

MCC LESOTHO COMPACT 2008-2013

MCA HEALTH PROJECT LESOTHO

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FINAL EVALUATION REPORT

HEALTHMATCH consultancies

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i. List of Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Ante Natal Consultation
AJR	Annual Joint Review, see Annex for explanation
ART	Anti-Retroviral Therapy
AST	Antibiotic Susceptibility Testing
BOS	Bureau of Statistics
BTS	Blood Transfusion Services
CAG	Community ART Group
CDC	Center for Disease Control
CED	Compact End Date
CEIP	Continuing Education Implementation Plan
CHAL	Christian Health Association of Lesotho
DHMTs	District Health Management Teams
DNP	Defects Notification Period
EGPAF	Elizabeth Glazer Pediatric AIDS Foundation.
EMRS	Electronic Medical Record System
ERR	Economic Rate of Return
ESP	Essential Services Package
FGD	Focus Group Discussion
FWA	Federal Wide Assurance
FY	Fiscal Year
GAVI	Global Alliance for Vaccines and Immunization
GoL	Government of Lesotho
HDI	Human Development Index
HCWM	Health Care Waste Management
HFS 2011	Health Facility Survey 2011
HI	Health Inspector
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSS	Health Strengthening System
ICAP	International Center for AIDS Care and Treatment Programs of Columbia University
ICT	Information and Communications Technology
IEA	Implementation Entity Agreement
ITT	Infrastructure Technical team
<i>ITT</i>	<i>Indicator Tracking Table</i> (used by MCC)
IUD	Intra Uterine Device
KII	Key Informant Interview
LENASO	Lesotho Network of AIDS Service Organizations
LMDA	Lesotho Millennium Development Agency
MAF	Mission Aviation Fellowship
M&E	Monitoring and Evaluation
MCA-L	Millennium Challenge Account Lesotho
MCC	Millennium Challenge Corporation
MCH	Mother and Child Health
MDG	Millennium Development Goals
MOHSW	Ministry of Health and Social Welfare, later renamed MoH
MOH	Ministry of Health, previously titled MoHSW
MSM	Men having Sex with Men
NHTC	National Health Training College
NRL	National Reference Laboratory

NUL	National University of Lesotho
OHRP	Office for Human Research Protections
OPD	Out Patient Department
PDA	Personal Digital Assistant
PEPFAR	President's Emergency Plan for AIDS Relief
PiH	Partners in Health
PIU	Project Implementation Unit
PLHIV	People Living with HIV
PMCS	Project Management and Construction Supervision
PMTCT	Prevention of Mother to Child Transmission
PPE	Personal Protective Equipment
PRS	Poverty Reduction Strategy
QMMH	Queen Mamohato Hospital
SACU	Southern Africa Customs Union
Solidarmed	Swiss Organisation for Health in Africa
SW	Sex Worker
TB	Tuberculosis
ToC	Theory of Change
TOR	Terms of Reference
TWG	Technical Working Group
WHO	World Health Organization

In this report, the terms 'patients' and 'clients' are used interchangeably

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iii. Executive Summary

a. Overview of Compact and intervention(s) evaluated

The Health Project evaluated is one of three projects under the Compact 2008-2013 between Millennium Challenge Corporation (MCC) and the Government of Lesotho (GoL). The aim of the Compact being poverty reduction, the other two projects addressed the water sector and the private sector. The water sector contributed to the construction of the Metolong dam and water outlets; the private sector contributed to improving access to credit, reducing transaction costs and increasing the participation of women in the economy.

Background

In the early years 2000, 24 % of adults aged 15-49 in Lesotho were infected with Human Immunodeficiency Virus (HIV). Tuberculosis (TB) and poor maternal health added to HIV's negative economic impact. In spite of a relatively high GoL spending on health, service delivery was considered ineffective and unable to cope with the HIV challenge. The Compact, which was implemented from 2008-2013 by the Millennium Challenge Account – Lesotho (MCA-L), intended to strengthen the country's health care system by providing a sustainable platform for the delivery of anti-retroviral therapy and other essential health services throughout the country.

The Health Project

The Project included the following seven Activities and accompanying (sub)Activities, which were complemented by investments from other donors in the sector:

- 1 Construction or renovation and equipment of 138 Health Centers (HCs) throughout the country, which is nearly 90 % of all Health Centers in the country.
- 2 Renovation and equipment of 14 Out Patient Departments (OPDs) attached at district hospitals (out of 16), to ensure HIV/AIDS care.
- 3 Reconstruction and equipment of a National Reference Laboratory (NRL), including staff training
- 4 Upgrading of the Blood Transfusion Services (BTS): construction and equipment of a Central Blood Transfusion Facility and of two regional centers, including provision of vehicles for mobile units and staff training.
- 5 Construction of premises of the National Health Training College (NHTC), which consisted of additional dormitories for students, staff housing, equipment; and hard- and software for teaching.
- 6 Health System Strengthening, which included:
 - Strengthening of pre- and in-service training capacity
 - Support to the process of decentralization of service delivery; various subActivities fall in this category.
 - Support to the Research and Development Unit within the Ministry of Health
 - Support to development of health information systems, including a Health Information System (HMIS) and an Electronic Medical Record System (EMRS).
- 7 Support to update and implement the Government's Medical Waste Management Plan.

The Health Project was designed to improve health outcomes for people using the HCs and OPDs renovated, which is more than 90 % of the entire population. In addition, patients in all hospitals in the country are potential “participants” since the NRL supports all the district laboratories in the country and blood transfusions are given in all of the hospitals, with more frequent use in Maseru hospitals. The Project also provided a considerable amount of training and was intended to support increased enrollment at NHTC, so health professionals and students can also be considered “participants.”

b. Evaluation type, questions, methodology

This evaluation serves to meet the requirement in MCC’s M&E Plan that every project be evaluated independently and enable MCC to be accountable for the Lesotho Health investment and generate learning we can apply to future.

MCC commissioned a mixed methods ex-post performance evaluation of the Lesotho Health Sector Project. Qualitative data collection included observations, key informant interviews with stakeholders at the Ministry of Health, LMDA, OPDs, and members of six (out of 10) District Health Management Teams, and 26 focus groups with 181 village health workers. Quantitative data collection included a Health Facility Survey (HFS) of 26 HCs and 10 OPDs, conducted from February-April 2018, and then compared to a 2011 HFS. The team also used extensive quantitative secondary data from Demographic Health Surveys, Annual Joint Reviews by the Government of Lesotho, and other health statistics. The evaluation presents on a descriptive analysis of trends, pre-post comparisons, and statistics from one point in time, complemented by qualitative analysis. The exposure period is a minimum of 4-years.

Table 1 summarizes the planned methods of data collection.

Table 1 Summary of data collection methodology

	Central (national) level MoH; various national institutions and international organizations		Peripheral level: DHMTs OPDs and Health Centers	
Data collection	Secondary data	Primary data	Secondary data	Primary data
Quantitative data	Statistics from health services, MoH ¹ ; DHS and AJRs.			HFS 2018 for comparison with HFS 2011
Qualitative data	Reports that contain system and process data; Includes MCA Health Project documentation	KIIs with MoH staff, institutions, agencies and NGOs, including MCA and MCC.	Various reports of national and international agencies	KIIs with DHMT and clerks in OPDs; clinicians in hospitals FGDs with VHWs in Health Centers (not OPD’s); Observations

For analysis of the ERR, interviews were held with MCC staff and a workshop with several knowledgeable stakeholders was held.

¹ international agencies like WHO and World Bank use statistical methods to improve certain statistical data. Unless indicated otherwise, health system-based data in this report come from the MoH.

c. Findings

This section shows the results of the Health Project in terms of Activities and outcomes. Also, it lists some of the evaluation questions plus summary answers. It ends with conclusions and recommendations.

Activities

Table 2 shows the results of the Health Project in terms of Activities and the costs associated.

Table 2 Summary of financial status of the Health Project; all amounts in USD

Health Project Components	Funding according to Compact 13 Sept 2008 – 13 Sept 2013	MCC cumulative expenditure to January 14, 2014	GoL cumulative expenditure to December 2016	Total expenditure		Outputs
	A	B	C	B+C		
Health Centers	72,934,000	91,755,009	85,622,188	177,377,197	2010 - 2016	Constructions completed with concerns about design and quality of constructions and furnishing; largely over budget
ART Clinics²	4,742,000	13,037,746	193,924	13,231,670	2010 – 2013	Constructions completed with some concerns about design and quality of constructions; over budget
Central Laboratory (NRL)	3,052,000	3,380,230	0	3,380,230	2010 – 2012	Constructions and equipment mostly adequate and completed; slightly over budget
Blood Transfusion Center (BTS)	2,689,000	2,414,595	0	2,414,595	2010 – 2012	Constructions and equipment adequate and completed; below budget
National Health Training College (NHTC)	7,414,000	4,541,283	0	4,541,283	2010 – 2012	Constructions, furnishing and IT equipment adequate and completed; reduced budget
Health System Strengthening; various subActivities and deliverables	15,000,000	10,615,549	64,556	11,080,105	2009 – 2013	Mixed results: various deliverables were a failure and several deliverables were a relative success; reduced budget.
Medical Waste Management	3,727,000	3,376,363	0	3,376,363	2010 – 2013	Tools for system support and pilot completed; planned roll out not implemented.
Health PIU	12,940,000	13,655,381	823,411	14,478,792	2008 - 2013	Project planning and management completed; concerns about quality and costs.
TOTAL	122,398,000	142,776,156	87,104,079	229,880,235		

Implementation

Health centers.

Initially, for the construction of the 138 health centers, various companies were contracted; one of them went half way out of business and had to be urgently replaced by other contractors, one of the reasons for considerable delays.

Eventually, all the health centers were constructed and furnished. Compared with the previous dilapidated facilities, this was a great improvement, in spite of issues with the design of the health centers, the quality of the construction and especially with the quality of the furniture, which was described as shoddy. In a single case, the construction was never finished.

Eventually the health centers took 77 % of the final, increased, total Health Project budget.

² ART clinics = Out Patient Departments (OPD's).

Due to design issues and to increased use of the health centers (see below), in general the spaces are insufficient, to the point that in some facilities tents are erected to provide for additional spaces.

OPDs.

For each of the 14 OPDs selected, a tailor-made approach resulted in additional working space. This Activity took 6 % of the budget.

Central Facilities

In Maseru, NRL, BTS were constructed in the so-called Botsabelo complex. The construction and equipment were carried out according to plans with hardly any delays and no major issues of quality. The additional dormitories and houses of the adjacent NHTC were also finished in time and according to plans. Together, these constructions + equipment took 4 % of the budget. The purpose of these constructions was to increase their capacity in the face of expected increased demands. However, all three institutions do not deliver higher numbers of tests of samples (NRL), blood units (BTS) or graduated students (NHTC) than before. According to the evaluator, this does not reflect a failure or weakness of the institutions per sé but it rather is a consequence of new strategies in the case of the or of budgetary constraints in the case of the BTS that limit the number of staff available. It is of note that from the districts, some patients are referred to the central Queen Mamohato Hospital (QMMH) not because they need specialist attention but because there is no blood available.

The Health System Strengthening activities together took 4.8 % of the budget. The approach was mostly to support the MoH in developing capacities, policies and technical tools like guidelines.

One component was staff training, for which a Continuing Education Implementation Plan (CEIP) was made and several technical documents like specifications of trainings. Trainings were given to 2,225 peripheral health professionals. The CEIP was not in use, four years after the Compact.

Support to the Research Unit of the MoH helped to settle the Unit firmly in the MoH and focused on strengthening the Ethical Review Board for research proposals. In 2018, both Unit and Board continue to operate. Yearly, between 100 and 200 research proposals are reviewed and advice is given to researchers.

The support to the ongoing decentralization of the health system was oriented towards strengthening the District Health Management Teams (DHMTs). Vehicles were supplied, and tools developed, such as guidelines for transport management. The tools are hardly used and adequate functioning of the DHMTs remains a challenge for various reasons. With support of several agencies and WHO however, strengthening of DHMTs still is actively pursued.

Another decentralization support was the development of an electronic Health Management Information System and an Electronic Medical Record System (HMIS, respectively EMRS). The HMIS clearly was a failure due to the way this component was set up. HMIS has been replaced by another system, DHIS2, that is functioning reasonably well.

The EMRS in OPDs also is not a success: only the administration module is functional, albeit with problems. The system is not used by the physicians and pharmacists. A new system is being developed by MoH.

The investment in Health Care Waste Management (HCWM) was guidelines development and a pilot in one district. Although not completed, this has certainly helped to improve policies and practices of waste handling. The activity requires permanent investment, which has been fluctuating for the years since the Compact.

Results in terms of outcomes

Utilization of health services by People Living with HIV (PLHIV) has increased and the number of persons on ART has nearly tripled since the start of the Compact, reaching 180,000 by the end of 2016. Whereas previously ART was provided in OPDs only, in 2015, of PLHIV who were initiated on ART, 68.4 % received treatment in health centers and 19.5 % in hospitals/OPDs. Also, the number of TB patients has increased. This cannot be attributed to the Health Project but certainly the Health Project has significantly contributed to this result. Various other strategies and developments also contributed to this: the policy to test & treat for HIV, introduced in 2016 and the policy to integrate HIV and ART services. Possibly because HIV is not a death sentence anymore and ART is more and more available, stigma is gradually reduced, allowing for more use of health services.

Outcomes at population level, like child mortality or prevalence of HIV, need a longer period to kick in. For example, in 2016, nearly 25 % of the population still was HIV positive. The effect of increased survival of PLHIV due to effective treatment may result temporarily in a higher prevalence. Over time, prevention of HIV transmission is expected to lead to lower prevalence.

Some of the expected health improvements like reduction of child and maternal mortality can only be assessed through community- or household-based surveys. These are carried out with a certain fixed regularity. The timelines of these measurements did not yet allow for comparison between before and after the Health Project and results cannot be provided as yet.

Table 3 lists the key questions for this evaluation and the summary responses.

Table 3; Key questions for the evaluation.

KEY QUESTIONS	GENERAL
Health Project planning and implementation: was the project implemented according to plan?	The Health Project was fully completed but with significant delays and large additional costs. After the Compact End date, it took the GoL more than a year to finish the health centers constructions and supply of furniture and equipment. The books were finally closed 28 months after CED. The actual duration of the Health Project thus was longer than five years. The budget of some of the (sub)Activities had to be reduced during Project implementation, to compensate for the increased costs of the health centers and OPDs (ART clinics).
KEY QUESTIONS	HEALTH PROJECT OUTCOMES
Patient outcomes: Has utilization of HCs and OPDs changed? Has utilization changed around HIV/AIDS, TB, and MCH services specifically? Have overall health outcomes such as infant, child, and maternal mortality; TB treatment success rates; HIV/AIDS treatment, and survival rates changed since the start of the Compact?	There is an increase of the use of health services, including a nearly threefold increase of patients on ARV's. For TB and MCH, increase is less prominent. Infant, child and maternal mortality are declining, also before the Compact. TB notification (46%) and treatment success rate (below 80 %) improve but are still below targets. Increased numbers of PLHIV are on treatment and the success rate (adherence and survival) is also increasing.
Community outcomes: What proportion of community members use the HCs and OPDs? Who chooses not to seek treatment at HCs and OPDs? Why?	No population-based data on use of health services do exist. Barriers to access to health services, such as stigma and reputation are gradually being reduced; health facilities are more appreciated than before; financial barrier (transport) remains. Community-based activities like Village Health Workers (VHWs) and outreach are important contributors.
Health professional outcomes: How satisfied are health professionals with their work environment now compared to before the Compact began? Are HCs staffed at appropriate levels?	Satisfaction levels among health professionals are higher than before the Compact, and this is related to more spacious health centers and their own housing conditions. Staffing of health centers in particular increased to nearly adequate levels, although the increase of users has created the need for a new (higher) standard of staffing.
Central Laboratory (NRL)	NRL construction and equipment are adequate. More tests are being done in Lesotho and very few samples are sent abroad for testing. NRL is able to support peripheral laboratories.
Blood Transfusion Center (BTS)	BTS construction and equipment are adequate. The number of units of blood collected and used has not increased and this is fully related to low staffing levels due to budget constraints.
National Health Training College (NHTC)	Constructions of dormitories and housing provide more security for students and teachers but do not lead to more students trained; IT supplies are helpful.
Health Systems Strengthening:	
EMRS	The Electronic Medical Record System that the Health Project introduced in the OPD's was largely a failure, only the administrative module operates; no clinician is using it.
HMIS	The electronic Health Management Information System that the Health Project developed did not function and is replaced by a new system, DHIS2.
IT	The Health Project's IT technical installations to connect hospitals operate and proved to be useful.
Decentralization	The contributions to decentralization: policies and guidelines mainly, were not adequately embedded in the system and are not in use. Decentralization is very slowly going on
Research Unit of MoH	The Research Unit continues to stimulate and support research, so through the Ethics review Board.
Medical Waste Management	The tools and training for HCWM and the pilot have been used to roll out the HCWM system in all the hospitals and health centers.

ERR

The ERR was estimated at 12.3 % at the start of the Compact in 2008 and at 5.2 % after the Compact, in 2014. According to the evaluation, benefits and costs are different from the ERR estimates in 2008 and 2014. There are several benefits not included, and there are significant costs changes, including reduction of the price of ARV's. To calculate what the net effect is of these changes on ERR would need more insight in the methodology used: there is no template or manual.

Conclusions

The objective of the Health Project 'to provide a sustainable platform for the delivery of anti-retroviral therapy and other essential health services throughout the country' certainly has been reached to a large extent. The Health Project contributed significantly to the improvement of the health services, although not all improvement can be attributed to the Project, in view of the multiple contributions of the GoL and other donors. For lack of a counterfactual, this statement is based on the opinio communis of each and every stakeholder in Lesotho consulted for this evaluation.

However, in the context of Lesotho, with nearly 25 % of the population HIV positive and a large proportion of them having TB as well, the real delivery platform is in the community, which needs further investments.

Some of the investments have not had results; delays, quality issues and large additional costs were the fate of other investments. One major factor was the difficulties with decision making at the level of MoH, MCA-L and the various committees; and with finding suitable construction contractors of quality in Lesotho and adjacent countries. Finishing the Health Project post-Compact also suffered from MoH-LMDA coordination issues.

All in all, although it was effective, the Health Project was not very efficient.

Sustainability of the positive effects of the Health Project depends on various factors, amongst others on adequate staffing levels of the facilities and on maintenance. Plans to increase staffing are contingent upon MoH's budget. Maintenance has been quite irregular, but currently is secured for the mid-term due to LMDA's five-year mandate, to 2023.

Recommendations

- For future support to health in Lesotho, to consider support to the MoH to strengthen its organizational capacity; support to LMDA to correct physical defects or weaknesses in the peripheral health services; and support to strengthening community-based prevention and care.
- Flexibility in the time available for a Compact
- A series of lessons learned and recommendations specifically for separate activities was offered by the PIU by closure date. They are listed in chapter 5.9.

d. Next steps/future analysis

This evaluation report, version September 2018, has been discussed with relevant stakeholders in Lesotho, in particular with MoH, LMDA and several other stakeholders, in

October 2018. Comments from MCC were received in September 2018 and March 2019. This has led to some clarifications or corrections in the text. Substantive comments and the evaluators' response in are listed in chapter 8.

1. Introduction

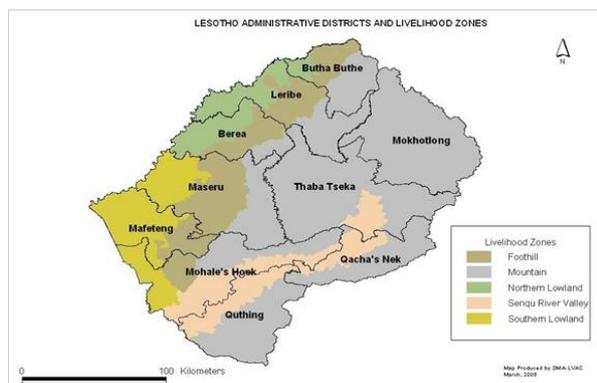
1.1 Lesotho context

Lesotho is one of the least developed¹, poorest countries in the world with a high level of income inequality. It is a small, mostly mountainous, and largely rural country of about 2 million people, completely surrounded by the Republic of South Africa. Preliminary estimates based on the 2010/11 Household Budget Survey² show a national headcount poverty rate of 57.1 %, virtually unchanged from the FY2002/03 survey. At the same time, income inequality increased from a Gini coefficient of 0.51 to 0.53 between rounds of the survey. The bottom 40 % of the population's per capita consumption contracted 0.4 % annually over the past five years. By comparison, annual growth was 0.9 % for the remaining 60 % of the population, with 1.1 % for the top 20 %. Poverty is not only high but also deep—and the depth has increased over time. A poverty gap of about 30 % indicates that substantial economic growth would be needed to lift a majority of the poor out of poverty. The country is classified as a lower middle-income country with a Human Development Index (HDI) of 0.4972 and a Gross National Income (GNI) of \$12.80. Human development outcomes are below the norms for a country of Lesotho's income level³. HDI value for 2014 puts the country in the low human development category—positioning it at 161 out of 188 countries and territories⁴.



