



USAID
FROM THE AMERICAN PEOPLE



CONFERENCE PAPER

SAMEA CONFERENCE - September 2013

Routine monitoring and performance assessments enable health workers to identify and address health delivery challenges in Botswana: Experiences in six health facilities

Authors: Jabulani Mavudze, Sithembiso Msomi, Naume Kupe, Anddy Omoluabi¹

¹ Affiliation: Management Sciences for Health, Building Local Capacity for Delivery of HIV Services in Southern Africa Project

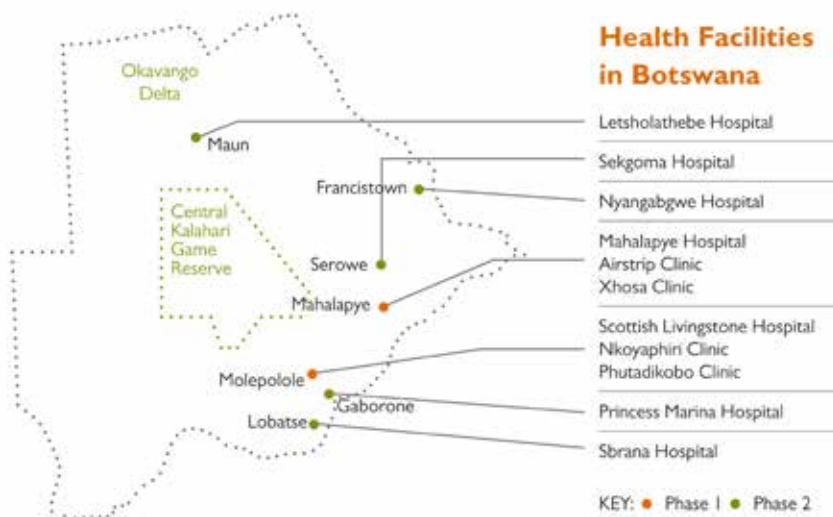
Background

Botswana is classified as a middle income country. However due to unequal distribution of wealth, about 28% of the population live on less than a dollar a day. With a life expectancy at birth of about 55 years for both sexes, the country carries a high disease burden. The Infant Mortality and the Under Five Mortality Rates remain high, with 40% of infant deaths occurring in the first week of their birth (National Health Policy 2011).

Morbidity and mortality for all ages are dominated by infectious diseases with HIV and AIDS, TB, and other communicable diseases responsible for about half the deaths. Botswana’s adult HIV prevalence rate of 24.8% is the second highest in the world.

Despite significant progress, Botswana is unlikely to meet its Millennium Development Goals to reduce child mortality, improve maternal health, and combat HIV and AIDS, malaria and other diseases by 2015. Achieving health targets depends on equitable access to a health system that delivers high quality services depending on the country context. According to the World Health Organization (WHO) different contexts all require adequate financing; a well-trained workforce; quality information on which to base policy and management decisions; logistics that get medicines, technologies and vaccines to where they are needed; well-maintained facilities organized as part of a referral network; and leadership and governance that provide clear direction and harnesses the energies of all stakeholders—including communities.

In Botswana, the health delivery system is challenged with shortages of skilled health workers and poor staff motivation and low productivity contributes to poor quality. This is further compounded by weak leadership and management practices and



BLC Focus Health Facilities in Botswana

poor information management systems. At facility level, information is not consistently generated to inform decision making. These challenges are highlighted in the the Botswana Ministry of Health’s (MoH) Corporate Plan 2000–2005, the National Development Plan 9.1, and the National Health Policy 2011, all identify additional health facility challenges including retaining staff, information management, and leadership and management skills. Furthermore, these challenges are more pronounced in rural health facilities as a result of unfavorable working conditions.

Following a request from the MoH, in 2010 the Building Local Capacity for Delivery of HIV Services in Southern Africa Project (BLC), with funding from the Centre for Diseases Control (CDC Botswana), developed the Quality Improvement and Leadership (QIL) program. The QIL program is delivered in partnership with the Council for Health Service Accreditation of Southern Africa (COHSASA) in 11 pilot facilities situated mostly in semi-urban areas of western Botswana.

