV risk factors incorporated into medical files;
 - d. HIV-testing informed consents documented.

2. Emergency
 - a. Steps taken to secure emergency equipment and supplies;
 - b. Training conducted on stigma and discrimination;
 - c. Infrastructure improved;
 - d. Bio-safety measures implemented;
 - e. Files documented;
 - f. Improved identification of risk factors and links to comprehensive care unit.

3. Obstetrics
 - a. Protocol standardized;
 - b. Women living with HIV and their newborns followed up during the post-partum period.

4. Internal Medicine
 - a. Steps taken to secure supplies and resources to provide care;
 - b. Interaction of care processes with people living with HIV improved;
 - c. Improved identification of risk factors and clinical linkage to comprehensive care.

5. Intensive Care
 - a. Steps taken to secure supplies and resources to provide care to critical patients;
 - b. Inter-consultation with comprehensive care unit improved
 - c. Improved identification of opportunistic infections;
 - d. Staff trained on specific bio-safety measures and using protective equipment;
 - e. Prevention of nosocomial infections improved.

6. Laboratory

- a. Documented good equipment maintenance and calibration;
- b. Sample processing protocols standardized and used;
- c. Bio-safety procedures implemented;
- d. Client care improved (training and privacy).

7. Blood Bank

- a. Staff trained on risk factors;
- b. Staff trained on stigma and discrimination;
- c. Flow charts used and linked to comprehensive care clinics;
- d. HIV, hepatitis, VDRL, and other rapid tests managed;
- e. Improved spaces for interviews so that they are private.

8. Management

- a. Multi-disciplinary quality teams managed;
- b. Resources managed to close gaps;
- c. Staff encouraged to achieve goals;
- d. Care protocols documented;
- e. Data and situation room analyzed.

9. Nutrition:

- a. Linked to comprehensive care for people living with HIV, since this service was not provided previously;
- b. Guidance provided on nutrition;
- c. Actions taken to procure nutritional supplements;
- d. Clinics have the equipment and supplies they need to guarantee comprehensive care for people living with HIV.

10. Counseling

- a. Post-test counseling improved by training providers at clinics and points of care in hospitals;
- b. Documentation in clinical files strengthened;
- c. Equipment and furniture provided for the clinics, including file cabinets.
- d. Services have care algorithms posted in visible places;
- e. Patients are asked about their risk factors;
- f. Family planning incorporated into comprehensive counseling;
- g. Actions to guarantee antiretroviral supply at clinics undertaken;

- h. Teams at comprehensive care clinics integrated into the rest of the hospital care team (including pediatricians, general practitioners, infectious disease specialists, psychologists, nutritionists, among others);
- i. Links made to community networks to strengthen referrals and counter-referrals.

11. Pharmacy

- a. Training conducted on good storage practices (air conditioning, stocks, labeling medications by lots, use of shelves, and documentation of incoming and outgoing medications);
- b. Improved steps to track pediatric supplies and supply of adult antiretroviral and support medications (sexual violence kit, STI medications, and emergency contraceptives);
- c. The situation room strengthened, improving bio-safety and epidemiological surveillance (reporting cases of hospital-acquired infections, HIV incidence and prevalence);
- d. Strengthened comprehensive care unit with community network participation.

CONCLUSIONS

1. OPQ has been adapted as a highly efficient model by the ministries of health.
2. 100% of the health facilities supported by the project have quality committees conducting continuous improvement actions.
3. The ministries of health in Belize, Costa Rica, and Panama are in the process of officializing and expanding OPQ. El Salvador already had an official Continuous Quality Improvement methodology with which OPQ has been harmonized. In Guatemala a political and financial crisis for the past two years affected institutionalization of OPQ. Trained personnel are leading the actions at the local level doing internal performance measurements and generating improvement processes. The majority of facilities have built strategic alliances with municipalities, NGOs, civil society, and universities for performance gap closing.
4. Criteria that contribute to service improvement are: 1) leadership; 2) client-centered processes; 3) strategic alliances for resource generation and management; and 4) analysis and data-based decision-making.
5. There was an overall regional increase in average performance scores from 54% at the baseline to 76% in the last measurement.

6. Twenty percent (15/76) of the hospitals achieved the desired performance score of 85%. In Costa Rica, 50% of the hospitals achieved 85% followed by Belize (33%), Panama (11%), El Salvador (10%), and Guatemala (9%).
7. Technical areas linked to care of people living with HIV that showed improvement included outpatient services, counseling, nutrition, laboratories, pharmacy, and blood bank.
8. A regional average of 93% (380/410) of people living with HIV stated they received a stigma- and discrimination-free service in facilities applying OPQ, ranging from 88% in Guatemala to 96% in Panama and El Salvador.
9. Thirty-seven percent of hospitals (19/51) applying OPQ reduced their nosocomial infection rates by 25% or had notification rates between zero and four percent.

RECOMMENDATIONS

1. Continue supporting ministries of health in applying OPQ in the health facilities until they maintain the desired level of performance in at least two consecutive measurements.
2. Strengthen coordination between the Ministry/Social Security Institute central and local levels in continuing the processes for sustaining quality improvement of health services.
3. Hold national meetings to present quality improvement results, strategic information, lessons learned, and successful experiences to replicate in other health facilities.
4. Forge strategic alliances with other regional and local organizations and the private sector to maximize resources for closing performance gaps.
5. Due to the high rotation of staff, continue quality improvement trainings at the central and local level.
6. Document successful actions and experiences to serve as a reference for other health facilities.
7. Disseminate results nationally and internationally for discussion and analysis to identify concrete actions for progressive improvement of the health services.
8. Utilize OPQ results to develop operational plans and to count on technical and financial support for closing performance gaps.
9. Recognize health facilities that achieve an improvement in quality to motivate best practices.
10. Support coordination between the hospital infections and quality committees to strengthen their collaboration to reduce hospital infections to less than four percent.

CHALLENGES

1. Political factors are an external variable that affects the quality management objectives including the disposition of economic and human resources and medicines.
2. High rotation of health personnel necessitates ongoing quality pre-service and in-service training programs. However, multiple regional and national actors and projects treat quality management differently without a common vision.
3. There is a strong emphasis on clinical indicators and little on user satisfaction. A quality approach should be incorporated and positioned in the community and with users of the services.