Picture 1 Administrative divisions of Lesotho

The picture above shows the 10 administrative districts of the country, the picture below shows the geographical zones of the country. Geographically, Lesotho is divided into four ecological zones, from west to east changing from lowlands to mountains with difficult access, as the picture below shows.



Picture 2; Geographical areas of Lesotho

The majority of the population lives in the western part, where the capital Maseru is also situated. Administratively Lesotho is divided in 10 districts, with population varying from 500,000 in the capital district to below 100,000 in eastern districts.

Completeness of birth registration is below 50 % and equivalent data on death registration are lacking, showing a weak data base in the country⁵.

Health indicators for Lesotho reflect its status as Lower Middle-Income Country. Some of the health indicators as used by the Millennium Development Goals (MDGs) for the Goals directly related to health: Goals 4, 5 and 6, comparing Lesotho with Sub Saharan Countries are shown in Table 1-1 MDG Goals for Lesotho and Sub Saharan Africa. Lesotho was off track for these indicators.

A striking feature is the increase of mortality rate and decrease of life expectancy since the 90's, which is mainly attributed to the HIV/AIDS epidemic. In other Lower Middle-Income Countries, tendencies are towards a lower adult mortality rate. Indicators for Lesotho and other countries, also show that the difference in life expectancy at age 60 between Lesotho and other countries in the Sub Saharan region is small and that the decrease of life expectancy is mostly before the age of 60, meaning in the young and productive population, see Table 4 and Table 5.

Table 4; MDG Goals for Lesotho and Sub Saharan Africa

	Goal 4 Under five mortality rates per 1,000	Goal 4 Under five mortality rates per 1,000	Goal 4 Infant mortality rate per 1,000	Goal 4 Infant mortality rate per 1,000	Goal 5 Maternal mortality rate per 100,000	Goal 5 Maternal mortality rate per 100,000	Goal 6 HIV new infection per 1,000 people 15- 49 years	Goal 6 HIV new infection per 1,000 people 15- 49 years
year	Lesotho	Sub Saharan Africa	Lesotho	Sub Saharan Africa	Lesotho	Sub Saharan Africa	Lesotho	Sub Saharan Africa
1990	86	179	69	107		990		
1995	93		71		525		4.96 (1996)	
2000	114	156	80	95	649	830		0.68 (2001)

2010	123		77		587		2.32 (2012)	
2015	117	92 (2013)	91	61 (2013)	510	510 (2013)		0.29 (2013)
2015 MDG target	37		27		93			

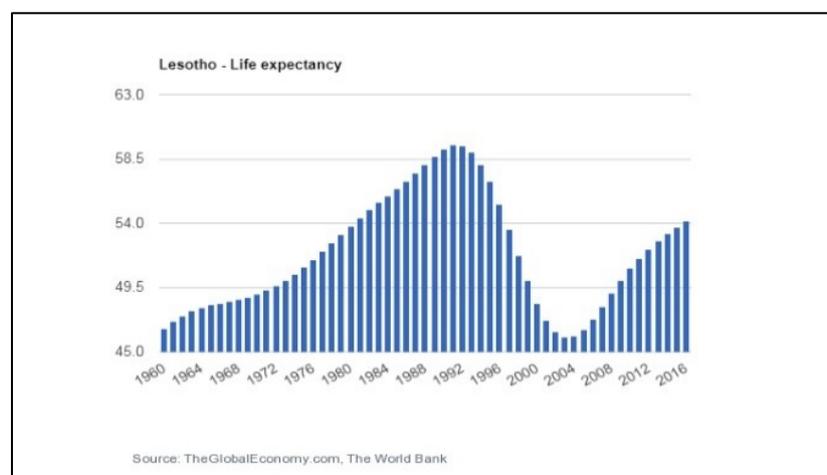
Table 5; Health indicators for Lesotho and other countries

	Adult mortality rate = probability of dying between 15 and 60 years per 1,000 population	Adult mortality rate = probability of dying between 15 and 60 years per 1,000 population	Life expectancy at birth	Life expectancy at birth	Life expectancy at age 60	Life expectancy at age 60
Year	Lesotho	Low Income countries	Lesotho	African Region	Lesotho	African region
1990	270	318	59.3			
2000	574	340	47.2	50.6	15	15.1
2007			44.9			
2012	528	251	48.8	58.2	15.6	16.2
2013	530	241	49.3	58.8	15.6	16.3
2015			53.7	60	15.8	16.5

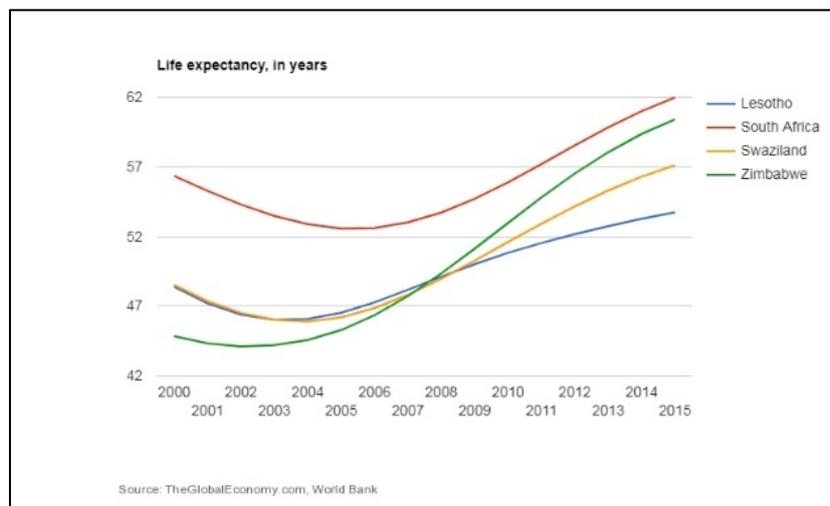
Nevertheless, by the middle of the years 2000-2010, life expectancy started to rise, before the Compact could have any impact, see Graph 1. However, compared to other countries in the region, Lesotho is lagging behind, see Graph 2.

Further, a particular challenge for Lesotho is the high frequency of HIV/TB co-infection: 70 % of TB patients who know their HIV status are HIV positive in 2017 ⁶.

Graph 1; Life expectancy in years in Lesotho



Graph 2; Life expectancy in four countries in the Southern Africa region.



1.2 Health system

There are various ways to describe health systems. The WHO health systems framework, see Figure 1, is a commonly used framework that describes the system as composed of six building blocks that need to function all in combination to deliver the various goals and outcomes. The building block ‘service delivery’ comprises the care process which, in most countries including Lesotho, is organized through a health care pyramid, with the basis formed by primary care: health centers and community level facilities and functions. In Lesotho, the first referral level are the district hospitals with their OPDs.

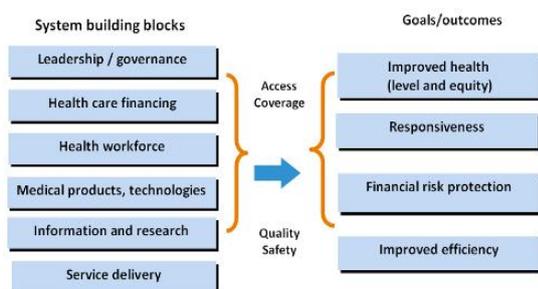


Figure 1; WHO framework for health system description

The outcome ‘responsiveness’ is considered as an outcome in itself and not just as an intermediary for improved health. Various aspects of the patient experience define the system’s responsiveness⁷. The original WHO framework has been modified to include ‘health information systems’ as an essential component, not included in Figure 1. The building block ‘medical products and technologies’ often is subdivided in supply of medicines, regulatory systems for supply, distribution channels and programs for rational prescribing.

1.2.1 The health workforce

Staff shortage in the health facilities is a major constraint. In several policy and strategy documents, especially the shortage of nurses is mentioned as a key constraint. There is no training opportunity for doctors in Lesotho and the country depends on few Basotho doctors

that have been trained elsewhere and on foreign doctors. A program to organize block training of Basotho doctors in Zambia faltered for lack of funding in 2016.

In the country there are six training institutes for nurses, midwives and paramedical professions of which one belongs to the MoH and four to CHAL. Their collective capacity was considered insufficient to cater for the whole health system and there have been initiatives around 2010 to contract nurses from Kenya.

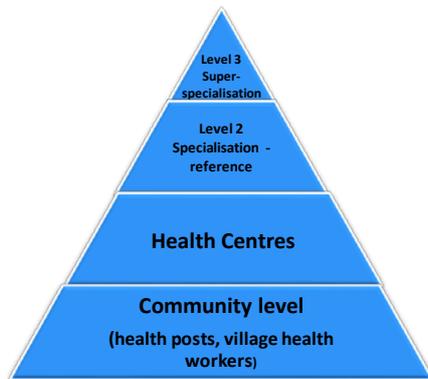


Figure 2; Pyramid of health services delivery

1.2.1 Health service organization and delivery

At the time of planning of the Health Project, a complete overhaul of the health services was considered necessary, if Lesotho was to deal with the high % of people with HIV. Therefore, several plans were made.

First, plans to re-organize health delivery services from 18 health regions to 10 districts, accompanied by decentralization from the MoH to District Health Management Teams (DHMTs), had been developed. The decentralization was considered as a necessary condition to provide for more effective steering, support and supervision of the health services delivery and therefore was a key component of the reforms.

At the bottom of the health delivery pyramid are Village Health Workers (VHWs) and health centers that often run one or several health posts in their area. According to a 2004 report of the MoH, the Christian Health Association of Lesotho (CHAL) did manage 75 of the 171 health centers in the country and the Red Cross Society of Lesotho managed two. The Lesotho Flying Doctors served nine remote health centers in mountain areas. All other health centers were managed directly by the MoH / DHMTs⁸ and actually form a National Health Service. A 2010 report counts 188 health centers, next to more than 100 private surgeries and nurse clinics⁹.

In 2010, CHAL and the MoH assessed the Health Centers' performance. A summary of the results is presented in Figure 3. The components represented in the Figure are parts of what is considered essential health services. It shows both the focus on systematic assessment and the insufficiencies in service delivery in the Health Centers¹⁰.

Sixteen district or regional hospitals with adjacent OPDs provided second level services, including diagnostic and treatment services for HIV/AIDS. During the years of planning the Compact, the treatment of HIV/AIDS was mainly carried out at OPD level, later these services were decentralized from OPD's to health centers, in order to improve accessibility

for the population. This would require strengthened capacity of the health centers, in structural and functional terms.

In the years 2010, a new national referral hospital, Queen Mamohato Memorial Hospital (QMMH) in Maseru and three filter clinics were built and commissioned through a PPP construction with a consortium of South African and Lesotho companies. The hospital started operations in 2011. The 100-year-old Queen Elizabeth II hospital was decommissioned as a national hospital. QMMH hospital is appreciated for its services, although the lack of an effective referral system results in a large patient flow to the hospital that does not need care at tertiary level. Due to the contract conditions, this results in a large financial burden for the MoH, which reduces space for other investments and running costs.

The Compact repeatedly mentions ‘essential health services’. In 2005 the GoL defined an Essential Services Package (ESP) and this was specified in the Health Sector Strategic Plan 2012/13-2016/17:

- Essential public health interventions: Health Education and Promotion; Environmental Health; child survival including immunizations; and Nutrition.
- Communicable Diseases Control: STIs, Tuberculosis and HIV.
- Sexual and reproductive health: antenatal care; management of deliveries; postnatal care; family planning; adolescent health; cancer screening (cervix and breast cancers).
- Essential clinical services: NCDs (diabetes, hypertension, cancers; and trauma); common illnesses (ear, eye and skin infections), oral health; and mental health.

The content of these services however has not been explicitly defined and currently, there is no agreed or updated list of essential health services. A 2010 assessment categorized the availability of essential health services, using four service delivery categories: MCH (Mother and Child Health) and OPD, TB, HIV and drugs, see Figure 3. This list will be referred to when discussing essential health services, but it is not the authoritative list in the country.

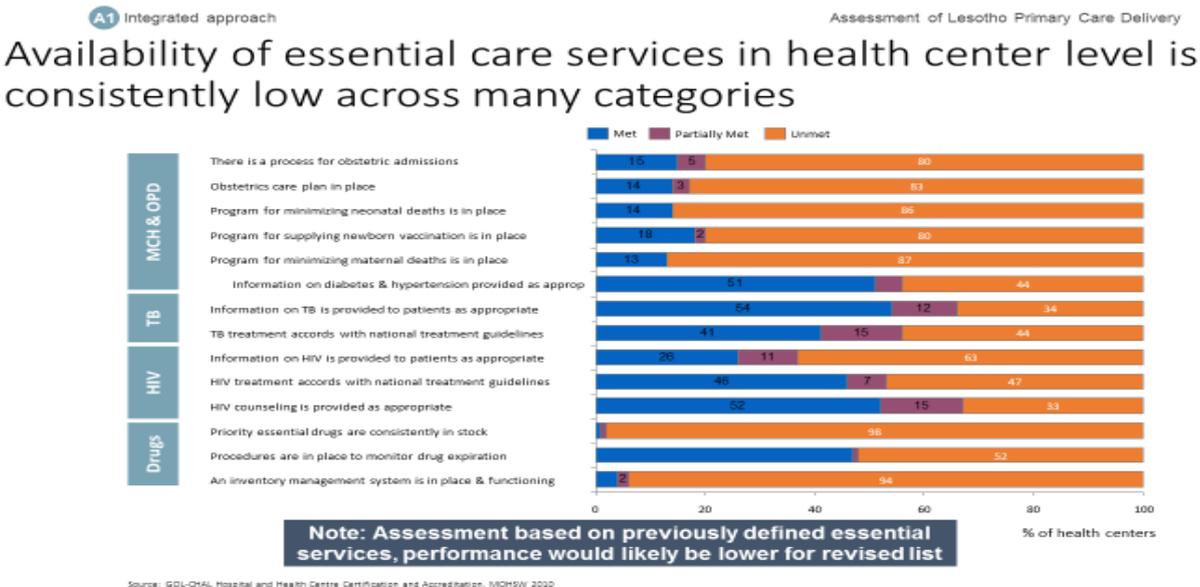


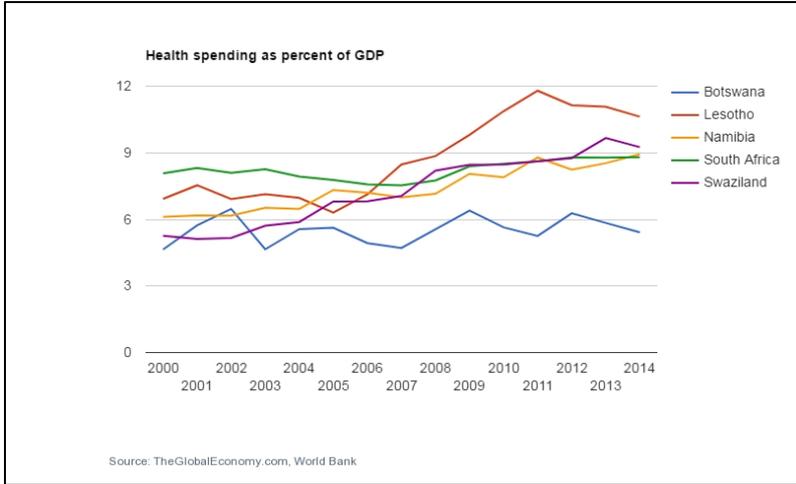
Figure 3; Essential services summary, 2010

The health system and health service delivery has been and is still supported by a considerable number of partners, that help to assess, plan, fund and deliver the health system in general and health services in particular. Among them are the World Bank, the African Development Bank, the Global Fund (GFATM), the WHO, the Global Alliance for Vaccines and Immunization (GAVI), the United States Agency for International Development (USAID), the President's Emergency Plan for AIDS Relief (PEPFAR), Irish Aid and a series of NGOs.

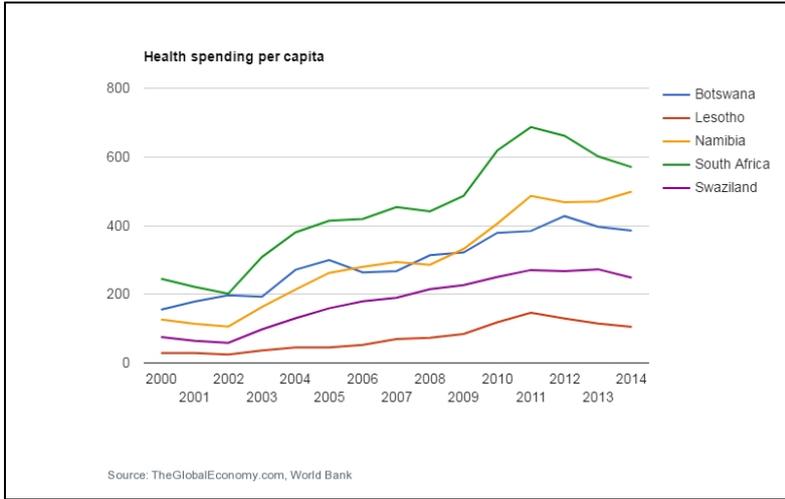
1.2.2 Health Expenditure

Lesotho spends a relatively high proportion of its GDP on health but overall expenditures per person are low due to Lesotho’s relatively small GDP, see Graph 3. Among the countries of the Southern Africa Customs Union (SACU), Lesotho has historically had the lowest per capita total expenditure; in 2012 Lesotho spent just \$130, almost half of what Swaziland spent, the next largest spender (\$267)³. See Graph 4.

Graph 3; Health spending as GDP % in SACU countries



Graph 4; Health spending per capita in SACU countries



DHMTs and hospitals do have their own annual budgets but spending rarely is close to 100 %; this means that the capacity to spend budgeted items is lagging behind. Further, nearly one third of the annual budget of the MoH is spent on the contract with the company that operates

³Dollar estimates are in constant 2005, PPP-adjusted international dollars.

QMMH. These and other factors have created concerns about the efficiency of health spending.

1.2.3 Health sector governance

In the past, while a relative high proportion of the GoL's budget is allocated to health, it has not been efficiently spent^{9,11}. Issues are at the level of leadership in the MoH and at the level of health services organization and delivery.

Decentralization of public services is a declared policy objective since 1996. The MoH and its institutions and services have been nominated as the early developers.

This process needs simultaneous and coordinated decentralization in other ministries, like the Ministry of Local Government & Chieftainship and the Ministry of Home Affairs and proves to take much more time than initially expected.

Decentralization from the MoH to the DHMT's is still ongoing, with support from several NGO's like Partners in Health (PiH) and the Swiss Organisation for Health in Africa (Solidarmed). The DHMT's have picked up a series of responsibilities, like planning and reporting, that makes the district a key unit in the health sector.

Over the years, several assessments of the health services have been made, in support to planning of decentralization. The assessment summarized in Figure 3 is part of a wider review of the capacity of guidance of DHMTs to the health services in their districts.

1.3 This report

This report summarizes and evaluates the Health Project, according to Terms of Reference (ToR). The specific evaluation questions of the ToR are listed in Annex 2.

In Chapter 2, the Health Project is described and in Chapter 3 existing evidence for the rationale and approach of the Health Project.

Chapter 4 explains how the evaluation was designed and implemented, followed by Chapter 5, the evaluation findings.

Chapter 6 draws conclusions and makes recommendations.

Chapter 7 contains the references used throughout the report.

Chapters 8 and 9 will be filled in on the basis of dissemination of this report among stakeholders and the ensuing discussions.

Several Annexes contain background information. The Annexes form a separate document but is an integral part of this evaluation report.

2. Overview of the Compact and the intervention(s) evaluated

2.1 Compact Program Logic

The Lesotho Country Proposal to the MCC describes the problem of health infrastructure as follows:

“... The first problem is that the distribution of the facilities is not adequate in terms of population coverage and due to physical distance given the national objective that such services should be within a distance of 10 kilometers or 2 hours walking distance.

Secondly, most of these infrastructure facilities such as clinics and hospitals are very old and therefore are not conducive to an efficient service delivery especially under increased demand resulting from HIV/AIDS patients. Hence the need for rehabilitation and renovations of most clinics and hospitals.

Thirdly, the inadequacy of space/rooms currently used for delivery of all the essential services is such that patients' privacy is seriously compromised.

The fourth problem is shortage of the requisite equipment and supplies. These health centers not only require upgrading and renovation but also need to be equipped. In addition to the inadequacy of equipment, their utilities are also rudimentary and do not facilitate maintenance of universal precautions. There is, therefore, a need for procurement of new and standard health equipment.... The sixth problem is that most of these facilities, particularly in the rural mountains, are not supplied with reliable public utilities”.

Not included in this description was the workforce shortages, as mentioned above.

However, during the years of the development of the Compact, it was obvious that these problems concerned all the building blocks of the health system. The Health Project was to address several of them.

According to the Compact 2008-2013 between MCC and the GOL, the goal was to reduce poverty in Lesotho through economic growth: the “Compact Goal”.