This paper, presented at the South Africa Monitoring and Evaluation Association (SAMEA) Conference in September 2013, focuses on results in six facilities where the BLC has intensively implemented the QIL program. It shows how the six health facilities have utilized monitoring and evaluation data and leadership and management to address challenges and improve the quality of health services.

Methodology

The QIL program is an integration of two components; leadership and management; and quality improvement in health care services. The quality improvement component assists health workers to identify gaps in health care standards and address them through periodic assessments and on-going technical assistance. Through the leadership and management component, participants, organized in multi-disciplinary teams, learn the basic practices of leading and managing to: 1) address organizational challenges and achieve results; 2) create a workgroup climate that supports staff motivation; 3) create and sustain teams that are committed to continuously improve health services; and 4) use data for decision making to ensure continuous quality improvement. This integrated approach ensures that facilities utilize knowledge gained in the leadership component to work on specific health indicators, while using data from the quality improvement assessments in management and decision making.

The BLC approach is based on the understanding that a country’s health system is complex: to run smoothly and fulfill its purpose (a healthy nation), many interdependent stakeholders must work together. These stakeholders are similar to cogs in a gear or machine: each has a specific role and is essential for the system to function optimally. When one cog has broken or worn teeth it can slow or even stop the entire system. The Quality Improvement

The QIL Approach



and Leadership program facilitates this process by analyzing the gaps in the health system (identifying worn or broken teeth) and providing skills to stakeholders to address these gaps. While gaps may be identified at health facility level, they frequently require cooperation and involvement from one or more stakeholders in the country. For example, a health facility may have a gap in a specific department (such as emergency care) because their equipment is not working, requiring intervention from another government department, such as the Department of Building and Engineering Services. The leadership and management skills provided by the QIL program are essential and promote collaboration at all levels, so that health facilities are able to function effectively, and quality of care improves. This process is depicted in the **QIL Approach** diagram on page 2.

The QIL Program Critical Path

In implementing the QIL program, BLC in partnership with COHSASA conducted training on leadership and quality improvements to ensure that health workers at ministry level and targeted facilities understand the program. This included the assessment process and the scoring criteria in the **service elements** (an organizational unit in a facility that provide a specific service. Examples of service elements include surgery, radiology, health and safety, community health service, and access to care). Baseline surveys to measure and identify gaps in quality of health care were conducted in six health facilities in 2010 and scores for all the service elements were recorded.

Health facility staff in all six facilities received training on leading and managing. During these trainings, health workers analyzed data from a web-based

database system—COHSASA Quality Improvement System (CoQIS)-this online system enables users to capture data, analyze, and identify gaps and their root causes. Based on CoQIS results, teams developed quality improvement plans or service elements work plans using the **Challenge Model** (a tool which helps teams define the path to a result by focusing on one challenge at a time. Using this tool, teams are able to: understand their current situation; identify the root causes and measurable results; develop priority actions; and as a team develop a shared vision).

Teams implemented the quality improvement plans with supervision, coaching, and mentorship provided by trained coaches. They applied leadership and management practices to achieve the objectives and targets. BLC and MoH assisted the coaches and service element leads through on-going needs-based technical assistance.

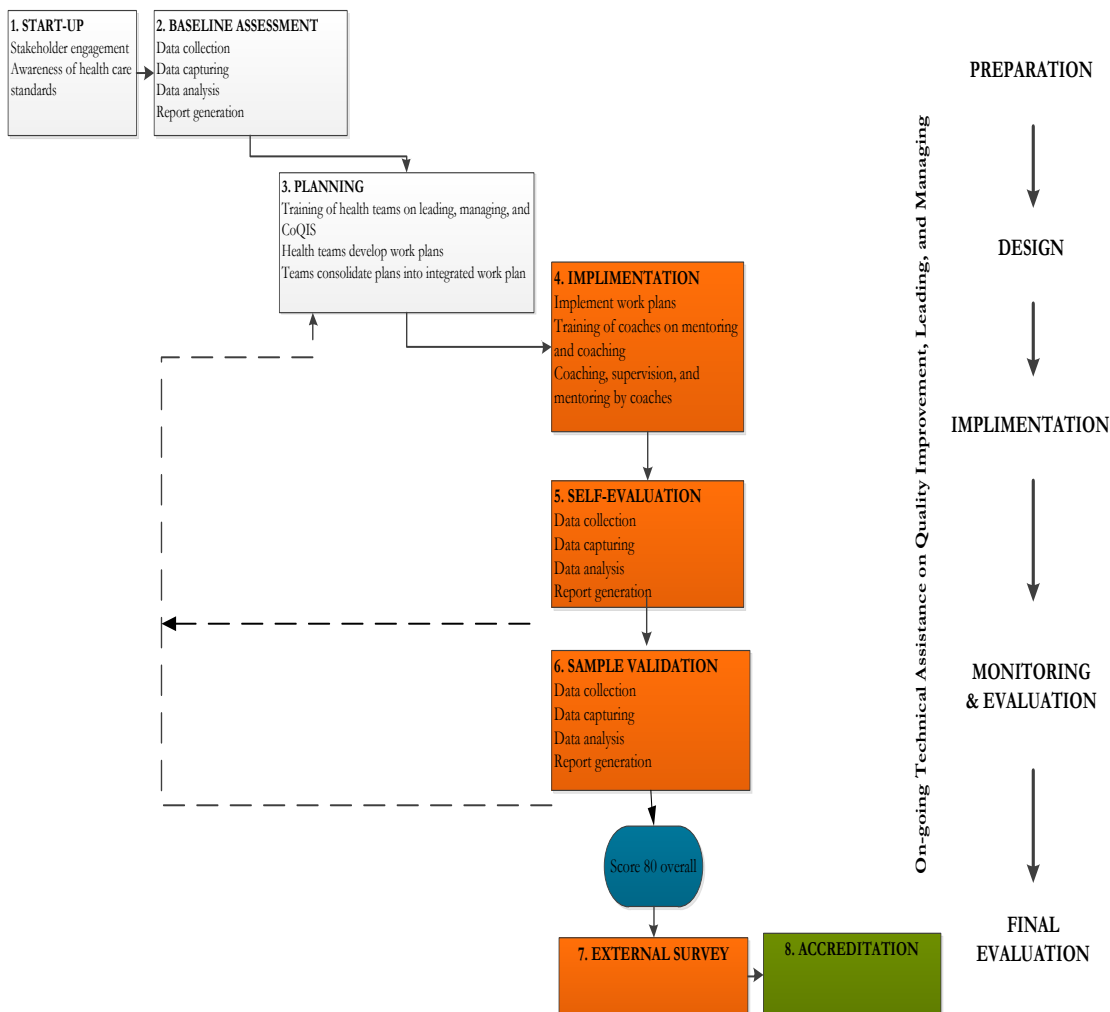
Health teams independently monitored the implementation of the service elements work plans by conducting **self-evaluations** (a process of self-assessment done by health staff to measure actual performance or quality in comparison with standards in order to provide a feedback mechanism that will facilitate continuing improvement) using the QIL data collection tools. Data collected was captured onto CoQIS and used to revise the service element work plans.

Self-evaluations were followed by **sample validations** (periodic assessments conducted by COHSASA surveyors to measure changes in health care standards). Since December 2010, four sample validations were conducted in each of the six facilities. The validations helped assess the health workers' understanding of health care standards; when the variations between self-evaluation and sample

Before and After: Progress made in management of information at Scottish Livingstone Hospital, as part of the QIL program



The QIL Process Diagram



validation scores are low, it means that the health workers are conversant with the health care standards and the tools used in the assessments.

Sample validation results inform the next step; if the overall and critical service element scores are 80 points or more the next step in the process is an **external survey** (a survey conducted by independent surveyors to determine if the facility qualifies for accreditation). Due to non-compliance in some service elements in the six BLC focus facilities, no external survey has been conducted, instead, facilities developed new or revised existing service elements work plans to address gaps in compliance. The process is cyclical until the facility qualifies for accreditation as shown in the diagram below.