The three Program Objectives were to:

- (a) improve the water supply for industrial and domestic needs and enhance urban and rural livelihoods through improved watershed management;
- (b) increase access to life-extending anti-retroviral therapy and essential health services by providing a sustainable delivery platform; and
- (c) stimulate investment by improving access to credit, reducing transaction costs and increasing the participation of women in the economy.

These three objectives were selected based on a proposal of the GoL to the MCC¹² and led to three different Projects: water, health and business environment. This evaluation exclusively deals with the Health Project.

The Compact worked with the assumption that the MOH and other donors would focus on improvements of other building blocks, including the establishment of a national referral hospital, the highest level in the triangle.

The purpose of the Health Project was to assist the GOL, in particular the MoH⁴, with the implementation of its Poverty Reduction Strategy (PRS) Paper, called Vision 2020¹³, the National Health and Social Welfare policy and its health sector reforms. The project focused on the service delivery at primary health care and first referral levels, by investing in health centers and OPDs, mostly in its infrastructure but also in staffing and working procedures, including waste management. It also addressed the governance function.

The Health Project was part of a major effort to strengthen the health system. A series of other partners and the MoH itself invested in policies and resources, to weather the devastating epidemic of HIV/AIDS and to address the high maternal and child mortality. Indeed, as shown above, the GOL spent a relatively large part of its budget on the health system:

The Project was further designed and decided upon by the MoH and MCC through an Investment Committee: 'Health Care Infrastructure Due Diligence'¹² and the Investment Memorandum¹⁴. A 'Program Implementation Agreement'¹⁵ for the three Projects defined the institutional arrangements.

2.1.1 The Health Project

The Activities of the Health Project are summarized in Table 2-1.

The emphasis of the Health Project was on strengthening the peripheral physical infrastructure of the health services.

The total number of health centers in the country at the time of the planning of the Health Project varied according to the sources but was around 205. These include some smaller private surgeries and nine remote facilities that were being served by the Lesotho Flying Doctor Service (LFDS) through the Mission Aviation Fellowship (MAF). The Compact estimation was that 150 health centers would be (re)constructed; after closer scrutiny some health centers were excluded: health centers in a reasonable state and some health centers that were too close to another health center did not qualify. Also, in some cases, another donor had committed to rehabilitation. The health centers served by the MAF were not included in the Health Project as well, although other hard-to-reach facilities were. Finally, 138 health centers were selected for construction or renovation.

Out of the 16 OPDs of district or rural hospitals, 14 were targeted for rehabilitation or extension. Two OPDs had just been built as an ART clinic with budget of the World Bank and were considered not needing (re)construction.

70 % of the budget would be spent on the (re)construction of these health centers and OPDs. In addition, construction and equipment of three central facilities: A Blood Transfusion Service, a Central Laboratory and several buildings for the National Health Training College (NHTC), would cost another eight % of the budget.

Various other health system strengthening activities mostly aimed to strengthen the MoH by the development of policies and guidelines or its functional infrastructure or the funding of a pilot, like for Health Care Waste Management (HCWM). These activities would cost around 11 % of the total budget. The Project Implementation Unit (PIU) would cost another 11 %.

⁴ At the time of planning and implementation of the Compact, the name of the Ministry was Ministry of Health and Social Welfare (MOHSW). Later the Ministry was renamed Ministry of Health (MoH). In this report, the acronym MoH is used.

Table 6 Health Project Activities and (sub)Activities

1. Renovation and equipment of 138 health centers throughout the country, including staff training ⁵	
2. Renovation and equipment of 14 OPD's attached at hospitals to ensure HIV/AIDS care, including staff training	
3. Reconstruction and equipment of a Central Laboratory, including staff training	
4. Construction and equipment of a Central Blood Transfusion Facility and two regional centers	
5. Construction and furnishing of a National Health Training College	
6. Health System Strengthening; Strengthening of pre- and in-service training capacity	
7. Health System Strengthening; Support to Research + Development Unit of MoH	
8. Health System Strengthening; Support to the decentralization of service delivery;	<ul style="list-style-type: none"> 1 Health information 2 District health management 3 TB surveillance and infection control 4 Health service quality 5 Health facility maintenance 6 Communications and public outreach
9. Health System Strengthening; support to Medical Waste Management	
Project Implementation Unit	

The logic of the Health Project is summarized as follows:

The Health Project consisted of several Activities that intended to jointly strengthen the country's health system. Through improved infrastructure, equipment, and training, the Project sought to improve perceptions of the health system, the quantity and quality of staff, expand the services offered, tests conducted, quantity and quality of blood collected and available for use, and increase use of the health care system. Intermediate and long-term outcomes are better service delivery that reaches more people, and decreased morbidity and mortality, especially with respect to maternal health care, and treatment of patients with HIV/AIDS and TB. These outcomes were expected to result in more productivity and ultimately a reduction of poverty

A detailed Theory of Change (ToC) was reconstructed retro-actively, see Annex 1 for the graphic presentation of the complete ToC.

The logic of the ToC is that the outputs of the Health Project, that will be described below, lead to a large number of immediate outcomes, at the level of health professionals, at the level of patients and at the level of working processes; the outputs also include support to the MoH, leading to better guidance and regulation of these work processes. Ultimately, via these

⁵ The compact specified “up to 150” but the target was later refined to 138 health centers.

immediate outcomes, the outputs of the Health Project result in increased utilization of health services of better quality and therefore in better long-term health outcomes, such as reductions in infant, child, maternal mortality; improved TB treatment success rate and improved HIV treatment and survival rates. These finally lead to the project goal: poverty reduction.

Figure 4 below shows two examples of how inputs ultimately lead to the expected results, according to the ToC: investment in infrastructure and in waste management.

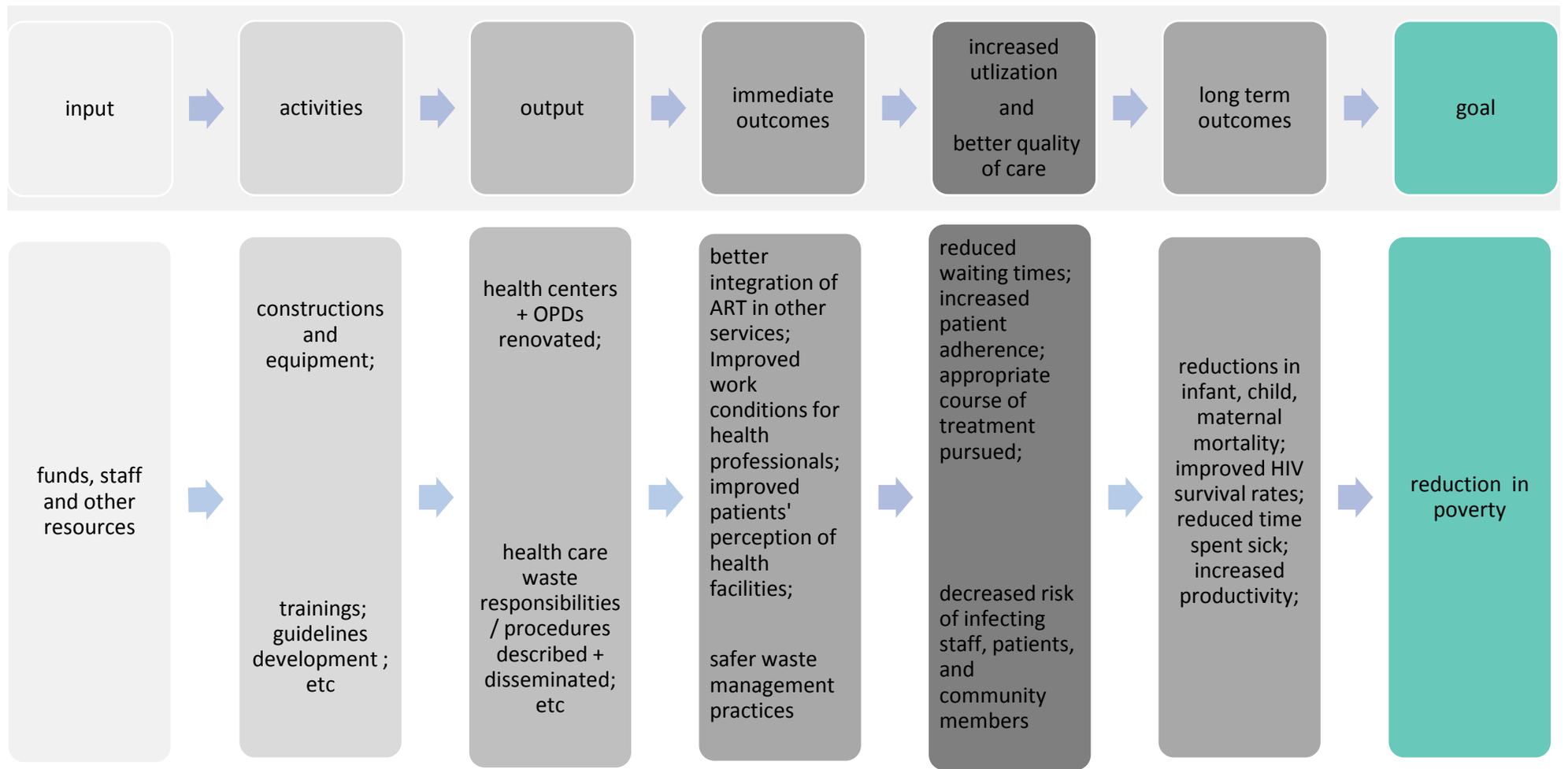


Figure 4 Extract from the Theory of Change: examples of how inputs lead to the final goal.

2.1.2 Link to ERR and Beneficiary Analysis

ERR, the methodology

Prior to the start of the Health Project, in 2007, and after the implementation, in 2014, an Economic Rate of Return (ERR) calculation has been made, in order to assess the expected economic benefits. Essentially, the ERR attempts to translate the health effects, like decrease of mortality, into economic benefits by calculating future increased productivity, offset against costs that are made now. At the start of the Health Project, the ERR calculated was 12.3 %. The last version of 2014 came to an ERR of 5.2 %, which is below MCC's hurdle rate of 10 %.

In terms of costs, the ERR calculation included the planned direct investments in the Health Project by MCC and later additional costs the GoL would incur due to the increased resources needed to sustain the additional activities generated by the Health Project:

- Incremental health service costs per capita (for delivery of essential health services package)
- Incremental ART costs
- Incremental health facility costs (for blood screening and storage, central laboratory operations, etc.)
- Incremental Human Resources costs
- Incremental recurrent environmental costs

MCC defines beneficiaries of the Compact as the individuals, and members of their households, who realize improved standards of living, primarily through increased income, as a result of the Compact investments. Participants, on the other hand, are defined as the larger group of people who will utilize services or enjoy outputs from the Compact. In other words, it is expected that not all participants will be beneficiaries¹⁶.

At the onset of the Project, the ERR calculation used several expected benefit streams, particularly in terms of maternal and child health, HIV/AIDS, and ultimately improved productivity. This is in line with the objectives of the Health Project:

- ART coverage will increase from 20% to 80%, reducing adult HIV/AIDS mortality by 33%. In absolute numbers, the coverage would increase from 12,000 to 48,000 PLHIV.
- Increasing PMTCT coverage to 80%; this is expected to reduce infant AIDS mortality by 50%;
- MCH interventions are expected to reduce maternal mortality by 50% and non-AIDS infant mortality by 40%.

Other expected benefits have not been included, such as reduced morbidity/mortality due to TB and health personnel that gains skills and has access to improved equipment, lowering the risk of infection in the work place. Quantifying these benefits was considered as speculative.

To calculate the long-term effects, ERR constructs a decrement life table for several age and sex groups for Lesotho in which AIDS and maternal mortality are broken out from other causes of death and in which a reduction of child mortality with 40 % is included, as attributable to the Health Project. The rationale is that these will be major areas of improvement as a result of the Project. The life table is used, in combination with demographic information to estimate the impact on future life years lived (2010-2049), given

improvements in ART coverage, prevention of mother-to-child transmission (PMTCT), and MCH.

While the investment costs were planned to be incurred in a period of five years, many of the outputs of the Health Project, like renovation or construction of infrastructure and the development of management tools, are expected to have long lasting effects for the beneficiaries. Also, the support to Asset Management is a Health Project effort to increase sustainability of the infrastructure. Some outputs, like purchased vehicles for the BTS, will last several years only.

The ERR uses existing data and some assumptions to define baseline values, for example on maternal and child mortality and it assumes the results to be achieved. One major baseline value is the proportion of persons with HIV/AIDS that was on ARV treatment at the start of the Compact. The expected outcome was a reduced mortality at the end of the Compact. Table 7 shows the values for the key parameters at the start and end of the Health Project.

Parameter Type	Description of key parameters	MCC Estimate start of Health Project	MCC Estimate end of Health Project
Summary	Actual costs as a percentage of estimated costs	100%	100%
Summary	Actual benefits as a percentage of estimated benefits	100%	100%
Specific	Reductions in adult HIV/AIDS mortality due to increased ART	33%	13%
Specific	Reductions in infant HIV/AIDS mortality due to increased PMTC coverage	50%	50%
Specific	Reductions in infant non-AIDS mortality due to increased MCH coverage	40%	40%
Specific	Reductions in maternal mortality due to increased MCH coverage	50%	50%
Specific	Primary Health Care Expenditures with Project (USD/capita)	30	30
Specific	Total Capital Costs (USD million) ⁶	102.9	102.9
ERR		12.3%	5.2%

Table 7 Key parameters for ERR analysis

As Figure 5 shows, the ERR calculation covered a time span of 20 years from the start of the Health Project onwards. During the first 10 years, the economic benefits are negative due to the investment costs, that gradually are compensated by the economic benefits to the point that after 10 years, in 2018, the benefits start to outweigh the costs. In the period 2023-2028, the annual benefit is around USD 75 million. In 2028, the final result of 5.2 % benefit has been achieved.

⁶ Although they were not included in this summary table, incremental recurrent costs represent another significant share of costs in the economic model

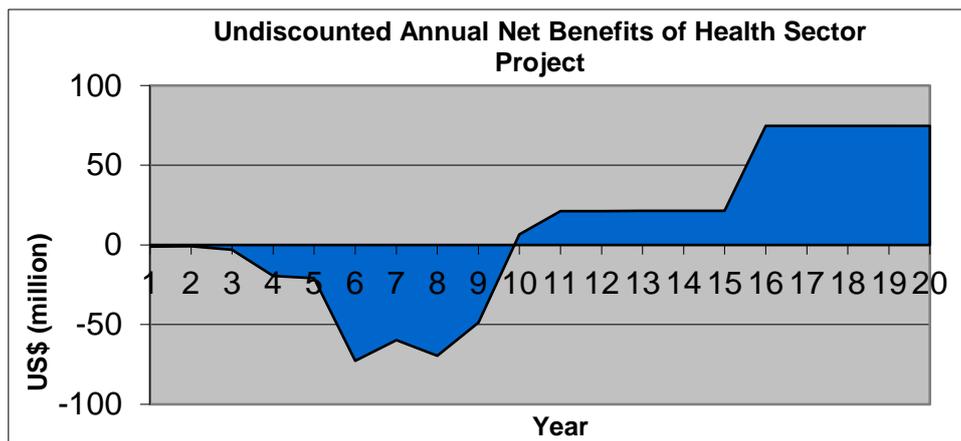


Figure 5 ERR calculation summary, ex-post

In section 5.7, ERR will be further discussed.

2.1.3 Program Participants

Around 90 % of the peripheral health infrastructure, OPDs and health centers, was (re)constructed by the Health Project. Since these cover mostly the more densely populated areas, one may assume that they cover approximately 90 % of the entire population. Certain services, like the BTS and NRL, in principle cover 100 % of the population. A strengthened MoH also covers the entire population. A proportion of the population does not make use of the health services however, because of barriers or because it does not believe in modern health services. Therefore, one might estimate the part of the population that benefits from the Health Project at between 80 and 90 %.

2.1.4 Geographic Coverage

In each of the 10 districts of the country, the majority of health centers and nearly all OPDs (14 out of 16) have been covered by the Health Project, which accounts for a geographical coverage of approximately 90 % of the country.

2.1.5. Implementation Summary

2.1.5.1. The governance of the Health Project

In agreement with the Compact, in 2008 the GoL created MCA-Lesotho (MCA-L), to carry out the GoL's obligations with respect to the Program Implementation Agreement. The Health Project was managed via an Implementation Entity Agreement (IEA) between MCA-L and the MoH, through a Health Project Implementation Unit (HPIU or PIU) located within the MoH. Coordination between the PIU and MCA-L was provided by a Health Infrastructure Engineer and a Health Systems Strengthening Coordinator, both reporting to the MCA-L Infrastructure Head.

In accordance with the IEA, the infrastructure development activities, on which the bulk of the funding was spent, were supervised directly by the MCA-L Health Infrastructure Engineer, supported by an Infrastructure Technical team (ITT) with representatives from the PIU, CHAL and Red Cross, and managed by a single Project Management and Construction

Supervision (PMCS) contractor. The actual constructions were carried out by several contractors, see below.

The Health PIU carried out the Health System Strengthening activities, that are detailed below, while working closely with MCA-L to facilitate procurement of goods and services from suppliers and consultants, respectively. This involved drafting of TORs and Technical Specifications, Evaluations and award of contracts. A total of 37 contracts for goods (i.e. medical equipment, furniture, ICT, vehicles and HCWM equipment) have been awarded. At CED, from that total, 28 contracts had been completed. For consultancies, a total of 13 contracts were signed and 12 contracts have been completed at CED.

Technical Working Groups were involved in the development and review of work supported by the different technical assistance teams. The Technical Working Groups included the following;

- Decentralization Inter-Ministerial Working Group
- Human Resources Technical Working Group
- National Health Care Waste Management Committee (NHCWMC)
- Health Care Waste Coordinating Group (HCWCG)
- District Pilot Task Teams
- The Infrastructure Technical Team (ITT)
- Strategic Information (SI) Technical Working Group

In 2011, an Audit, commissioned by the Inspector General of MCC, aimed ‘to determine whether MCC’s Health Sector Project was structured to achieve its objective of increasing access to antiretroviral therapy and essential health services by providing a sustainable delivery platform’¹⁷. The Audit identified several risks and made 11 recommendations to MCC, that responded by committing to follow up on most of the recommendations and explained why some of the recommendations could not or needed not to be followed up. In the sections below, the Audit report will be referred to several times.

Around the time of the CED, a report on implementation of the Water and Health Projects was commissioned by MCC¹⁸.

When it became apparent that, at CED, the Health Project would not be completed, high level discussions between MCC, MCA-L and the GoL took place, resulting in the agreement by the GoL to complete the Health Project after CED, including bearing the additional costs.

These additional costs come on top of previous financial commitments by the GoL to co-fund the construction part of the Health Project, as described in the next section.

The FIFA World Cup was held in South Africa in June/July 2010 and Lesotho hoped to host one of the teams for training. The Domiciliary Health Center is close to the National Stadium in Maseru and the government of Lesotho asked if it could be upgraded in time for this. An advance contract was prepared and awarded and the fast-track contract was completed on 13 July 2010.

2.1.5.2 Health Centers renovation /construction and equipment

The initial proposal by the GOL, was to renovate or reconstruct 96 health centers. Before the signing of the Compact, MCC commissioned a due diligence report, that recommended that all health centers in the country be given equal opportunity to receive assistance, leading to the number of 150 health centers.

According to the above-mentioned Audit report, after the signing of the Compact, the decision was taken by MCA-L to re-do the due diligence because the previous one only visited 28 of the 150 health centers, which was considered inadequate. This second due diligence in 2009 did a needs assessment of all health centers and excluded some of them, because of redundancy (overlap of population covered) or because they had been or would be renovated by another agency. The result was a decision to include 138 health centers in the (re)construction plan.

Also, the Audit considered that the budget for the health centers was too low. Amongst others, although MCC knew during the initial due diligence of the GOL's future strategy of introducing free health care, MCC did not factor this change into the potential increased utilization rates of the health centers. Between the signing of the Compact and entry into force, the GOL introduced free access to health care. Because they expected health center use to increase in response, MCC and MCA-Lesotho increased the number of large health centers that had to be built and increased the cost of the project.

The minimum requirements for the health centers were developed by one architect based on orientations by the Department of Estate Management of the MoH; no consultation with local patients or staff took place. Two models were envisaged: one smaller model for health centers with less than 60 visitors per day and model 2, somewhat larger, when the number of visitors is higher than 60 on average per day. See Annex 5 for a description of the two models and a list of the health centers for each model.

For the construction of the 138 health centers, one advance contractor (see box) and two other contractors were selected: one was awarded a contract for three lots and one for one lot. The contractor with the three lots went out of business six months before CED; it had completed 30 health centers, but many defects had been reported. Five local contractors were engaged to take over the constructions. For an overview of all the contracts, see Table 8. This was cause of delays that later led to extension of the Health Project and completion by the GoL. At CED physical completion of Health Center facilities was at 88% while only 33% was furnished and equipped with the remaining 67% of furniture and equipment awaiting completion of the health centers.