Results

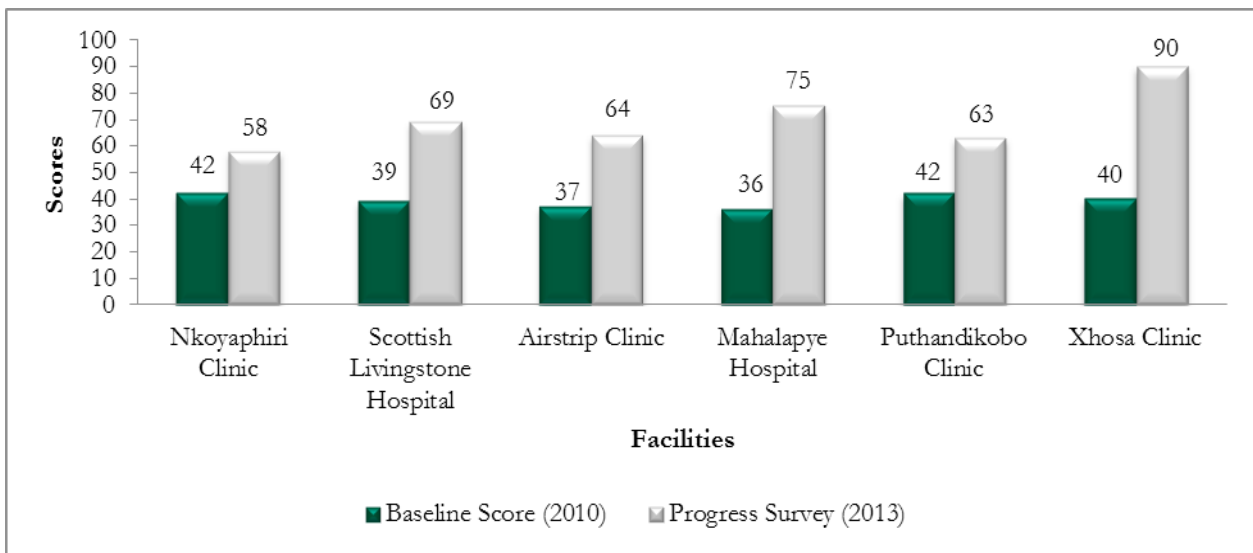
The QIL program resulted in improved health care standards; enhanced ownership of intervention by health workers at all levels—national, district, and facility levels; and increased understanding of the

concept of continuous improvement. Application of acquired leading and management skills was demonstrated by increased collaboration among teams in various health facility units; routine self-evaluation to monitor progress and identify challenges; development of service element work plans; and increased stakeholder participation.

Improvement in service elements and overall health facility scores

In 2010, the baseline overall scores for each of the six facilities were below 80 points—the benchmark for qualifying for an external survey; the highest score was 42 points (Nkoyaphiri and Puthadikobo Clinics) and lowest 36 points (Mahalapye Hospital). In three years, all six health facilities have increased their overall facility score and various service element scores. As shown in Figure 1 below, Xhosa Clinic recorded the highest increase (125%) from 40 to 90 points, followed by Mahalapye (108%) from 36 to 75 points. Nkoyaphiri registered the lowest increase of 39% from 42 to 58 points. Measured against 80 points,

Figure 1: Six Health Facilities Increase their Quality Improvement Scores



the minimum accepted score for accreditation Xhosa Clinic surpassed the benchmark while Mahalapye and Scottish Livingstone Hospitals are within reach.

There are 33 service elements measured for a hospital and 11 service elements measured for a clinic, as detailed in Appendix A and B, respectively. When baseline assessments were conducted in 2010, only one service element at Scottish Livingstone Hospital scored above 80 points. At Mahalapye Hospital administrative support scored the highest at 60 points. Most management systems service elements which include management and leadership, human resources management, management of information, and quality management and improvement, returned low baseline scores across all six facilities. Clinical service elements (prevention and control of infections, medical/surgical/pediatric & obstetrics, medical care, surgical care, critical care, obstetric/maternity care, pediatric care, and operating theatre and anesthesia services) scored below 50 points in all the assessed facilities. After three years 39% of service elements at Mahalapye Hospital scored above 80 points and