By the end of 2014, MCC commissioned an agency to verify the status of the newly constructed health centers¹⁹. In line with its objective, the report identified deficiencies and shortcomings in the constructions. In Chapter 5, Findings, some of its observations will be presented. In March 2015, the same agency provided a report with photographic documentation, emphasizing the improvements and positive results²⁰.

Table 8; Contracts for the construction or renovation of the 138 health centers

	Initial contracts for health center construction		Re-contracting after failure TBWB						Construction completed by LMDA after December 2013	Medical equipment and furniture supplied by LMDA after December 2013			
	Number of health centers	constructor		Number of health centers after contract change	constructor	Construction completed by CED	Medical equipment and furniture installed by CED	Construction completed by December 2013					
Advance	1		XXX	1	XXX	1	1	1	22	94			
Lot 2	36		YYY	36	YYY	14	43	14					
Lot 1	35	101	ZZZ	30	ZZZ	30		43			30		
Lot 3	33											21	
Lot 4	33												24
		6											
			3										
				5									
					6								
		6											
			0										
				0									
					0								
		0											
			0										
				0									
TOTAL	138						138		46	44	116	22	94

2.1.5.3 Renovation and equipment of 14 Out Patient Departments

Depending on the pre-Health Project situation of the OPDs, a design was made for one or more buildings to be constructed or, in rare cases, to be renovated. This construction component was tailor-made and therefore differs per OPD. Capacity of OPDs and user-friendliness were to be enhanced by these constructions.

This Activity was carried out by one single constructor without delays and within budget.

2.1.5.4 Construction of Central Facilities

- Reconstruction and equipment of a Central Laboratory (CL), including staff training.
- Construction and equipment of a Central Blood Transfusion Facility (BTS) and of two regional centers, including provision of vehicles for mobile units and staff training.
- Construction of premises of the National Health Training College (NHTC), which consisted of additional dormitories for students, staff housing, equipment; and hard- and software for teaching.

The CL, further referred to as National Reference Laboratory (NRL), and BTS are situated in the north of Maseru on adjacent plots. The NHTC is at short distance of the NRL and the BTS. All three together form the so-called Botsabelo complex and are at very short distance of the QMMH. Their construction was commissioned to one single contractor who went out of business after completion of the NRL and was replaced by another one. The construction and supply of equipment were finally implemented according to the requirements formulated and within the planned time-frame, against slightly higher costs, USD 9,144,000 than the original contract: USD 8,960,000.

2.1.5.5 Health System Strengthening

Under this heading, several Activities and (sub)Activities were undertaken, meant to strengthen the governance and implementation capacity of the MoH and lower levels of the health system.

- Strengthening of pre- and in-service training capacity.
Under this heading, the Health Project supported the MoH in revision of the Retention Strategy for health staff.

The contracted HSS Firm, under the stewardship of the MOH HR Directorate, led the capacity building of the health professionals.

The Health Project-supported trainings and mentoring were based on ministerial priorities set out in the 5-year Continuing Education Implementation Plan (CEIP), updated and implemented on an annual basis. The CEIP was informed by a training need assessment conducted in 2010. At the end of the Health Project, the MOH had a 2013/14 CEIP in place.

Training course specifications and manuals were developed and by the end of the training support in May 2013, a total of 2,225 health workers from GOL and CHAL facilities had been trained. Two thirds of all internal training focused on nurses and midwives.

In addition to the formal trainings, the HSS Firm conducted mentoring sessions for the staff at DHMTs, OPDs and HCs. In particular, mentoring at the DHMT level focused on them being able to effectively assume their new roles in the provision of health services and their management of decentralization of health services.

Further support to the NHTC was given: six expert tutors assisted in coaching NHTC lecturers on the preparation and development of a Competence Based Curriculum for the national tutors and they mentored the national tutors on community nursing and health center management. Also, a curriculum for in-service IT training was developed on behalf of the Planning & Statistics Department of the MoH.

- Support to the Research and Development Unit within the Ministry of Health.

An Ethical Review Board or Institutional Review Board (ERB and IRB) in the MoH was pre-existent. MCA-L recruited a consultant for a needs assessment in the field of research, in 2010. The recommendations were:

1. Improving the governance and management system through:
 - Strengthening the Research Coordination Unit in the MoH
 - Streamlining the research clearance system in the MoH
 - Establishing an independent research ethics committee that conforms to international standards
 - Contributing to efforts to establish a National Research Council.
2. Setting national policies and priorities for research in health and social welfare.
 - Setting a national agenda in health and social welfare
 - Adopting a national policy framework for research for health and social welfare
3. Implement strategies to align research activities to agreed priorities by:
 - Informing partners of laws and regulations regarding research for health and social welfare.
 - Conducting an annual review of the research agenda
 - Organizing an annual conference on research in health and social welfare
 - Building capacity of the MoH staff at the central level
 - Building capacity of the MoH staff at the district level

- Continuous mentoring of MoH in using data to improve programming
- Continuous monitoring of research conducted in the country

Especially recommendations 1 and 3 have been followed up during and after the Health Project implementation.

The pre-existing ERB was strengthened: The Health Project provided an external trainer on research ethics, for training of the ERB members: two courses for 30 people each on research; participants from the districts also joined the training. Supported by an external consultant and international contacts, 'Guidelines for submission of a health research proposal' were developed in 2012, drafted in 2013 and submitted for approval by the Minister – which has not taken place to date.

- Support to the process of decentralization of service delivery. The decentralization process is part of a general decentralization policy in the country. MoH is one of the early developers among the ministries, whereas the Ministry of Local Government and Chieftainship is coordinating. Since 2007, DHMTs have been established. During Compact year 1, a Decentralization Strategy was developed, resulting in the selection of several areas for support by the Health Project, these are already mentioned in the Compact. The relationship with decentralization is not obvious for all activities:
 - 1) Health information; this is the development of a Health Management Information System (HMIS) for health services in general and of an Electronic Record Management System (EMRS) for OPDs and hospitals.
 - (2) District health management; as part of capacity building of the DHMTs, two training modules were developed, one for transport management and one for communication systems and procedures for DHMTs; a guideline for the Preventative Maintenance Management Strategy was developed as well. All DHMTs were provided with two computers and CHAL was supported with three vehicles to support supervision
 - (3) TB surveillance and control; no specific TB oriented activity has been planned or carried out by the Health Project.
 - (4) Health services quality; two clinical guidelines were developed.
 - (5) Health facility maintenance; several policy documents and implementation tools were developed.
 - (6) Communications and public outreach; this (sub)Activity was intended to ensure that all stakeholders, partners and beneficiaries were abreast of Project developments. Based on a baseline informative assessment, meetings and communication materials were used to inform the public on the Health Project.
- Support to update and implement the Government's Medical Waste Management Plan from 2005.

Prior to the Health Project, a degree of HCWM was already implemented with the support of a World Bank funded project for the period 2005-2008²¹. The answers to the HFS 2011 reflect this:

- How often do you use separate containers to separate sharps?
In all 145 OPDs and health centers, minus one: health center St Denis in Leribe, the answer was: always.
- How often do you use separate containers to separate medical waste?
In 12 of 14 OPDs and in 108 out of 131 health centers, the answer is: always.
- How often do you use separate containers to separate non-medical waste?
In 11 out of 14 OPDs and in 100 out of 131 health centers the answer is: always.

The HCWM component focused on improving the efforts of the MOH in promoting occupational safety and infection control in the health facilities through proper management of medical waste in health facilities. Specifically, it supported the development of appropriate legislation, policies, regulations, standards and procedures to guide waste management practices. At closure of the Health Project, a pilot on implementation of HCWM in Berea, Leribe and Maseru districts was ongoing.

The following products were delivered:

- The Situational Analysis (2009);
- HCWM Policy (2010);
- HCWM Strategic Plan (2010); this included a HCW Communication and Education Strategy.
- HCWM Implementation Plan (2010);
- HCWM Standards (2010); abridged Sesotho translation (2012); and
- Hazardous (Health Care) Waste Management Regulations (2012), promulgated under the auspices of the Ministry of Tourism, Environment and Technology.
- A HCWM training course was designed and used to conduct a Training of Trainers for Tertiary Educators and District Health Staff
- Procurement of three specialized HCWM vehicles, personal protective Equipment (PPE), appropriate HCWM containers and a total of 92 waste storage freezers for the pilot (see below) and throughout the country.

In August 2012, the Consolidated Lesotho National Health Care Waste Management Plan (CLNHCWMP) was developed as part of the World Bank funded Maternal and Newborn health Performance-Based Financing Project. It was a result of a synthesis of the various documents above. The Plan provided a detailed consolidated overview of the management of healthcare waste in Lesotho.

2.1.5.6 Who were the implementers?

There is a large variety of implementers. In the period 2008-2013, MCA-L and the PIU contracted a range of national and international suppliers and consultants.

For the construction of health centers, the previous Table 2-3 gives an overview.

For the OPD's, one single company was contracted.

The central facilities were constructed and equipped by a South African company. For the health system strengthening one European company was contracted and for HCWM another. For specific technical work, like development of asset management further companies were contracted.

2.1.5.7 What were the projected and actual costs?

At signing the Compact, MCC committed USD 122 million. Over the years this amount grew to USD 142 million. The GoL's contribution grew from zero to USD 87 million of which 56 % before CED and 44 % after CED. Table 2-4 summarizes the expenditures as planned by the Compact and later implementation. The increase of the budget for the Health Project during the implementation was a result of various factors:

- inadequate due diligence leading, amongst others, to a too low estimation of costs at the time of planning the Compact⁷;
- devaluation of the USD;
- increase of prices (inflation);
- additional costs due to the need to undertake unplanned activities or to repeat certain activities or surveys and to delays in implementation; the PIU needed to function for a longer period of time;
- additional costs related to replacement of one of the contractors, that went out of business.

Table 9 Summary of Health Project expenses, planned and implemented.

HEALTH PROJECT COMPONENTS	Funding according to Compact (5 years)	MCC cumulative expenditure at CED, Sept 17, 2013	MCC cumulative expenditure to January 14, 2014	GoL cumulative expenditure at CED, Sept 17, 2013	GoL cumulative expenditure to January 14, 2014	GoL cumulative expenditure to December 2016	Total expenditure
	A	B	C	D	E	F	C+F
Health Centers	72,934,000	77,474,684	91,755,009	48,550,459	81,583,930	85,622,188	177,377,197
ART Clinics	4,742,000	12,881,253	13,037,746	0	0	193,924	13,231,670
Central Laboratory	3,052,000	3,205,762	3,380,230	0	0	0	3,380,230
Blood Transfusion Center	2,689,000	2,317,777	2,414,595	0	0	0	2,414,595
National Health Training College	7,414,000	4,579,005	4,541,283	0	0	0	4,541,283
Health System Strengthening	15,000,000	9,844,328	10,615,549	0	464,556	464,556	11,080,105
Medical Waste Management	3,727,000	3,322,160	3,376,363	0	0	0	3,376,363
Health PIU	12,940,000	13,451,716	13,655,381	0	823,411	823,411	14,478,792

⁷ AUDIT OF THE MILLENNIUM CHALLENGE CORPORATION'S HEALTH SECTOR PROJECT IN LESOTHO AUDIT REPORT NO. M-000-11-001-P January 25, 2011

TOTAL	122,398,000	127,076,685	142,776,156	48,550,459	81,583,930	87,104,079	229,880,235
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Sources: Compact; Audit post Compact; audit report no. M-000-14-010-N of April 7, 2014;
LMDA, personal communications

MCC contributed USD 142,776,156 or 62.1 % of the total costs

GoL contributed USD 87,104,079 or 37.9 % of the total costs.

These costs do not include overall Compact related costs such as M&E and audit.

2.1.5.8 Were monitoring targets achieved? Why or why not?

A Monitoring & Evaluation Plan for the Health Project was developed in 2008. In 2010 and 2012 follow up versions were developed and formally accepted and in January 2014 a final one, post-Compact.

These plans were monitoring outputs and outcomes; these are described in Chapter 5. For this evaluation, no documentation on the use of these M&E Plans has been identified, nor how MCC monitored progress of the Health Project.

The PIU produced four annual reports, (2009/10; 2010/11; 2011/12/; 2012/14; the last one covering 16 months, including the four months close period after the CED) that describe the Activities and deliverables. There is no documentation on if and how MCC has used these reports.

Finally, there is no documentation on when, how and why decisions were taken with regard to budget (changes) and, especially in the early years of the Health Project, what Activities were selected for implementation.

3. Literature review of the evidence

3.1 Evidence gaps that current evaluation fills

Lesotho is a Lower Middle-Income Country that sits low on the HDI. One question is how much health improvement can be expected from an investment in the Lesotho health system as done by the Health Project, with a strong emphasis on the primary care level. Also, the question is what factors do enhance or inhibit the results of the investment in Primary Care.

Since the Declaration of Alma Ata in 1978, primary care has been the central strategy for expanding health services in many low- and middle-income countries. In 2010 however, Kruk, Porignon et al. observed that the relative effectiveness of primary care versus other health service delivery approaches has not been systematically evaluated in low- and middle-income countries²². They reviewed experience in 14 countries, of which four in west Africa and four pertaining to the category least developed countries, of which three were in Sub Saharan Africa. They conclude that ‘the best evidence for the effectiveness of primary care in achieving health system goals comes from some of the recent Latin American experiments in expanding rural primary care services to broad segments of the population. However, although evidence directly attributing health and other benefits to primary care in other low-income regions is not as strong, from the experiences reviewed here, it appears that primary

care initiatives are contributing to increased access to services as well as equity in access and outcomes.’

In 2015, WHO published a study on health reforms in 10 low- and middle-income country cases of which four in Africa, including South Africa, two in Asia and four in Latin America. Two Sub Saharan countries belonged to the Least Developed countries²³. The study identified some common success factors to improving health system efficiency. The first one was prioritization of primary health care. Other lessons were: alignment of financing and delivery; better accountability through outcome- and output-based contracts with providers; the right input mix; a decentralized system and independent regulatory agencies. Not surprising is the need for managerial capacity and information systems and alignment of donor support with country priorities. On the negative side is the lesson that fragmentation of organization and service delivery is a common source of inefficiency.

In conclusion, there is some evidence on the positive effects of strengthening primary care such as done in Lesotho, in a context that is relevant for comparison with Lesotho. No publications show negative effects of primary care strengthening. The evidence is not very strong, partially because systematic research has started rather late. Another reason may be that, for many years, another approach was dominant in the health sector: directly addressing needs of beneficiaries (sections of the population) with only secondarily or not at all investing in the system: a programmatic approach. Investments in care models or medicines for HIV or TB patients without giving support to the underlying system (governance, supervision, staff, infrastructure, transport) is an example of a programmatic approach. For donor organizations this may be the preferred option, because it is expected to yield quicker results than a system approach.

No evidence has been found on the effects of a large investment in peripheral infrastructure such as carried out in Lesotho.

Does this evaluation fill an evidence gap? The changes in functioning and results of the health system since 2008 cannot be attributed solely to the Health Project, therefore this evaluation does provide only some evidence for its overall effectiveness. Improvements take place thanks to the combined investments and efforts of the GoL, donor organizations and NGO’s. However, the health system is better equipped and functions better since the Compact and MCC can certainly claim to have contributed.

As will be discussed later in chapter 5.6, the Health Project approach to support a whole health system with emphasis on Primary Health Care, may be considered as good practice.

The absence of attribution is the price to pay.

4. Evaluation Design

4.1 Evaluation type

Based on the Terms of Reference (ToR), this evaluation is a performance evaluation, serving to estimate the contribution of MCC investments to changes in outcome trends. By and large, the Health Project intended to contribute to improvements in the health system, and no improvement can be solely attributed to the Health Project.

This evaluation is based on evaluation questions provided by MCC, that inquire about key outputs and outcomes. It also addresses key outputs and outcomes as listed by the M&E Plan, see Figure 4

4.2 Evaluation questions

In chapter 5 Findings, all individual questions are addressed and for each question or subject context is provided to assess if, and if yes how, indeed the Health Project contributed to improvements and what impediments, if any, to improvement did or do exist.

The evaluation is conducted almost 5 years after project CED or Compact close-out. This implies that some of the information cannot be adequately verified as some key personnel who were employed in Compact are not available.

Most questions are related to the Health Program as such or to specific (sub)Activities. Apart from the enquiry about implementation, the questions intend to address outcomes or effects rather than outputs. Several questions inquire about the current status of a component of the health system, in reference to the ToC.

The questions are categorized as follows:

- Health Project planning and implementation
- Patient outcomes; patient perspectives (satisfaction) and use of health services, with particular emphasis on HIV/AIDS patients; overall health outcomes in terms of morbidity and mortality.
- Community outcomes, with emphasis on use of health services.
- Health Professional outcomes, with emphasis on perception (satisfaction) and professional development
- Student outcomes, addressing output of the NHTC.
- System outcomes; a wide range of questions addresses the delivery of essential health services; the outputs of NRL, BTS and NHTC; EMRS and HMIS; decentralization and waste management.

Annex 2 contains the complete list of questions.

4.2.1. Country-specific and international policy relevance of evaluation

The evaluation serves to provide insights into strengths or weaknesses in the program implementation through assessment of the measurable components of the program's intermediate and ultimate outcomes. It attempts to identify opportunities to improve program implementation and investment decisions for MCC's and other USA supported future health projects, possibly through a Compact II, through the formulation of a series of policy implications in Chapter 5.8.

Internationally, generic frames are available to plan and prioritize health services and support programs across countries, for example in the field of Mother and Child Health and HIV/AIDS programs and at the level of health systems as such. At this level policy implications can be formulated. However, health systems are strongly determined by context and support programs need to be very context specific. No generic prescription for detailed health system investment is useful. Chapter 3 has elaborated on this.

4.2.2. Key outcomes linked to program logic

The evaluation questions mostly address key outcomes related to the ToC. Further key outcomes were defined by the Compact and the subsequent M&E Plans; there is some overlap between both.

During the lifetime of the Health Project, several changes to the list of outcome indicators or their values were made in the various M&E Plans, based on growing understanding or more precise definitions.

The final M&E Plan, that follows the ToC, lists the expected outcomes of the Health Project. For all these outcomes, baseline before the Health Project and target values at the end of the Health Project were defined.

- Percentage of nursing positions that are filled
- Deliveries conducted in the health facilities
- Health Centers conducting deliveries
- Immunization coverage rate
- Percentage of people living with HIV/AIDS receiving ARV treatment
- People with HIV still alive 12 months after initiation of treatment
- TB notification per 100,000 of the population
- TB treatment success rate

These outcomes relate to different steps or levels in the ToC: the health facilities functioning, patients and population. They have been chosen to reflect:

- Improvement to which the Health Project directly contributed, such as deliveries conducted in the health facilities and Health Centers conducting deliveries – through improvement of the physical infrastructure;
- Improvement to which the Health Project contributed indirectly, such as immunization coverage rate, percentage of people living with HIV/AIDS receiving ARV treatment, people with HIV still alive 12 months after initiation of treatment and TB treatment success rate: the Health Project did not support directly these activities but they were expected to improve as a result of general health system strengthening. The strengthening of the ‘delivery platform’ to address HIV/AIDS even was the main objective of the Health Project.

In addition to key outcomes, the final M&E Plan also lists a series of output indicators, that also will be reviewed in Chapter 5.

In summary, the outputs and key outcomes in the M&E Plan and the discussion of the evaluation questions together provide adequate information to estimate the contribution of MCC investments to changes in outcome trends and to formulate recommendations for the future.

4.3. Methodology

This evaluation addresses questions that concern the implementation of the Project and specific questions for the results or impact of each (sub) Activity.

The evaluability assessment in 2016 concluded that evaluability of the Health Project was reasonable. There are many issues of availability and quality of (baseline) data from the health system and data on the Project implementation, leading to gaps in understanding what happened and why. Quality of quantitative data is an issue that will come back regularly below, because it affects comparability. For example, there are large variations between one year and the next for several activities or outputs in the health system, because a number of facilities do not or only partially report one year and quite differently the next year. Also, internationally many different numbers are being used for example on maternal mortality or on the number of patients of certain categories like HIV or TB. This is due to the use of various extrapolation and correction methods.

However, thanks to triangulation and cross-checking, the evaluation still can provide answers to most of the specific evaluation questions.

Questions on the implementation of the Health Project mostly are answered with the use of qualitative data whereas the outcomes or impact questions require more quantitative data. Understanding the developments in the health system since the Health Project requires a mix of both types of data.

Both qualitative and quantitative data collection used primary and secondary data, as shown in Table 10.

Table 10; Overview of methodology of data collection

	Central (national) level: MoH and various national institutions and international organizations		Peripheral level: DHMTs OPDs and Health Centers	
Data collection	Secondary data	Primary data	Secondary data	Primary data
Quantitative data	Statistics from health services, MoH; DHS and AJRs.			HFS 2018 for comparison with HFS 2011
Qualitative data	Reports that contain system and process data; Includes MCA Health Project documentation	KIIs with MoH staff, institutions, agencies and NGOs, including MCA and MCC.	Various reports of national and international agencies	KIIs with DHMT and clerks in OPDs; clinicians in hospitals FGDs with VHWs in Health Centers (not OPD's); Observations

4.3.1 Quantitative data:

Some of the statistical data used in this report have been made available by the MoH, from its central database. It is of note that, due to changes in the reporting forms and in the HMIS/DHIS2 (see section 5.4.3.1), extracting data is laboursome for MoH and comparing data remains a hazardous undertaking.