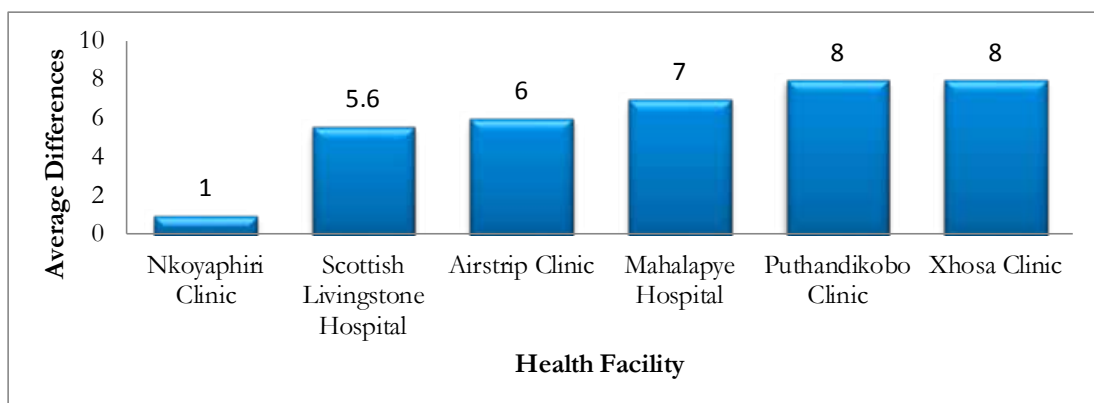
none scored below 55 points. At Scottish Livingstone, 30% of service elements scored above 80 points and none scored below 50 points. The picture below demonstrates improvement in the management of information service element at Scottish Livingstone Hospital.

Institutionalization of leading, management, and quality improvement practices and tools in health facilities

In all six facilities, there is increased application of leading and managing skills and knowledge thereby contributing to improved health care services, sustainability, ownership, and accountability by health workers.

Between August 2010 and July 2013, each facility conducted 14 self-evaluations; an average of four assessments per year, using the QIL program data collection, management, and analysis tools. In the same period, COHSASA conducted four sample validations in each facility.

Figure 2: Average Difference between Self-evaluation and Sample Validation Scores



Comparing the self-evaluations scores and the subsequent sample validations scores in the facilities showed little difference, indicating good understanding of quality improvement standards by health facility staff. Figure 2 below shows an average difference of 1 at Nkoyaphiri Clinic and 8 at Xhosa and Puthadikobo Clinics, between self-evaluation and sample validation scores.

“The QIL program has done wonders for us. Although we are yet to reach the ratings required for accreditation, we have doubled our score from a baseline of 37 two years ago. Our staff now understands the concept of standards, quality, and being held accountable, and it’s not just the nursing staff I’m talking about, but also the general workers.”

Dr Bose, Superintendent, Mahalapye Hospital, Botswana

Increased team work, coordination of services, and resource utilization

Some service elements have interdependencies, meaning that if a determinant service element is not performing well, it will have a detrimental impact on the scores of dependent service elements. For example, in most facilities the maintenance service element has affected scores in clinical service elements, such as operating theatre and anesthesia, and surgical care. However, the QIL program has helped the health facilities recognize and understand the synergies and complementary relationships among the different service elements. As a result service elements teams increasingly share information and work collectively to address challenges.

“This program [QIL] has improved working relationships between doctors and nurses; we are now talking the same language; of continuously improving the quality of service.”

Julia Ngidi, Quality Manager, Scottish Livingstone Hospital, Botswana

Improved quality of care to patients

If the QIL program has helped health workers to improve health care scores, the next question is what does this compliance to health standards translate to in terms of benefits for the patients and their families?

Though a specific study is still to be conducted, the following initiatives and experiences demonstrate the positive impact of the QIL program at the level of the patient and the community at large.

Scottish Livingstone Hospital sustains an efficient and effective Occupational Therapy department

“We had a challenge with providing appropriate interventions for our psychiatric patients. The patients are typically admitted to the hospital for short periods of time but require longer-term support before they can function as effective members of families and societies. We chose to set up a small gardening project because we knew that we could find most of the resources needed within the hospital system. We first sold the idea to the psychiatric unit, then to the hospital management. Within six months we had acquired the land, fenced it, and installed the irrigation pipes, prepared the land for planting, and acquired part-time gardeners to help our patients grow vegetables. So far we have supplied patients’ families and donated carrots, onions, and kale to the hospital kitchen. One patient has started his own vegetable



Harvesting vegetables at the Scottish Livingstone Hospital garden

garden at home,” said Misani Monthe, Occupational Therapist, Scottish Livingstone Hospital.

Constructing a patient waiting shelter through innovative resource mobilization and community involvement

The QIL program has brought communities and health facilities closer. Members of the community are playing an increasingly significant role in ensuring quality services by supporting hospital management. At Nkoyaphiri Clinic, the community contributed to the construction of a new patient waiting area and a waste disposal safety area.

The construction of the waiting area was a result of the Nurse-in-Charge, Mmapula Modise, attending QIL training on Infection and Prevention Control, one of the critical areas in the quality improvement standards. After the training, she approached the African Comprehensive HIV/AIDS Partnerships (ACHAP), an organization that provides HIV and AIDS services in the area, to fund the construction of the waiting area. ACHAP provided the building material and labor, and the waiting area was constructed. Patients at the Infectious Disease Care Center (IDCC) had previously been forced into a small waiting area without proper ventilation.

Conclusions and Recommendations

The results discussed in this paper demonstrate that routine monitoring and evaluation in six facilities supported by BLC’s QIL program has helped health facility teams to: identify challenges and implement corrective measures; understand and adhere to health care standards; improve service elements scores and provide effective, efficient, and innovative services to the people of Botswana. The pattern of low baseline scores for each of the six facilities may imply that health facilities in Botswana face similar challenges and therefore would benefit from the QIL or similar program.

The QIL is a sustainable and cost effective approach that empowers health facility and ministry of health staff to advance a quality improvement agenda. The Botswana experience shows that it can be implemented in health facilities facing health services delivery and compliance challenges in resource constrained environments. A future area of work will be to conduct an impact assessment to determine the QIL’s impact on the health outcomes of the general population.

To speed up the process of accreditation, it is recommended that inter-ministerial and interdepartmental collaboration should be enhanced.

On June 10, 2013, Solomon Mukwenha was awarded a Public Service Excellence Award by the Botswana Ministry of Presidential Affairs and Public Administration in recognition for his valuable contribution to the public service. This prestigious award is given to those who excel in executing their public service role. As the laboratory quality officer, Solomon led the drafting of standard operating procedures and quality policies, and implementation of quality improvement projects. The laboratory consistently performs well in proficiency testing as a result of its adherence to standardized testing, equipment calibration, and quality controls performance. Solomon also coordinated laboratory in-service trainings and facilitated relationship-building between health facility departments.

Solomon Mukwenha is a Medical Scientific Officer at Mahalapye Hospital, Botswana



Appendix A: Trend Analysis of Service Elements in Hospitals

Service Element	Mahalapye Hospital Scores			Scottish Livingstone Hospital Scores		
	Baseline 2010	Progress Survey 2013	% Change in Scores	Baseline 2010	Progress Survey 2013	% Change in Scores
Management and Leadership	47	84	79%	34	65	91%
Human Resource Management	38	67	76%	49	64	31%
Administrative Support	60	93	55%	54	70	30%
Access to Care	42	87	107%	44	88	100%
Patient and Family Rights	27	90	233%	45	77	71%
Management of Information	25	74	196%	24	87	263%
Health and Safety	20	66	230%	12	52	333%
Quality Management and Improvement	17	63	271%	27	57	111%
Prevention and Control of Infections	14	73	421%	14	52	271%
Medical Care	36	78	117%	39	60	54%
Surgical Care	38	70	84%	42	58	38%
Obstetric/Maternity Care	41	73	78%	48	59	23%
Psychiatric Care (Ward)		71	N/a	35	90	157%
Paediatric Care	43	85	98%	51	62	22%
Operating Theatre and Anaesthesia Service	35	68	94%	29	60	107%
Laboratory Service	45	71	58%	46	72	57%
Radiology Service	51	75	47%	47	66	40%
Pharmaceutical Service	46	82	78%	49	55	12%
Emergency Care	35	73	109%	33	65	97%
Outpatient Care	36	81	125%	26	61	135%
Sterilising and Disinfecting Unit	34	68	100%	33	60	82%
Food Service	40	66	65%	53	86	62%
Laundry Service	26	57	119%	37	55	49%
Housekeeping Service	23	63	174%	16	56	250%
Maintenance Service	19	59	211%	17	52	206%
Resuscitation Service	11	75	582%	15	74	393%
Health Care Technology Management	25	69	176%	24	75	213%
Physiotherapy Service	48	85	77%	55	81	47%
Occupational Therapy Service	38	82	116%	43	84	95%
Dietetic Service	38	81	113%	85	92	8%
Clinical Psychology Service		84	N/a	49	87	78%
Social Work Service	56	84	50%	59	90	53%
HIV Management (Hospital Level)	55	91	65%	58	82	41%
TOTAL SCORE	36	73	103%	39	70	79%