Other data come from surveys that agencies working in Lesotho have carried out together with MoH. The data sources are indicated where appropriate.

Demographic Health Surveys (DHS): DHS in 2004, 2009 and 2014 are population-based surveys that cover various retrospective or recall periods. The 2004 and 2009 entirely cover pre-Compact periods and the 2014 DHS, for which the data collection was carried out in November/December 2014, covers the period 2009 – 2013 included, which is mostly the period before the Compact results could kick in; it includes most of the first year post-Compact, since 2014 is considered the first post-Compact year.

Annual Joint Reports (AJRs): In Lesotho, AJRs are reports with information on health status of the population and on health services: inputs, activities and outputs, including functioning of the health system as such, like data quality processes. The reports cover periods between April and March of the next year, in sync with the financial year. The data are collected through the regular reporting system of the health services, using data bases in the MoH, and through annual short surveys at the level of health facilities. The AJRs are developed by the MoH in close collaboration with donors, who take part in the data collection and/or contribute funding to the data collection exercise. AJR's cover the entire health sector, including those health facilities that have not been part of the MCA Health Project. AJRs are produced every year since 2000 and the methodology gradually has become standardized, allowing for better comparison between years and between districts. The AJR 2016/17 has been skipped. At the time of this evaluation, AJR 2017/18 is in preparation.

Health Facility Survey 2011 and 2018.

In 2011, the MCA Health Project commissioned a survey of the health facilities in Lesotho, with the intention to provide for baseline monitoring data, later to be used for comparison. The Health Facilities Survey (HFS) was carried out by contracted consultants in close collaboration with MoH. The survey collected information from patients⁸ (exit interviews), health staff and managers and from registers. Some observations were carried out as well. Data collection in the field took place in the period July-August 2011. The HFS 2011 includes 138 Health Centers and 14 Hospital OPDs, both Government and CHAL facilities. These are the facilities included in the MCA Health Project and therefore the survey does not represent all health facilities in the country.

The HFS 2018 was carried out in the period February – April 2018 with the following objectives:

- To compare a number of parameters with seven years earlier, data from HFS 2011. In particular, HFS 2018 was interested in comparing satisfaction levels of patients with the health facility and the services and satisfaction of staff with the facility and their living and working conditions.

⁸ During the survey, the term 'client' was used, in line with HFS2011 terminology.

- To assess the level of appreciation and satisfaction of patients and staff with the facilities and services as they were early in 2018, without comparison with seven years earlier.
- To assess in how far several of the guidelines and other support documents developed by the Health Project were in use early in 2018, 4 ½ years after CED.

For the HFS 2018, a selection of the 2011 questions was made, because not all of those were relevant for the evaluation questions.

In order to optimize comparability with 2011, the questions selected in 2018 were phrased in exactly the same way as in 2011. In some cases, the phrasing was adapted, when the pilot survey showed that the original phrasing created misunderstandings. For example, the 2011 survey asked managers of facilities if Family Planning services were provided. In 2018, the question was split in two: is Family Planning counselling provided and is contraception provided?

Also, additional questions were included, both open and closed questions.

Annex 4 contains the four survey-forms with the questions used for the HFS 2018.

HFS 2018 was carried out by two teams of two or three surveyors each: they interviewed patients, staff, managers of health centers and OPDs and made observations in OPDs and health centers. These teams also did the KII's and FGDs in the districts.

For the survey, forms were developed and during the survey paper copies were used, to facilitate registration of the answers to open questions and to eliminate the risk of connectivity problems when tablets would be used.

Sampling of the health facilities and respondents is discussed below.

Survey-interviews with staff and managers were conducted in English and patient interviews were conducted in Sesotho. All staff and patients were informed of the purpose of the questions according to the standard MCC informed consent, see Annex 4, adapted for each category, and were given the option to not answering all (refusing to take part) or some of the questions.

Before the actual survey started, the surveyors were trained during a week and a pilot was carried out in a health center close to Maseru. As a result, several questions were rephrased, a few questions were added, and the order of the questions was changed somewhat.

After the survey, all data from the paper survey forms were uploaded in four databases (Surveymonkey) by a data manager and a check of the uploaded data was done by the evaluator.

Subsequently, results were analyzed. For comparisons between 2011 and 2018, Levene's tests were carried out to test the equality of the variances between the 2011 and 2018 populations of patients and staff and T-tests were used to assess significance of the differences.

4.3.2 Qualitative data

These are to be distinguished in central and peripheral data. Central data refers to MoH and all national and international agencies and institutions based in Maseru, including Compact related data. Peripheral data refers to data coming from the district level and below.

Central data: extensive albeit incomplete documentation of the Health Project is used to describe and assess the implementation of governance and of the (sub)Activities. Further, reports from MoH and from several international agencies and donors, like WHO, PEPFAR, USAID, PiH, Solidarmed and others add to understanding developments of the health system since the Health Project.

Annex 8 contains a list of 10 documents considered key for understanding the current situation of the health sector in Lesotho. They all have greatly contributed to this evaluation.

These data are completed by Key Informer Interviews (KIIs) with a number of stakeholders in the country, like MoH, LMDA and international agencies, and in MCC.

At district level, major sources of information were the DHMTs, some staff of OPDs and hospitals and groups of Village Health Workers (VHW), through Focus Group Discussions (FGDs).

Focus Group Discussions with Village Health Workers.

In each of the health centers selected for the HFS 2018, an FGD with seven VHWs was planned. The VHWs were to be randomly chosen by the manager or other staff of the health center, taking care to find a balance between VHW of different ages and the two sexes. Also, VHWs that live far away from the health center needed to be included, not just those that are at short travel distance. There is no guarantee of complete random selection of the VHW's, in spite of efforts to instruct the manager appropriately.

The FGDs were semi-structured, with the topics directly related to the questions for this evaluation.

FGDs were conducted in a space of the health center by two surveyors in Sesotho and recorded on a voice recorder. One surveyor was guiding the discussion and asking the questions and the other made notes, controlled the recorder and asked questions for clarification. Later, the recorded FGDs were transcribed, translated and consolidated by the same two surveyors. Two surveyors later consolidated the 26 FGDs reports in one single report.

Annex 6 contains the list of topics and the setup of the FGDs.

All 26 planned FGDs were carried out. A total of 25 male and 156 female VHWs took part, which corresponds with the general male/female distribution among VHWs.

4.4 Study Sample

This section exclusively addresses the collection of primary data, qualitative and quantitative.

Central level

No sampling was carried out for data collection at central level, because all relevant partner-organizations were included in the data collection.

Peripheral level

Summarizing from the previous sections on quantitative and qualitative data, sampling at peripheral level was done to plan:

- HFS 2018
- FGDs in health centers
- KIIs with DHMT staff and with OPD staff

In view of the large number of variables, no calculation of the expected sample size to provide for statistically significant results was made.

In order to limit the amount of data and effort while preserving sufficient numbers to allow for observation of trends and variations, the following sampling steps were taken to achieve a broad representation of perspectives, on the basis of population numbers, variations in geographical conditions and available resources for this evaluation.

Districts

Six out of the 10 districts in Lesotho were selected for data collection. This number was presumed to cover sufficient population and health facilities to be representative. In view of the many different types of data, no specific statistical power is sought through sampling. The sampling was stratified: first, in view of its population size, Maseru district in the lowlands was included. Then, the other five districts were randomly selected from the remaining nine. The random selection resulted in the inclusion of one mountain district. In order to cover sufficient geographic diversity, at least one of the mountain districts needed to be included. This was motivated by the known climate, access and isolation issues in those districts. If this would not have happened through random sampling, one of the lowlands/foothills districts would have been dropped (randomly selected) and replaced by one of the four mountain districts, again randomly selected.

DHMTs

In each district semi-structured KIIs with 2-3 members of the DHMT were planned. Typically, DHMTs have 6 to 10 members, each with a different portfolio. Spontaneously, all six DHMTs participating offered to bring in all the members present at that day. As a result, the KII's developed in an FGD, with contributions of most of the DHMT members.

OPDs

All OPDs reconstructed in the six districts were included, 10 OPDs in total. In each OPD, there were two target groups of professionals: the manager and two doctors. Prior to and during the visits of the evaluation team, in agreement with the manager of the OPD/hospital, the survey-respondents were selected on the basis of availability and convenience. Length of tenure was an additional selection criterion, if choice existed. During the implementation of the data collection, one survey team was oriented towards Paballong OPD in Butha Buthe district, in lieu of the OPD of Butha-Buthe hospital and collected the data there. Paballong OPD was opened in 2012 and not renovated by the MCA Health Project but received support from other foreign organizations. In view of the role of Paballong OPD, which specializes in HIV care, and because of time constraints for further visits of the survey team to Butha-Buthe, it was later decided to accept the Paballong OPD and not to correct this choice. This resulted in data collection in nine OPDs that were renovated by the MCA Health Project.

Health centers

A sample of three Health Centers was randomly selected in each district. In Maseru district an additional two Health Centers were randomly selected because of the population size, which

accommodates around 25% of the total population of the country. Six hard-to-reach Health Centers spread over the six districts were included, which ensured sufficient representation in the study. Two Health Centers supported by the Red Cross were included.

During the implementation of the survey, one of the hard-to-reach health centers that were selected, turned out not to have been renovated by the Health Project: it was located in the same village as the health center that was renovated, hence the name confusion. The substitute health center however is not considered hard-to-reach. As a result, the number of hard-to-reach health centers included in the survey is five, not six.

Annex 3 shows the list of health centers and OPDs sampled.

Respondents

Management

In each OPD and health center, the managing nurse or person was interviewed based on a standard list of questions, with a few open questions.

Health staff in OPDs and health centers

In terms of health care staff, two nurses per OPD and health center were to be invited to participate in the survey: the head nurse and the newest nurse. When the head nurse was not available, another nurse was selected based on availability and longest serving years. Anticipating that in some situations no two nurses would be available (absence or occupied with patient care), the survey teams tried to include one additional nurse whenever possible, in compensation.

Patients in OPDs and health centers

The aim was to target six patients at each OPD and HC (two adult women, two adult men, two care givers). Consecutive patients exiting the health facility were asked to participate, which continued until the sample size had been reached for each of the three categories to be sampled. The timing of the survey was determined to ensure sufficient availability of patients. Concretely this meant that the survey was mostly carried out between mid-morning and early afternoon, when consultations are typically ongoing. Anticipating that in some situations there would be less than 6 patients available or less than two patients of each category, the survey teams tried to include one additional patient whenever possible, in compensation.

The number of survey respondents targeted and implemented is shown in Table 4-2. Since the anticipated un-availability of patients and staff did not occur, more than the targeted numbers have been surveyed. In several facilities however, no or just a few male respondents were identified and only 96 % of the target was achieved.

26 health centers plus 10 OPDs	Patient females	Patient males	Patient – care takers, male and female	Staff	Manager
Number targeted	72	72	72	72	36
Number implemented	86	69	77	108	36
Implemented %	119 %	96 %	106 %	150 %	100 %

Table 11 HFS 2018 survey responses

4.5. Timeframe

4.5.1. Justification for proposed exposure period to treatment

The time frame of the exposure to the Activities or outputs of the Health Project differs for the various Activities. The first Activities of the Health Project were completed in 2010 (reconstruction of the Domiciliary Health Center in Maseru) and the last Activities in 2014 (reconstruction of Health Centers), four years before data collection. Although some outcomes might be expected right away, like increased enrollment at NHTC, others might take more time to materialize like the effect on quality of care of in-service training of staff, as a result of the policies and guidelines developed by the Health Project. It was expected that all outcomes of interest will have materialized by the time of data collection. This expectation is in line with the ERR assumption that the net annual benefits would start to accrue 10 years after the start of the Compact, i.e., from 2018 onwards, which implies that some benefits started to accrue several years earlier. Hence, data collection in 2018 can be considered appropriate timing. However, one caveat is that recollection of earlier experiences will likely be difficult or impossible to capture due to elapsed time.

5. Findings

General

The original plan for the Health Project was gradually developed during its first year. While the overall categories of Activities had been agreed upon upfront, during Compact planning, many of the (sub)Activities had to be further defined. This was done on the basis of more detailed needs assessments or studies during the first year of the Compact.

In general, the Health Project was implemented according to its design, there were no major changes or deviations in terms of objectives and the categories of (sub)Activities. As discussed in section 2.1.5.7, the initial budget of the Project was USD 122 million, provided by MCC, that later increased its contribution to USD 142.3 million. When it turned out during the Compact that the costs would largely exceed the budget, the GoL started to contribute. Ultimately, before and after CED it funded with 87 million USD.

It is of note that the PIU costs of 14.5 million USD are approximately the same amount as the value of the two Activities it was coordinating and supervising: Health System Strengthening and Waste Management. It is not clear what would cause this seeming discrepancy. Hypotheses are (1) the PIU was also involved in the construction activities to some extent and had to dedicate (wo)manpower to these tasks, in particular to facilitate procurement of goods and services from suppliers and consultants; (2) Health Systems Strengthening covered a large amount of small activities and contracts that all needed close follow up; the comments of the 2012 audit, cited on page, suggest that ; (3) inefficiency on the part of the PIU. Since this evaluation is not tasked or mandated to audit ex-post the PIU, and five years after the Compact information will be difficult to identify, there is no final conclusion on this aspect.

Health Project organization, some issues.

For the (re)construction activities, an Infrastructure Committee, later Infrastructure Technical Team (ITT), was created, with representatives from MCA-L, MoH, CHAL and the Red Cross.

This committee/team was expected to give ‘no objection’ to the designs of the health centers and OPDs, but in practice this did not happen for all designs. The ITT also was expected to work together with the company that did supervision of the contractors, but collaboration was only partially effective. As a result, there have been issues of design and quality of the constructions, to be further discussed below.

Delays in completing the (re)construction of a number of health centers and their equipment, led to a number of unfinished health centers at CED, in September 2013 and only 33 % of the health centers had received equipment and furniture. The GoL provided additional funding for the completion after CED.

5.1. Estimated effects on key outcomes.

In line with the observations about the health system buildings blocks, there is general understanding that the input of the Health Project contributed to certain outcomes and that no outcome can be attributed entirely to the Health Project. Nevertheless, changes and (lack of) improvements of the health system are relevant for an assessment of the effectiveness of the Health Project.

The key outcomes and outputs MCC used for assessment of the improvements of the health system are

- the targets in the Compact
- indicators used in the post-Compact M&E plan and in the *Indicator Tracking Table (ITT)*⁹.

Indicators

In 2012, an independent assessment of the quality of performance indicator data over time and across various data sources was made²⁴. This concerned mainly the indicators used by MCC to monitor and assess the outputs and outcomes of the Health Project. Adjustment of indicators was done since.

Objective and outcome indicators are useful when they are specific, measurable, attainable, relevant and time bound - SMART. The indicators used in the Compact are variable in this sense: some are less, and others are more SMART. For example, the under-5 mortality rate is an indicator that looks back at a longer period of time and therefore in 2013 could not capture the effects of the Health Project. Correctly therefore, its target was identical to the base-line value but then also this reduces its value as an indicator.

The reduction of the measured prevalence of TB by health system strengthening also cannot be attained in a 5-year period because TB prevalence is determined by a wide range of factors of which health services is just one. Rather, the observed and reported prevalence may increase when health services’ coverage and quality, including quality of reporting, improve.

Several of the outcome indicators are not specific, like essential health services availability and immunization rate. Also, the latter is a composite indicator that has limited value, because for some immunizations like measles, 90 % coverage is insufficient because it does not provide herd immunity whilst for polio the full herd effect is reached at 80-86 %. The

⁹ *ITT* in italics, to distinguish from the ITT, the Infrastructure Technical team.

composite indicator then may suggest (lack of) progress but does not indicate much in terms of effectiveness. Finally, all indicators need clear descriptions of what they intend to reflect. Baseline data on availability of essential health services are lacking. While baseline data on deliveries in health centers are lacking in the Compact indicator list, a percentage is given for deliveries in health facilities in the post-Compact M&E Plan; this percentage needs to be treated with great caution because it is unclear what health facilities are included here. For total patient visits the definition also is lacking, so that it is unclear what visits are included here.

Some output indicators measure output of services like the NRL, BTS and NHTC, and therefore are rather outcome indicators of the Health Project; other output indicators measure output of the Health Project itself, such as % of construction of facilities completed.

Bearing in mind that some of the Compact indicators do not really capture effects of the Health Project and question marks on other indicators, Table 12 provides an overview of the value of the indicators at the end of the Compact or at later dates, when data for CED are not available. Table 13 shows the indicators as determined in the post Compact M&E Plan. There is an overlap between both sets of indicators and targets, some indicators are used in both tables. They are shown both for the sake of completeness.

Table 12 Health Project Indicators and Targets¹⁰; Compact

Objective: Increase access to life-extending ART and essential health services by providing a sustainable delivery platform				
Objective-level result	Baseline	Year 5 Target	Result achieved	Comments evaluator
Mortality rate (per 1,000)	Under 5 = 113 F:15-49 = 9.9 M:15-49 = 12.3	Same as baseline	Under 5 = 94 F: 12.8 M: 13.9 (source: Levels & Trends in Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation; United Nations 2014 Child Mortality; UNICEF; modified data on basis of Demographic and Health Survey; Key Indicators 2014)	Composite or aggregate indicator 'mortality' is not sensitive to one 5-year project and data necessarily are not very precise.
People with HIV still alive 12 months after initiation of treatment (percent)	82%	90%	94.3 % in 2016.	See Table 13
Prevalence of TB (per 100,000)	592	400	544	See Table 13
Outcome-level result	Baseline	Year 5		
Essential health services available (percent)	TBD	80%	TBD	No formal definition of essential health services in place in Lesotho; general description of what it should entail does not allow for quantification
TB treatment success rate (percent)	64%	85%	70 % (2016) (source: PEPFAR 2017 COP/ROP)	See Table 13
Facilities staffed with standard number and type of qualified staff (percent)	5%	60%	75-80%% (HFS2018)	The current (2018) standard for facility staffing is being adjusted, because it is outdated.
Total patient visits (number)	800,000	1,000,000	No (aggregate) data	It is unclear what exactly type of visits are included or not in the baseline of 800,000. Also, due to changes in the reporting system of the health facilities, comparability of data between the years is low.
Immunization rate (percent)	78%	90%		See Table 13
Number of people receiving ARV treatment (number)	17,966	35,000	110,000	See Table 13
Health centers deliveries	TBD	TBD	TBD	See Table 13
Utility availability (percent)	TBD	90%	90 % (source: HFS2018)	See section on health center construction
Total annual enrolment at NHTC (number)	350	938	451 in 2017/2018 (source: NHTC)	See Table 13
Referred tests performed per quarter (number)	885	1,800	0	See Table 13
Blood units collected per quarter (number)	700	1,500	~ 2000 (2015)	See Table 13

¹⁰ Date and source of data unclear

Table 13 Targets and achievement, used in the post-Compact M&E plan.