Appendix B: Trend Analysis of Service Elements in Clinics

Service Element	Score (Nkoyaphiri)			Score (Phuthadikobo)			Score (Xhosa)			Score (Airstrip)		
	Baseline (2010)	Progress Survey (2013)	% Change in Scores	Baseline (2010)	Progress Survey (2013)	% Change in Scores	Baseline (2010)	Progress Survey (2013)	% Change in Scores	Baseline (2010)	Progress Survey (2013)	% Change in Scores
Management and Leadership	23	50	117%	30	57	90%	29	95	228%	34	70	106%
Patient and Family Rights	42	75	79%	34	72	112%	45	95	111%	49	100	104%
Access to Care and Continuity of Care	73	84	15%	79	83	5%	75	100	33%	60	55	-8%
Human Resource Management	23	68	196%	23	57	148%	21	84	300%	17	74	335%
Management of Information	37	50	35%	38	50	32%	38	91	139%	31	59	90%
Management of Medication	54	76	41%	54	71	31%	59	90	53%	30	49	63%
Health and Safety	22	33	50%	18	42	133%	17	76	347%	16	46	188%
Provision of Clinical Care	71	76	7%	71	81	14%	64	92	44%	66	72	9%
Primary Health Services	54	74	37%	71	81	14%	57	95	67%	58	76	31%
Quality Management and Improvement	13	13	0%	13	52	300%	14	83	493%	13	43	231%
Housekeeping Service	47	47	0%	33	56	70%	27	92	241%	31	59	90%
TOTAL AVERAGE	42	59	40%	42	64	52%	40	90	125%	37	64	73%

References:

1. U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Partnership to fight HIV/AIDS in Botswana. Retrieved on June 3, 2011, from: <http://www.pepfar.gov/countries/botswana/index.htm>
2. Management Sciences for Health. 2005. Managers Who Lead: A Handbook for Improving Health Services. 3rd ed. Cambridge, MA: Management Sciences for Health.
3. World Health Organization. (2007). WHO country cooperation strategy: Botswana. Brazzaville: WHO. Retrieved June 3, 2011, from: http://www.who.int/countries/en/cooperation_strategy_bwa_en.pdf
4. Botswana National Health Policy. (2011). National health policy towards a healthier Botswana (Final Draft)
5. Botswana Ministry of Health. (2012) Emergency Medical Services standards

Launched in 2010, the USAID-funded Building Local Capacity for Delivery of HIV Services in Southern Africa Project (BLC) strengthens government, parastatal, and civil society entities to effectively address the challenges of the HIV and AIDS epidemic.

Throughout the Southern Africa region and with specific activities in six countries, BLC provides technical assistance in organizational development, including leadership, management, and governance in three key program areas: 1) care and support for orphans and vulnerable children; 2) HIV prevention; and 3) community-based care.

BLC is working with Global Fund Principal Recipients in Angola, Namibia, South Africa, and Swaziland, as well as the Southern African Development Community.

This publication is made possible by the generous support of the United States Agency for International Development (USAID) under the Leader with Associates Cooperative Agreement GPO-A-00-05-00024-00. The contents are the responsibility of The Building Local Capacity for Delivery of HIV Services in Southern Africa Project and do not necessarily reflect the views of USAID or the United States Government.



Access BLC publications online:
www.hivsharespace.net/collection/blc

Building Local Capacity Project (Regional Office)

Ditsela Place
 1204 Park Street (Cnr Park and Jan Shoba Streets)
 Hatfield, Pretoria, South Africa
 Tel: +27 12 364 0400; Fax: +27 12 364 0416
blcsouthernafrica@msh.org; www.msh.org