Part 1

Indicator Name	Baseline (Year)	End of Compact Target	Indicator level: outcome		Comments
			Result achieved	Source	
Percentage of nursing positions that are filled	57% (2011)	N/A	83.8 % end of 2013	ITT	Is further discussed in section below
			102 % in 2018	HFS2018 (see chapter 5.2.1.10)	
Deliveries conducted in the health facilities	36% (2008)	80%	23.3 %, October-December 2013 (without Maseru)	ITT	Is further discussed in section below
			40 % in 2015	AJR 2015/16	
Health Centers (HCs) conducting deliveries	25% (2008)	50%	33,3 %, October – December 2013 (without Maseru)	ITT	Is further discussed in section below
			85 % in 2015	AJR 2015/16	
			75 % in 2018	HFS 2018	
Immunization coverage rate	62% (2009)	80%	No data	ITT	Immunization coverage is a composite indicator that very roughly shows the evolution of the performance of a part of the essential services. Very difficult to ensure data quality and precision. Overall progress is very likely
			93 % of 3 doses Hep B in 2016 93 % of 4 doses DTP in 2016 90 % 1 dose minimum of measles in 2016	https://www.indexmundi.com/facts/lesotho/immunization	
Percentage of people living with HIV/AIDS receiving ARV treatment	34% (2008)	70%	No data	ITT	Progress is obvious but at lower speed than expected. Latest results are encouraging.
			54 % (2016) 67% (2016) In early 2017, 98 % of people newly testing positive for HIV in a six-month period in the country had been enrolled on antiretroviral treatment, or pre-ARV care	https://data.worldbank.org/indicator/SH.HIV.ARTC.ZS?locations=LS http://aidsinfo.unaids.org/ https://www.theglobalfund.org/en/portfolio/country/?k=01ae2dc3-49f1-48b7-b9fb-2be348d15051&loc=LSO	
People with HIV still alive 12 months after initiation of treatment	74% (2008)	80%	No data	ITT	Progress is obvious but at lower speed than expected. Latest results are encouraging. Target of 80 % is low.
			94.3 % in 2016.	2015 ART COHORT ANALYSIS REPORT; MoH; Disease Control Directorate; 2017	
TB notification per 100,000 of the population	640 (2008)	400	No data	ITT	The Health Project did not carry out a specific TB activity; improvements reflect an overall improvement of the health system performance, to which the Health Project contributed. The target should have been an increase of notification, not a decrease, since a better functioning health system identifies more patients. Only after many years of improved living conditions and improved health system functioning, a decrease of incidence and of notification can be expected.
			2015: 334 2016: 724 (confidence interval 468–1,030)	AJR 2015/16 https://extranet.who.int/sree/Reports?op=Replet&name=/WHO_HQ_Reports/G2/PROD/EXT/TBCountryProfile&ISO2=LS&outtype=html	
TB treatment success rate	74% (2008)	85%	No data	ITT	This indicator is very sensitive to errors in data (collection) and large variations between the health facilities. Therefore, results like averages are difficult to interpret.
			From 2011 to 2015, the % changed from 65.5 to 70.2 MDR/RR-TB cases started on second-line treatment in 2014: 64% New and relapsed cases in 2016: 77 % MDR/RR TB cases started on second line treatment in 2015: 66 %	AJR 2015/16 https://extranet.who.int/sree/Reports?op=Replet&name=/WHO_HQ_Reports/G2/PROD/EXT/TBCountryProfile&ISO2=LS&outtype=html	

Table 13; Targets and achievement, indicators used in the post-Compact M&E plan.
Part 2

Indicator level: output;				
Indicator Name	Baseline (year)	End of Compact Target	Result achieved	Source
Blood units collected by BTS	3,381 (2008)	5,000	No data	<i>ITT</i>
			7,988 in 2013	Annual Statistics from BTS
			5,008 in 2016 5,429 in 2017	
Tests done at the NRL	554,823 (2008)	400,000	No data	<i>ITT</i>
			214,417 in 2013	Annual Statistics from NRL
			296,469 in 2016 415,213 in 2017	
NRL test referrals	8,873 (2008)	400	Ill-defined data	<i>ITT</i>
			No tests are referred at all to any laboratory	Annual Statistics from NRL
Students who graduate from NHTC	176 (2008)	250	223 in 2013	PIU exit report
			254 in 2018	NHTC data
Percentage physical completion of health centers	0% (2008)	100 %	88 % at CED	<i>ITT</i> and PIU exit report
Percentage physical completion of OPDs	0% (2008)	100 %	100 % at CED	<i>ITT</i> and PIU exit report
Health centers equipped	0% (2008)	100 %	33 % at CED	<i>ITT</i> and PIU exit report
Hospital OPDs equipped	0% (2008)	100 %	100 % at CED	<i>ITT</i> and PIU exit report
Percentage physical completion of NRL construction	0% (2008)	100 %	100 % at CED	<i>ITT</i> and PIU exit report
Percentage physical completion of BTS construction	0% (2008)	100 %	100 % at CED	<i>ITT</i> and PIU exit report
Percentage physical completion of NHTC student accommodation construction	0% (2008)	100 %	100 % at CED	<i>ITT</i> and PIU exit report

Outcome indicators.

The outcome indicators show varying results, between improvement and non-improvement. The most relevant for the Health Project are the increase of PLHIV on ART and staffing levels.

The output indicators are further discussed in the sections below.

5.2 Construction and renovation of the health centers and OPDs

This section discusses the results of the construction and delivery of equipment. This is completed with observations in the 26 health centers and the 10 OPDs visited during this evaluation and followed by the VHW and patient perspectives on the construction. Also, patient perspectives on service delivery are reported.

A next paragraph details issues of maintenance, including experiences of staff and management.

Information from the HFS 2018 was collected to make several comparisons with the pre-Health Project situation. Information from DHMT meetings and KIIs at central level completes the data.

The ToR for the evaluation do not contain questions specific for construction and equipment.

The following vignette of a visit to a health center by one of the evaluation teams serves to illustrate the study that is undertaken.

Maqokho vignette

The health center is situated in a mountainous area, nearly two hour's drive from Quthing, the district capital: 45 minutes on tarmac, 45 minutes on a dirt road over mountain slopes. At arrival, a stunning view of the mountains and valleys rewards the visitor. The health center is considered hard-to-reach, which implies that staff gets a (small) allowance on top of the salary.

At arrival of the evaluation team around 8 am, staff is busy preparing but patients/visitors are late, according to staff due to the torrential rains of the previous day. Around 10 am the health center is filled with patients.

A first walk around the health center reveals a nicely looking set of buildings in a fenced area, without a solar system on the roofs; a very small waiting house for mothers; a parking area on the back-side of the health center that is only half-paved (MCA or LMDA never finished it) – on the front side the pavement is well done and the garden well maintained; cracks in the walls of the five staff houses built by MCA, some of which have obviously been repaired, only to worsen the condition of the wall plasters; a fenced furnace, visibly often used, with iron doors missing/broken.

The condition of the health center itself is good, according to the manager. It has permanent electricity from LEC but no tap water. The health center and the houses should receive water from a higher water reservoir, but the pump to fill that reservoir is broken since a long time. For flushing of the five toilets for patients, staff and disabled, there is water from another reservoir, although the disabled toilet flush is broken since a long time ago. The health center looks neat and well equipped, with recent graphs on the wall and posters in the waiting area.

The three registered nurses and two nurse assistants all live in the five houses constructed by MCA. They have electricity but sometimes spend weeks or months without energy, allegedly because the DHMT delays in purchasing electricity coupons. There is no water in the houses: a tap outside is the only supply. A satellite dish with TV has been installed in the houses by the MoH some four years ago. Further to the cracked walls on the exterior, the inner walls have half-repaired cracks; broken tiles on the floor of one house have been replaced by tiles of a different color, and during rains the water enters in the living room, under the door.

In 2018, the health center serves a population of 15,999 according to the DHMT, which receives the figures from the BOS. However, according to the recent community inventory done by the 54 Village Health Workers, there are 1,204 households in 22 villages. In view of the average number of persons in a rural household according to the 2016 census, 4.2, this would correspond with approximately 5,050 persons. However, not all villages do have a VHW and the real number of households maybe a bit higher.

A VHWs register contains updated and detailed data provided by the VHWs, who meet once a month in the health center. Some of the data and mathematics in the register obviously are incorrect, like large variations in number of pregnant mothers between one trimester and the other. Nearly 1,000 patients with HIV are registered but only seven are under treatment for TB, which is far from the expected number of more than 30 new cases per year. Still, the health monitoring of the population seems structurally done and recorded. The health center has six outreach sites, of which three are not any more accessible by car, due to degraded roads. The other three are visited every month, with the intention to optimize vaccination results and bring ART to the population.

Next to VHWs and health center staff, also Lenaso volunteers, themselves HIV+, stimulate the population of the villages to come forward for HIV testing.

The vaccination coverage for the children's population in the area of the health center has been very low for years, reaching only 29 % in 2017 for measles. This is calculated using the official population numbers. If one uses the number of 5,050, the coverage increases to 93 %. The lower population size may also partially explain the low number of deliveries in the health center, around four in a month or 45-50 in a year. On a population of 5,050 one would expect 140 deliveries in a year, or around 12 a month¹¹. Some pregnant mothers are referred to

¹¹ Birth rate in Lesotho is 28.2/ 1,000 in 2015.

the Quthing hospital for delivery. Others deliver at home, in another health center or in South Africa. According to the manager, during the last seven years, there has been no case of maternal death in the health center area. When 140 deliveries occur per year, the total number for seven years is 1,000. The mortality rate of Lesotho according to the DHS 2014 is 618/100 000. Thus, one would expect approximately 6 maternal deaths in the seven-year period.

The last visit of a doctor from Quthing hospital was three months ago; a social worker came to visit one month ago. The health center has a car contracted by the DHMT that may only be used for patients and pregnant women evacuations to Quthing hospital. For outreach trips, a different car is rented.

Medical waste is collected every two weeks. Waste may smell in summer; two weeks span to collect waste is a long time.

Seven patients are asked for their views on the health center. They all show satisfaction with the time and attention they get from staff. While the majority has no wishes for improvement of the health center, some have several suggestions; repair of the water supply is one of them.

Three staff are interviewed. When asked about needs and desired improvements in living and working conditions, water supply repair, increase of the number of houses to lodge support staff and electricity in the houses are mentioned most.

The visiting evaluation team is of the opinion that the main constraint for the health center functioning is ineffective maintenance.

5.2.1 Results of the construction and delivery of equipment.

The infrastructure of all 138 health centers and 14 OPD's has been improved, in spite of quite a number of defects. Due to the increased number of users, spaces are small or insufficient in many facilities. The quality of equipment and furniture that were supplied was low.

5.2.1.1 The constructions and equipment delivered

Currently, in 2018, all 138 health centers are functioning.

The construction/renovation of health centers met many problems in terms of design and actual construction. In many facilities, the design is not optimal, but the quality of construction and the general status of the buildings are satisfactory to good. Unanimously, all stakeholders consider that the constructions have greatly improved conditions for health services delivery. The construction of staff houses, two per health center model 2 and five per health center model 1, has greatly increased the attractiveness of working in the health centers.

The health centers all have a building that serves as shelter for pregnant women. The space these buildings offer varies: they have one or two rooms, the size of which varies as well. Some critical points are the following.

- The construction of a few health centers has never been completely finished: six of 26 visited health centers have no fence constructed, in one the parking lot has only be halfway completed. Some septic tanks were constructed in soft soil and started to move and leak; they had to be reconstructed, see the section below on LMDA.



Picture 3 Unfinished pavement in one of the health centers

- For the current numbers of patients and programs, the space in most health centers is insufficient. Some health centers have a tent, erected by EGPAF, to accommodate special activities or patient groups, mostly for ART. Staff and patients alike complain about too small delivery rooms, too small waiting spaces and staff also considers that there is insufficient storage space in the dispensaries. In several health centers, the watchman building at the entrance accommodates only one guard, while at night there are mostly two.
- Mothers waiting for the delivery often have to share a room in the shelter especially built for that purpose; this lack of privacy is an obstacle to mothers coming to deliver. In some health centers, staff has resorted to lodging waiting mothers in staff houses. Further, the shelters have no kitchen or space for cooking, so mothers have to improvise mostly.



Picture 4; Tent erected by EGPAF to expand working space



Picture 5; Storage of broken chairs, seen in various health centers



Picture 6; Watchman building at entrance of the healthcenter. Too small for its purpose



Picture 7; Inadequately fixed electric appliances.

- Furniture and equipment. The (ref) Findings of Independent Engineer Investigations: November – December 2014 Health Infrastructure Deployment states: “Furnishing and Equipment” was one of the highest failure categories, at 57%. Shoddy goods prevailed. At most sites one finds all manner of broken or unusable goods: chairs, file cabinets, privacy screens for beds, unlabeled or expired fire extinguishers, and delivery beds that are too small or collapse in use. One site had a maternity patient fall from a defective delivery bed. The gas heaters provided do not work, so most of them have been moved to storage at HCs; at Mont Martre HC, a gas heater set a staff house afire, damaging it sufficiently that the house must be repaired before being inhabitable.”

In the report on the 26 FGDs with VHWs, the following section contains their perspectives on the physical aspects of the constructed health centers.

‘While most VHWs expressed that what causes contentment in some facilities is that people are no longer denied services because of limited space from which services were provided before renovations; there was a general impression that the renovations brought about an increased number of patients who seek services at the facilities, this has in a way led to limited space in the waiting rooms, waiting mothers’ shelters, post-natal and the multipurpose hall as well. Different facilities experience space limitations of varying magnitudes, some need extension while others need new structures. It came out very clearly in most facilities that antenatal shelters need to be extended so that more pregnant women can be accommodated, and kitchen facilities can be available. Another important structure that has been identified as a need is construction of an adolescent health corner in order to create a youth friendly environment and offer youth friendly services. At one health center in Berea district, it was mentioned that the rooms are not adequate to accommodate all the services that are offered in the facility: one service has to be completed before the next service can

commence as one room is used for many services (e.g. ANC and OPD). While at another health center in Quthing it was mentioned that the waiting room is small and gets overcrowded, the greatest worry is the poor ventilation, more especially in cases of untreated TB patients who mix with all other patients in the waiting room. At a health center in Qacha's Nek, the waiting room is small to an extent that some people wait outside. The village health workers at a health center in the Maseru district stated that the waiting room is very small as compared to the one in the old clinic. Whereas at another health center in Quthing it was said that there is a shortage of counselling rooms and the multi-purpose hall is at times used for HIV testing. This situation makes patients very uncomfortable and they feel belittled due to lack of privacy.'

As for OPDs, the rehabilitation was tailormade and based on local needs and space available at the compound of the hospital. Mostly, one building was rehabilitated and/or added, like the an OPD building. In general, these (re)constructions are well appreciated. The ITT did not see the design of 10 OPDs, which left room for the constructor to adjust as he deemed fit. In some cases, this led to suboptimal size or design of buildings, according to members of the previous ITT. Also, some issues have been mentioned by the DHMT FGDs: in one district, the pharmacy store room was never constructed although an old store room was removed. In another OPD, toilets were poorly constructed and leaking from the very beginning; this was not a matter of maintenance. However, in general, these (re)constructions are well appreciated.

5.2.1.3 Patients' perceptions

One of the evaluation questions was: to what extent have patients' perceptions of HCs and OPDs changed? Have perceptions changed since the Compact began?

Data

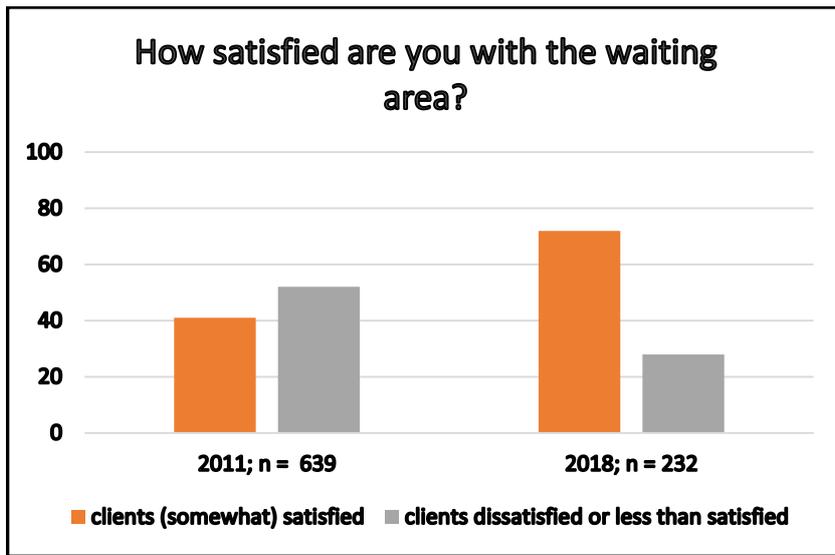
Patients' perceptions of the facilities have been measured by the HFS in 2011 and 2018 by asking them about their (dis)satisfaction with some physical aspects of the health centers and OPDs: waiting area, consultation rooms and toilets. In 2018, they were also asked whether they considered the health center better or worse than before the renovations. Further, clients' perceptions were discussed during FGDs with the VHWs.

The graphs below show the results. The numbers of patients responding are indicated. Since not all patients made use of the toilets, not all of them could respond to the question. In rare cases, data like age of the patient are not available.

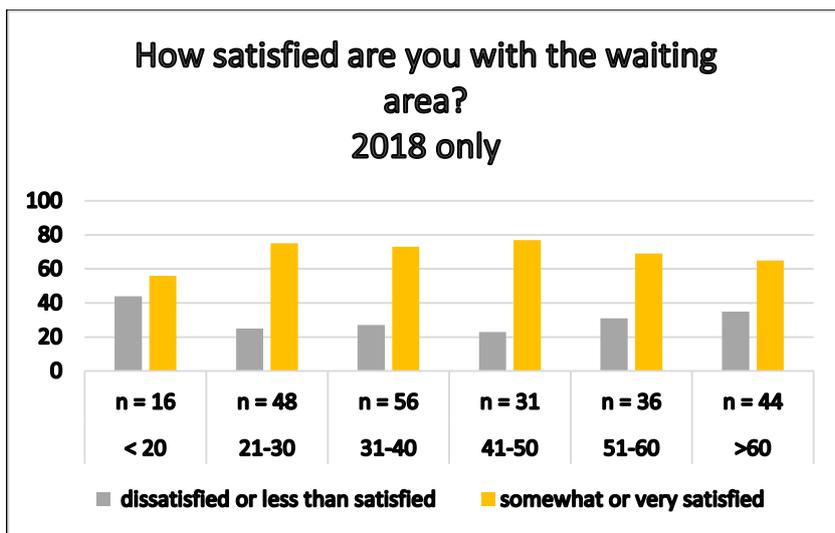
Results

Graph 5 shows the clients' responses to the question about their (dis)satisfaction with the waiting area. There is a clear increase of satisfaction and decrease of dissatisfaction, and the difference is statistically significant ($P < 0.05$, T-test). Graphs 6 and 7 show the results, for 2018, for the different age groups, respectively for those who are care-taker and those who come for their own care. The differences are not statistically significant.

Graph 5; Client satisfaction with the waiting area, comparison 2011 and 2018

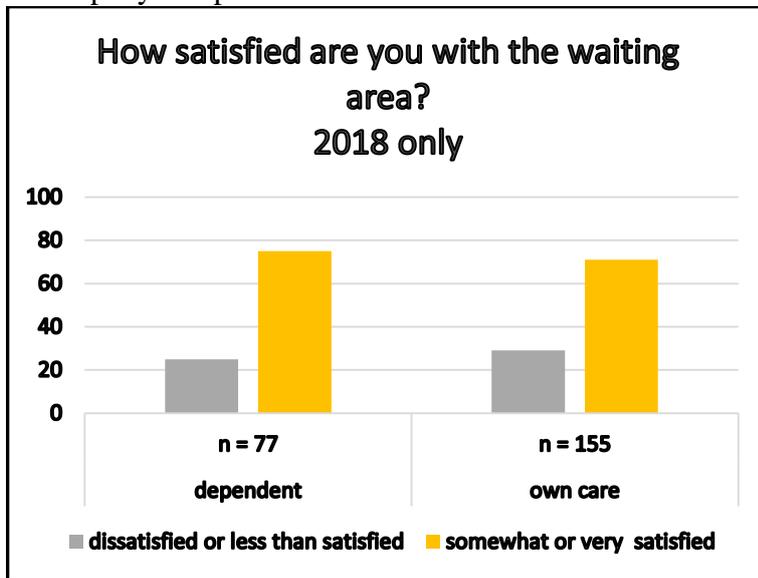


Graph 6; Client satisfaction with the waiting area 2018, age groups



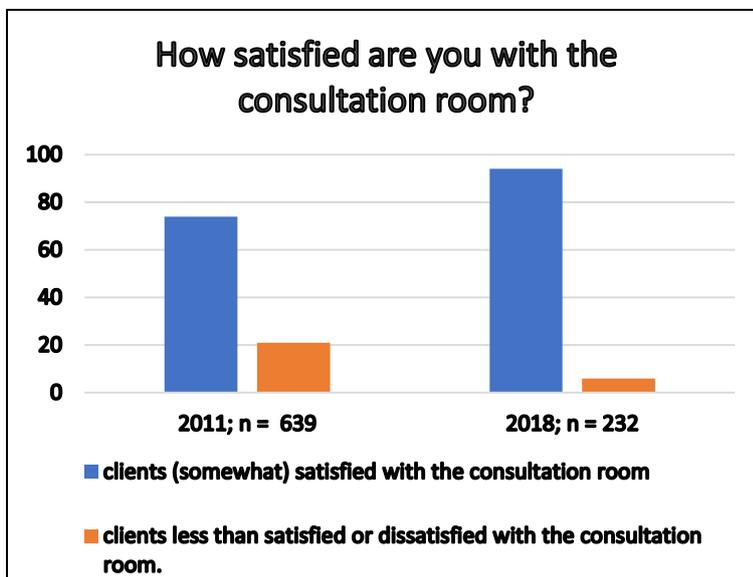
Graph 7; Satisfaction with waiting area; % of patient – respondents in OPDs and health centers;

Patients are differentiated between those who came for their own care and those who came to accompany a dependent – a care-taker.

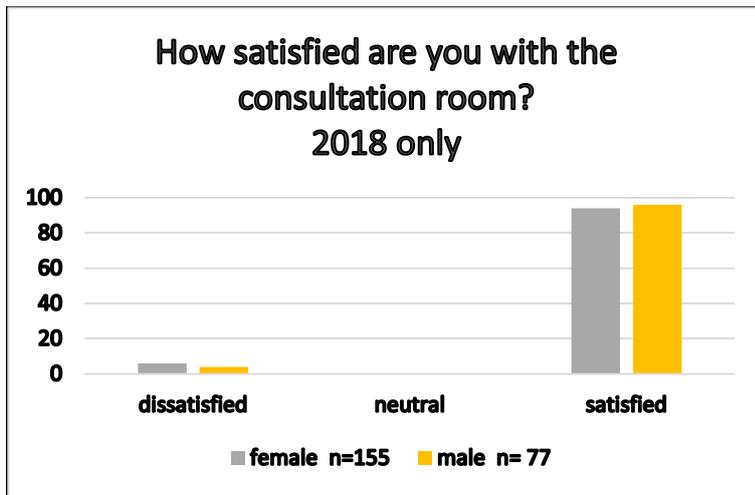


The (dis)satisfaction with the consultation room is shown in graph 8: satisfaction was already high in 2011 and is higher even in 2018; the difference is statistically significant ($P < 0.05$, T-test).

Graph 8; Client satisfaction with consultation room

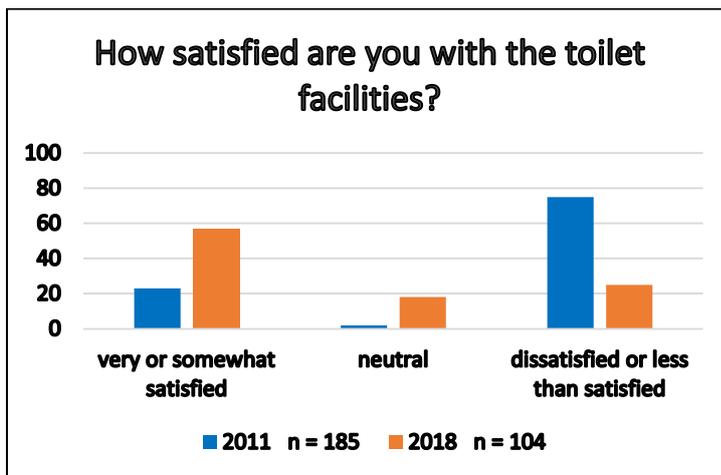


Graph 9; Client satisfaction with consultation room in 2018; male / female



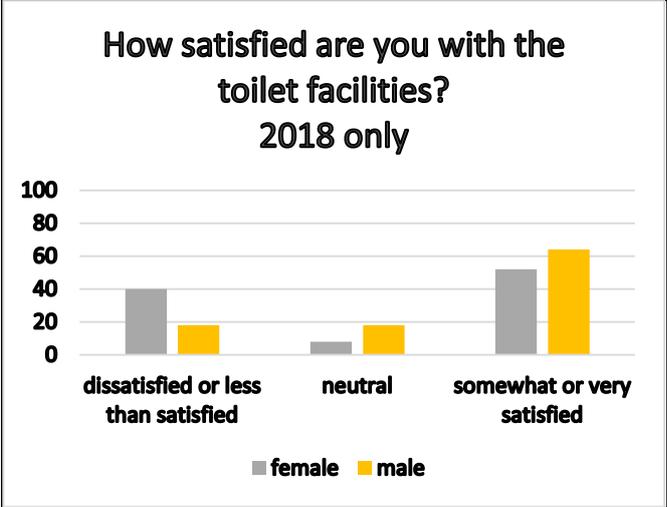
Satisfaction with the toilet facilities is shown in Graph 10: there is a strong increase of satisfaction and decrease of dissatisfaction in 2018 compared to 2011. The differences are statistically significant ($P < 0.05$, T-test).

Graph 10; Satisfaction with toilets; % of responses of clients in OPDs and health centers



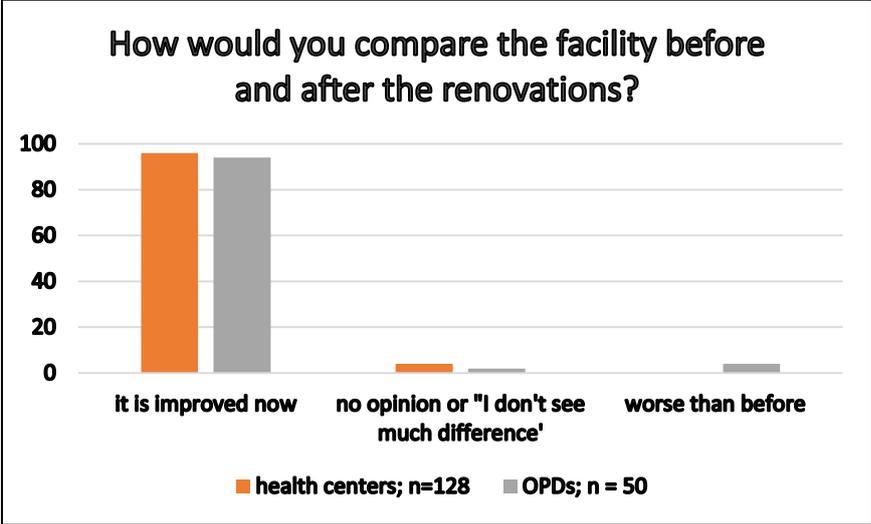
When male and female are separated out, a difference between their appreciation of the toilet facilities becomes evident: Graph 11 shows that females are less satisfied and more dissatisfied than males, but the difference is not statistically different.

Graph 11; Satisfaction with toilets; differentiated for males and females



In 2018, only those clients who had visited the health facility before the renovations, were asked whether they would see any improvement, or the contrary. As shown in Graph 12, of the 128 clients in health centers who were asked to compare the health facility before and after the renovations, 122 (96%) considered that it has been improved, none said that it was worse than before. In the OPDs 50 respondents (94%) considered the OPD had improved.

Graph 12; Overall appreciation of health facilities; % of patient-respondents in OPDs and health centers



However, in several OPDs other facilities have been added or improved since the Health Project and clients cannot make a difference between one and the other improvement. Two OPD patients considered that the facility had worsened: one found the facility was dirty and the other commented on the permanently changing organisation of service delivery – not related to the infrastructure.

To the question what could be further improved, 126 patients answered, 63 of them had no suggestion for improvement and 63 gave one or more suggestions, covering many aspects of the facilities and of the service delivery. Table 14 lists those answers that have been given more than once.

Table 14 *What could be further improved, in terms of the health facility?*

Number of patient respondents, total	126
Nothing or I don't know	63
Upgrade services to doctor or hospital level (diabetes, cancer, ophthalmology)	16
Electricity or water supply	15
More waiting space	12
More staff	12
Toilets, number to increase	11
Toilets, cleanliness to improve	10
Waiting shelter for mothers – larger and higher number per health center	7
Availability of medicines	6
Maintenance of the health center premises	5
Better heating	5
X ray	4
Toilets, maintenance to improve	3
Improvement of the roads (2 x) and car availability (1x)	3
Supplementary feeding	2
Health education	2
Home visits	2

In all the 26 FGDs, the VHWs unanimously indicated that clients are very appreciative of renovation of the facilities, for them these are like local hospitals.

5.2.1.4. Accessibility of health services

Opening times.

All 26 health centers surveyed in 2018, have regular opening times from Monday to Friday. Four of 26 do not open at night, even not for emergencies, allegedly for security reasons. Two of 26 do not open during the weekend for emergency cases.

Financial accessibility.

Since 2010, as part of the policy to increase accessibility of health services, all services and medicines in the health centers are for free. In 2011, in four of the 139 health centers,

according to one or more patients a fee was asked for the consultation and in 12 of 131 health centers the manager affirmed that a fee for maternal services was asked.

In 2018, in the 26 health centers, not a single patient has been charged for the consultation, according to the 168 respondents and also no manager affirmed that a fee was asked for maternal services.

However, according to the VHWs FGD, in one health center in Maseru district, diabetic patients are charged for blood sugar and pregnancy tests. In a health center in Quthing district, patients pay for cotton wool.

While in all health centers patients pay M10 for the bukana¹², in the same health center in Quthing patients are charged the double amount.

Further, nearly half of the patients have to pay for transport to and from the health facility, which for many may constitute a barrier, see Table 15.

Table 15; Patients paying for transport; health centers and OPDs; all amounts in Maloti

Survey 2018	Did you have to pay for transport to the facility?		Average amount to pay	Median amount to pay	Maximum amount to pay	Do you have to pay for transport back home?		Average amount to pay	Median amount to pay	Maximum amount to pay
	no	yes				no	yes			
Total number respondents	129	103	14.2	10	85	128	104	14.2	10	85
total %	56	44				55	45			
Respondents in hard-to-reach health centers	27	4	22,5	17,5	50	28	3	26,5	25	50
Total %	87	13				90	10			
Respondents in the other health centers	102	99	14,2	10	85	103	98	14,2	10	85
Total %	51	49				51	49			

These data show that within health centers financial barriers have nearly disappeared but transport remains a financial burden. In later chapters, FGDs with VHWs and discussion of health posts will show that for many people these barriers may be prohibitive.

Availability of medicines

A comprehensive assessment of supply of medicines is out of scope of this evaluation. Rather, patients’ perceptions with regards to medicines supply has been assessed.

Patients were asked whether they had received medicines, a prescription, neither or both, in 2011 and 2018. Receiving medicines is the generally expected outcome of a consultation. Receiving a prescription means that the health facility does not have available the required medicine and the patient is supposed to acquire the medicines elsewhere. This is generally

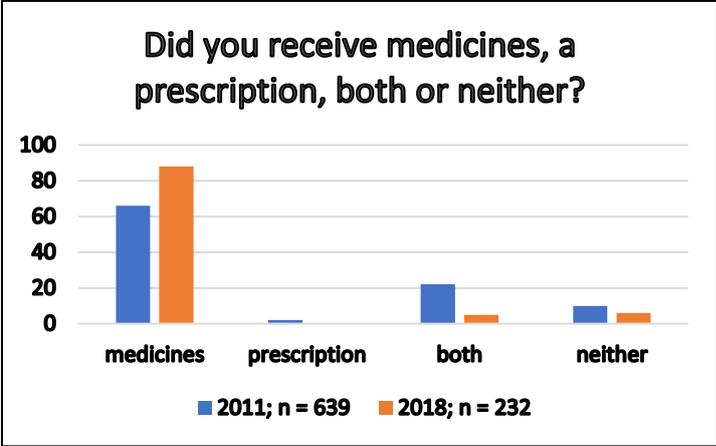
¹² A bukana is a small booklet that serves as the patient’s medical file and stays with the patient always.

interpreted as a problem of medicines supply of the facility, although in rare cases it may be a prescription for a medicine that is not on the standard list. This then uniquely happens in OPDs, not in health centers.

As shown in Graph 14, in 2018, 12 or 5 % of patients did not receive a prescription or a prescription and medicines. In 2011, the numbers were 151, or 24 % of patients. This suggests that in 2018 there was less shortage of medicines, although different prescription behaviour by the health staff cannot be ruled out. In 2018, 15 (6 %) clients did receive neither a medicine nor prescription and 3 (1%) believed they would have needed one. The others came for a regular check-up or result of examination. In 2011, 10 % of clients did not receive either a medicine or prescription; no data exist on how they perceived this.

Graph 13; Patients receiving medicines or prescription

% of patient-respondents in OPDs and health centers



5.2.1.5 Waiting times.

One of the questions for the evaluation was if waiting times have been reduced. If so, has EMRS contributed to a reduction in wait times?

The section below shows that waiting times have bene reduced. EMRS will be discussed further in chapter 5.4.3.1. Since it has not been functioning, it has not contributed to reduction of waiting times.

The length of time patients have to wait to be served, is one indicator of accessibility and quality of care. There is no specific benchmark or target for the (maximum) waiting time for consultations and dispensaries in Lesotho. The various AJR’s report about clients’ waiting time, based on exit interviews with clients. In these reports, waiting time is defined as the time between arrival and departure from the health facility, including the time for actual service delivery. No further detail about the enquiry- methodology is given. A household survey in 2010 enquires about waiting times during earlier health facility use, using a 4-week recall period¹³. The HFS 2011 and 2018 clients’ surveys inquired about clients’ waiting time for the consultation and for the dispensary.

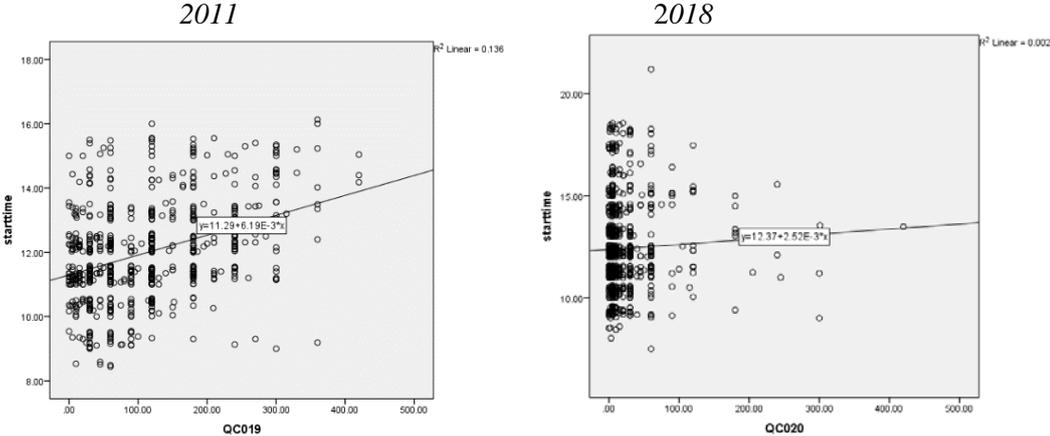
Methodologically, establishing and comparing waiting time in a meaningful way on the basis of perceptions expressed by clients during a survey is a challenge. First of all, asking clients to

¹³ BOS; Continuous Multi-Purpose Household Survey: Third Quarter Report September 2010

express waiting times in minutes or hours in the Basotho culture may result in gross and unrealistic estimations. Second, at what point in time does one consider that waiting time starts? Common sense says that waiting time starts at the moment that services should start according to the established and communicated schedule. In the Lesotho context, clients may come very early to the health facility, as early as 6 or 7 am, and measure waiting time from the moment they arrive, not from the moment the services should start according to the established schedule. Also, services may start later than the established schedule and then clients may or may not consider the start of the waiting time at the moment the services start. Third, for household surveys that inquire about waiting times longer ago, memory lapses may influence the outcomes.

For exit surveys in facilities, it may be assumed that, to some extent, the earlier in the day the client is interviewed, the shorter the waiting time for consultations is; because the earlier in the day, the less time clients could have waited. So, the timing of inquiring the waiting time influences the outcomes. Comparing data over the years needs to take into account this variation.

Graph 14; Correlation starting time interview and waiting time in 2011 and 2018;
horizontal axis: waiting time in minutes; vertical axis: time of the day.

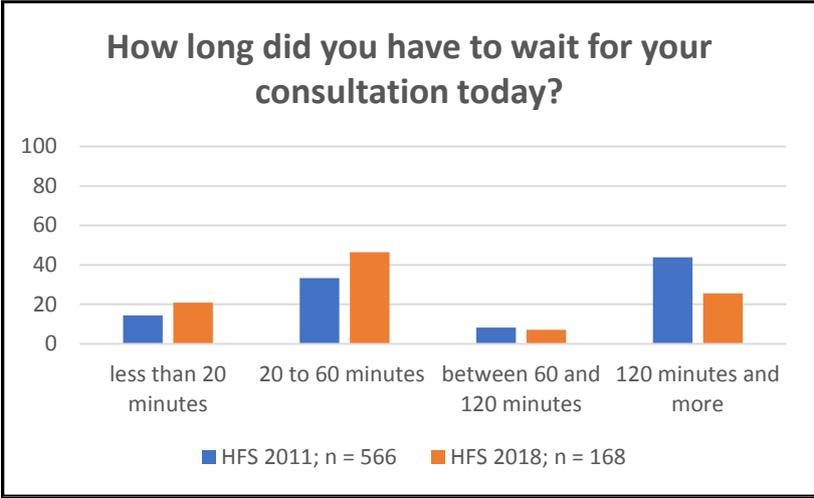


Graph 15, left, shows that according to the results of the HFS 2011, there was a statistically significant correlation between the starting time of the interview and the length of the reported waiting time. Graph 15, right, shows that in 2018, there also is a significant correlation, albeit much weaker.

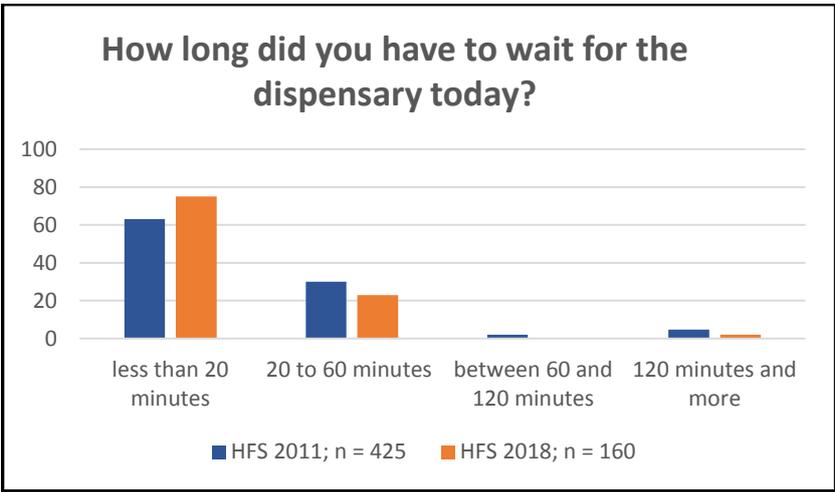
The conclusion is that the method and/or timing of inquiring about waiting times may systematically influence the outcomes. Comparability of data on waiting times is affected.

Bearing in mind this caveat, waiting times have been reported and Graph 16 and Graph 17 show the results in health centers for, respectively, the consultation and for the dispensary. Compared to 2011, in 2018 there is some reduction in waiting times for consultations, especially of the extremely long waiting times. For the dispensaries, the waiting times are much shorter and changed less.

Graph 15; Waiting time for consultation; % of patient respondents; health centers



Graph 16; Waiting time for dispensary; % of patient respondents; health centers



The waiting times reduction is statistically significant. When subgroups are split out, for CHAL and Red Cross health centers the reduction is also statistically significant, but it is not for the subgroup of GoL health centers.

What are acceptable waiting times? As mentioned above, no waiting times limits have been set in Lesotho. If one would set, arbitrarily, the maximum acceptable waiting time for consultations at 1 hour or more and for dispensaries at 30 minutes or more, then for consultations 54% and for dispensaries 22 % of patients have to wait more than these maximums, in 2018. Excessive waiting time may be considered as waiting 2 hours or more for consultations and 1 hour or more for dispensaries; for 26% respectively 9% of patients these waiting times are exceeded.

In conclusion, the methodology of measuring waiting times is vulnerable to various systematic biases, which affect the comparability of data between one measurement and the next. These biases can be reduced by thorough definition of parameters of measurement. Taking into account these limitations, there seems to be a significant reduction of waiting times for consultations and dispensaries in health centers between 2011 and 2018.

To date, waiting times in Lesotho have been measured and reported on, without follow up or consequences. For example, the AJR’s each year inquire and report about waiting times. It is recommended to establish a national norm for maximum waiting times that the health facilities try to achieve; and for excessive waiting times that in all cases the health facilities have to avoid.

5.2.1.6 Services in health centers and OPDs

This section addresses the question from the ToR: do health professionals understand patients’ concerns and spend adequate time addressing them? This section shows that the patients’ satisfaction, that was high prior to the Compact, increased somewhat.

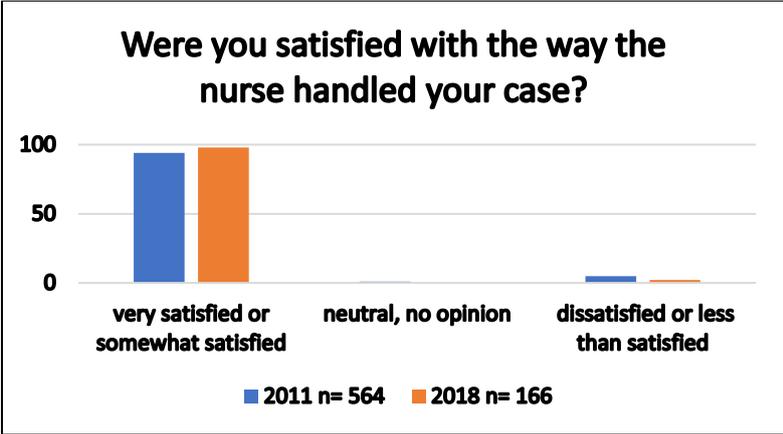
In 2011 and 2018, clients were asked about their (dis)satisfaction with the nurses, with treatment in general, and with the doctors. This is a proxy indicator for health professionals’ understanding and the time they spend in addressing patients’ concerns. It is important to note that satisfaction rates alone cannot be considered evidence of quality care, since satisfaction is influenced by earlier positive and negative experiences and do not give an objective measure of medical quality of care.

The results are shown in Graphs 17 to 19 below, separately for health centers and OPDs. Since doctors are not working regularly in health centers, this question was only asked in OPDs.

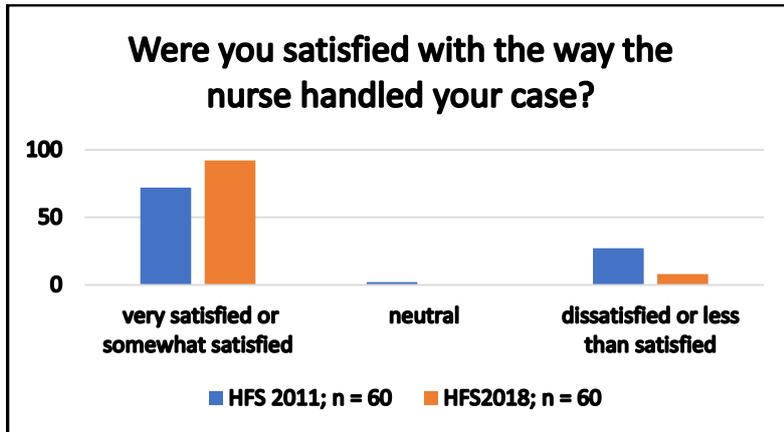
Graphs 20 and 21 show satisfaction with treatment in general, for health centers and OPDs.

The results show that the already high level of satisfaction in 2011 is even slightly higher in 2018.

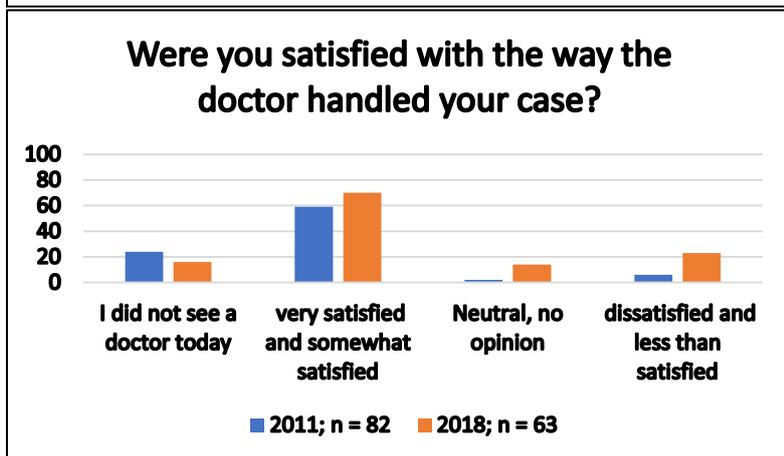
Graph 17; Satisfaction with nurses’ handling; % of patient respondents; health centers



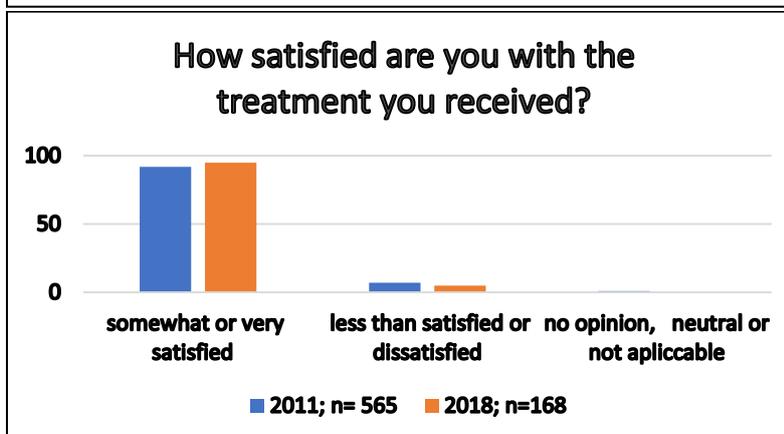
Graph 18; Satisfaction with nurses' handling; % of patient respondents; OPDs



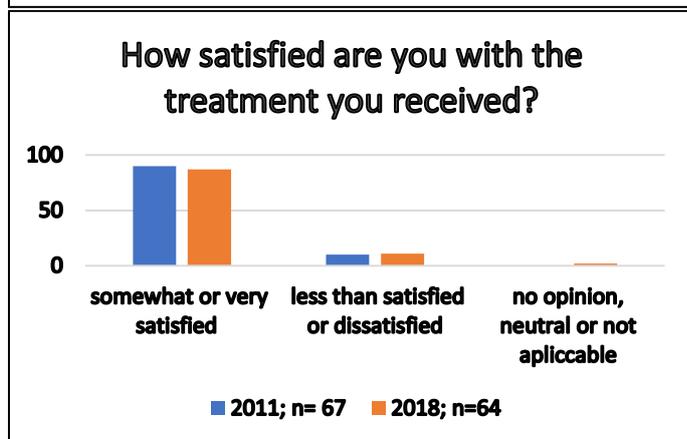
Graph 19; Satisfaction with doctors; % of patient respondents, OPDs



Graph 20; Satisfaction with treatment in general, health centers, % of patient respondents



Graph 21; Satisfaction with treatment in general, OPDs; % of client respondents



The differences between 2011 and 2018 satisfaction or dissatisfaction levels are small and statistically not significant (T-test).

Patients' vignettes, 2018

One interviewee is a lady-patient who came to an OPD to remove plaster. She had to wait for 2 ½ hours before a doctor could do this. She was satisfied with how he did this. During the waiting period she used the toilet but was dissatisfied with it. Transport to/from the OPD costs M60 and the plaster removal costs M30. She doesn't know if PLHIV feel fear or shame and doesn't know about any health education on this matter in the OPD

Another lady-patient came to the same OPD to collect medicines for her child with HIV. She paid M40 to travel to/from the OPD and didn't pay anything else. She had to wait 15 minutes for the dispensary and was quite satisfied with how she is treated. She is satisfied with the consultation room and the waiting room but not with the toilets, that need to be maintained. She does believe that HIV-related stigma does exist but does not feel embarrassed or treated differently.

Another source of information on clients' perceptions of nurses in the health centers are the 26 FGDs of VHWs. Almost all the VHWs indicated that following renovation of the health centers the staff attitude improved tremendously; they are approachable, receptive to advice and empower patients with regard to patients' bill of rights. There is a marked positive attitude towards clients in the provision of general out-patients services particularly during provision of maternal services including deliveries. However, in some FGDs VHWs asserted that nurses' attitude has been unbecoming towards clients particularly in situations when clients are deemed to have arrived late (within working hours) at the facility or came on a day that is not scheduled for the services that they require, like immunization sessions; in such cases patients may be denied services. At one facility in Quthing it was mentioned that nurses have a very negative attitude towards patients, while at another facility in Qacha's Nek, lack of professionalism by nurses and respect for patients' privacy in the consulting and delivery rooms were cited as patient's complaints. "Nurses in this facility allow non-nursing staff into the consulting and delivery rooms while patients are being assisted, they also allow them to dispense medications which patients do not trust that it is the correct medication. Some patients choose to go to other facilities where they would get medications from the appropriate staff". It was also mentioned at one facility in Maseru district, that nurses arrive late for work and already in a bad mood, they find patients waiting for them and that shows lack of commitment.

5.2.1.7 Has utilization of the health services changed?

Utilization has increased, especially by PLHIV. Immunization rates are below standard.

The above question from the evaluation ToR is specified by two questions:

- What services are used most. Has utilization changed around HIV/AIDS, TB, and MCH services specifically?
- Who seeks treatment at HCs and OPDs? Has this changed since the Compact began?

Data on use of services.

General outpatient consultations.

According to the MoH, until 2015, the reported numbers from health centers and OPDs for general outpatient consultations did include new and repeat consultations, and they were not differentiated. From 2016 onwards, only new consultations for outpatients are reported and repeat consultations are not reported. As a result, there is a decrease of the number of users, but that does reflect rather a change in registration method than a real decrease. So, for this evaluation, general consultations in OPD's and health centers could not be used to assess trends in the use of health services, between 2010 and 2017.

This problem does not affect numbers of users or visits for specific programs, such as ART, TB treatment and MCH.

This evaluation attempted to obtain absolute numbers of deliveries in specific health centers in 2016 and 2017, using the central MoH database, to compare before/after the Compact. This was considered as a more efficient approach than recording these data of the facilities themselves, during the HFS 2018. However, these data have not been forthcoming, and the comparison is not possible.

The section below presents available data on the use of health services, coming from various sources. This allows for conclusions at the end of the section.

MCH services

In 2018, in seven of 25 health centers (28 %) the document 'National Reproductive Health Policy' of 2009 is available. In 2011 it was available in 49 of 131 health centers (37 %).

Deliveries

According to DHS 2014, eight in 10 deliveries (78 %) are assisted by a skilled provider, for the most part, a nurse/midwife (61 %). Unskilled persons, such as traditional healers, village health workers, and relatives/friends, assist in 21 %; 1 % of births receive no assistance. Skilled providers assist at nearly 100% of deliveries in health facilities, but only 7 % of deliveries that take place elsewhere. Institutional deliveries have increased from 52 % in 2004 to 59 % in 2009 and to 77 % in 2014.

Maternal deaths in Lesotho in 2015 according to AJR 2015/16	
Number of expected deliveries in the country per year	58,198
Number of institutional deliveries	23,646 (40.3 % of expected deliveries)
Number of institutional maternal deaths	72
Inferred:	
Maternal mortality rate, institutional deliveries	304/100,000

These data are not consistent with the data from the AJR 2015/16: the latter reports on page 54 that 23,464 out of 58,198 expected deliveries, or 40.3 %, have been conducted in health facilities.

In four of 25 health centers surveyed in 2018, there is no delivery bed at all and in an additional two health centers the delivery bed is not functional. Exceptionally, one health center in Butha-Buthe district has six delivery beds. This facility was initially constructed by the Lesotho Hydro Water Scheme and has always been a little bit different from the rest even before renovation.

Ante Natal Consultation (ANC)

According to DHS data, that are community based and not facility based, the proportion of women age 15-49 in Lesotho who received ANC from a skilled provider has risen from 90 % in 2004 to 95 % in 2014. The proportion of women that received the recommended four or more ANC visits has increased from 70 % in 2004 to 74 % in 2014. District differences in ANC coverage are small, ranging from 92 % in Quthing and Thaba-Tseka to 98 % in Leribe and Qacha's Nek.

Family Planning

In some health centers, mostly those that are run by the Roman Catholic church, counselling on Family Planning is provided but no contraception.

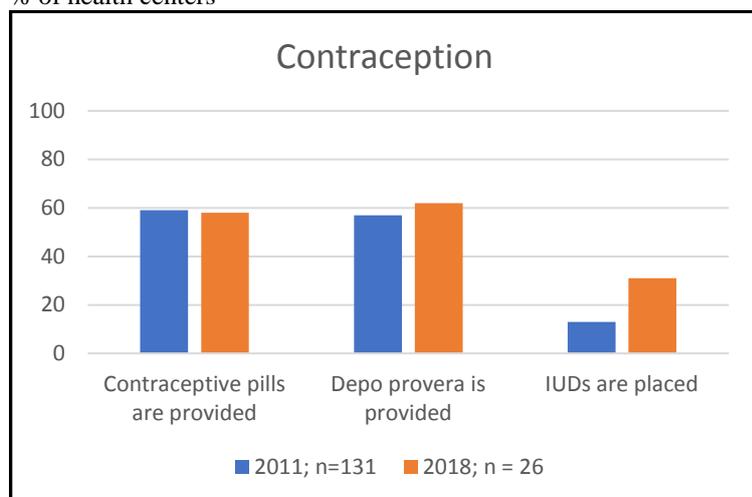
In 2018, counselling on Family Planning is done in 24 out of 25 health centers that answer to this question during the HFS 2018. Actual provision of contraceptive means is done in 15 out of 25 health centers.

Intra Uterine Devices (IUDs) are placed in only eight health centers. Lack of equipment (appropriate lighting) and skills are frequent reasons to not place IUDs in health centers that otherwise provide contraceptives.

Graph 22 shows that some more health centers provide IUDs in 2018 than in 2011, but for contraceptive pills and Depo-provera there is not much difference.

Graph 22; Provision of contraception in health centers

% of health centers

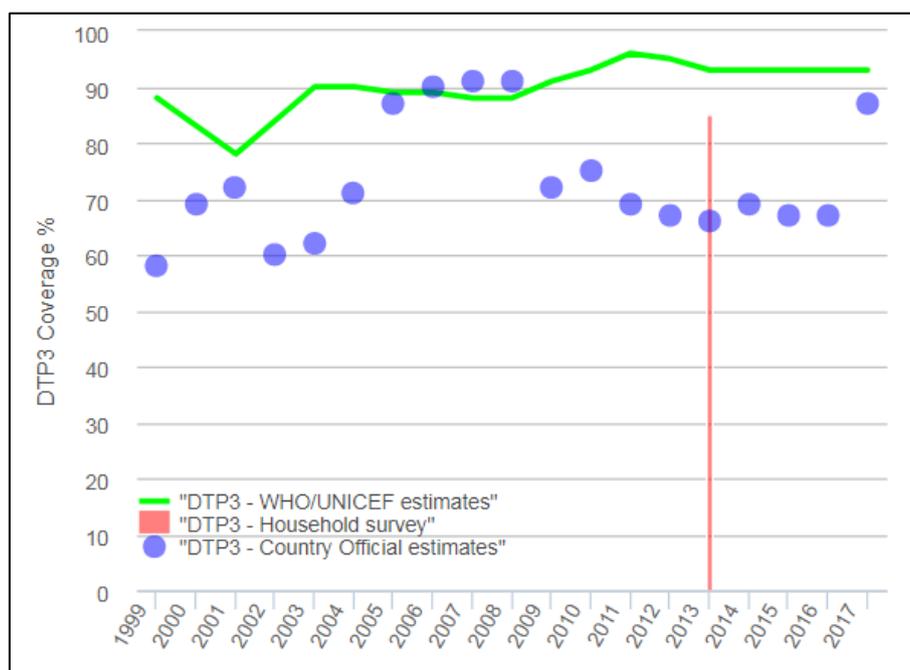


In 2011, three of 13 and in 2018 two of 10 OPDs that are surveyed do not provide contraception, but they do provide counselling services on Family Planning.

Immunizations

Further on MCH services, another indicator are vaccination rates. Graph 23 shows DTP3 immunization rates: the rate plateaus since 2013, according to WHO/UNICEF estimates. For the other antigens, a similar plateau is found. For some antigens, like Measles, coverage needs to achieve 95 % in order to provide herd immunity, but that level is not achieved²⁵.

Graph 23; DTP3 immunization rates Lesotho



According to MoH policies, immunization should be provided at every contact opportunity, meaning, all days the facility is offering services. In 2011, in 54 of 130 (42 %) surveyed health centers immunization was offered every day the health center was opened; in 2018, this

was done in 6 of 26 (23 %) health centers. In all others, it is scheduled for once or several days a week but not on all days.

Referrals

All 26 health centers surveyed in 2018, have some form of transport to the nearest hospital available. 18 health centers have their 'own' vehicle and three have contracted one. Five health centers use a vehicle from the community for urgent cases, like an imminent delivery. Only exceptionally there is transport from the community (villages) to the health facilities. The terrain is mostly impassable for cars or trucks.

5.2.1.8 Specifically for HIV-positive patients, the ToR ask:

Improvement of services to diagnose and treat PLHIV is the key objective of the Health Project. The main strategy was to strengthen the capacity of Health Centers and OPD's to the large number of (potential) patients. Hence, the evaluation are as follows:

- Have ART integration efforts contributed to a reduction in social stigma around HIV/AIDS treatment?
- Are HIV/AIDS-positive patients more likely to seek care now than they were before the Compact began?
- Are HIV/AIDS- positive patients more likely to adhere to treatment now than they were before the Compact began?

In summary, the answer to these three questions is affirmative.

Data

Information in this section comes from several reports of other agencies in Lesotho, including a 2016 survey carried out by ICAP²⁶. Further, during the HFS 2018, patients have been asked questions about their perception of stigma. Also, FGDs and DHMT interviews discussed stigma.

Lesotho has adopted the international ambitions, expressed through the UNAIDs Political Declaration, to achieve 90-90-90:

- By 2020, 90% of all people living with HIV will know their HIV status.
- By 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy.
- By 2020, 90% of all people receiving antiretroviral therapy will have viral suppression.

Therefore, over the past few years, several major changes took place in the approach to HIV in Lesotho, mostly in sync with similar changes in other countries. First, testing and treating HIV patients has been decentralized from hospitals or OPDs to health centers. The sheer numbers of PLHIV made this necessary. Equally important are the new service delivery models that have been implemented, e.g. fewer lab tests, less frequent clinic visits, multi-month prescriptions. This is in line with WHO recommendations and Lesotho is one of the first countries to implement these. In 2016, a national Test & Start policy was initiated and rolled out, leading to same day treatment initiation. According to responses of staff to the HFS 2018, Test & Start is being applied in all 36 health facilities surveyed.

The number of adults on ARV in health centers: in 2011, in 112 health centers for which data are available according to the HFS 2011, 37,865 HIV+ patients received HAART. In these same health centers, the number is 92,004 at the end of January 2018, a more than twofold increase.

Table 15; Change in number of patients on ART

Number of health centers = 112	HFS 2011: data collected from registers in the facilities in July/August 2011	Data from central MoH database; January 2018 (without QMMH data)
	37,865	92,004

Viral load suppression is 65 % for the 15-49 years and 67.6 % for the 15-59 years. This suggests that 2/3 of adults are effectively treated for HIV; the suppression is higher among females than among males.

Currently, community involvement is being developed: health education and mobilization and community ART groups (CAG’s). CAGs have been piloted in Mozambique and later in Lesotho by MSF and partners²⁷. As a successful model it is now being rolled out in the whole country with the help of PEPFAR.

CAGs are self-formed groups of HIV positive patients who take turns to collect drugs at the health facility for themselves and the other members of the group. In addition, CAGs are also a source of social support. Patients in CAGs continue to receive at minimum yearly clinical assessments and monitoring tests at their local health center.

Stigma

People with HIV/Aids frequently feel stigmatized, as has been documented in Lesotho by several surveys among people living with HIV (PLHIV), the latest in 2014²⁸.

Due to the stigma which exists, a part of the HIV/AIDS patients will avoid attending clinics where their condition might be revealed, and they prefer to receive treatment in less public surroundings. Indeed, in response to the questions about stigma during the HFS 2018, several patient-respondents state that PLHIV try to hide their condition; for example, they go to health facilities further away from their village, in order not to be recognized. Also, VHWs and staff mention this experience. Some patients therefore ask the ART services to be integrated, to avoid identification and stigmatization. However, others, who are not bothered by stigma, ask to have specific ART spaces and services, in order not to have to mix with other patients, not to have to wait long hours and to be able to talk with their peers.

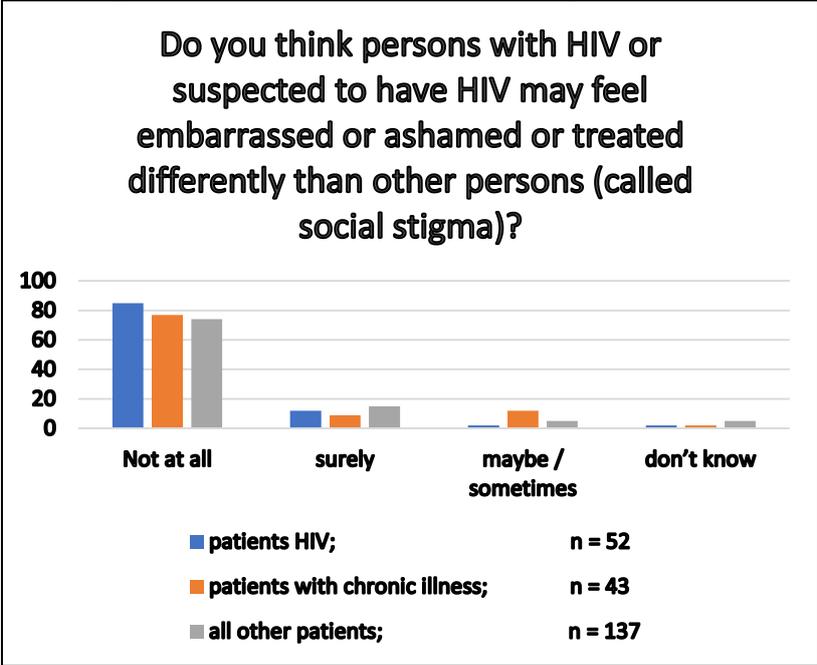
The argument advanced by many members of the international HIV/AIDS treatment community suggests that ART facilities should be “mainstreamed” into all health care facilities in order to remove any stigma attached to the disease, and that persons who are HIV positive should receive the same attention under the same conditions as any other person seeking medical attention. In itself, this strategy does not reduce stigma but tries to limit the consequences of stigma.

Efforts are underway to reduce stigmatization, amongst others via donor support, like PEPFAR’s. There is no documentation that shows a concrete contribution by the Health Project to integration, however.

In response to questions of the HGS 2018, most patients deny that stigma exists, including HIV patients themselves, see Graph 24. In this Graph, the group of patients with chronic disease has been separated as well, because among them many there are many PLHIV. Graph 25 shows the age distribution in relation to opinions on stigma. There is no important difference between the age groups. These questions do relate to stigma in general, not in relation to the health services.

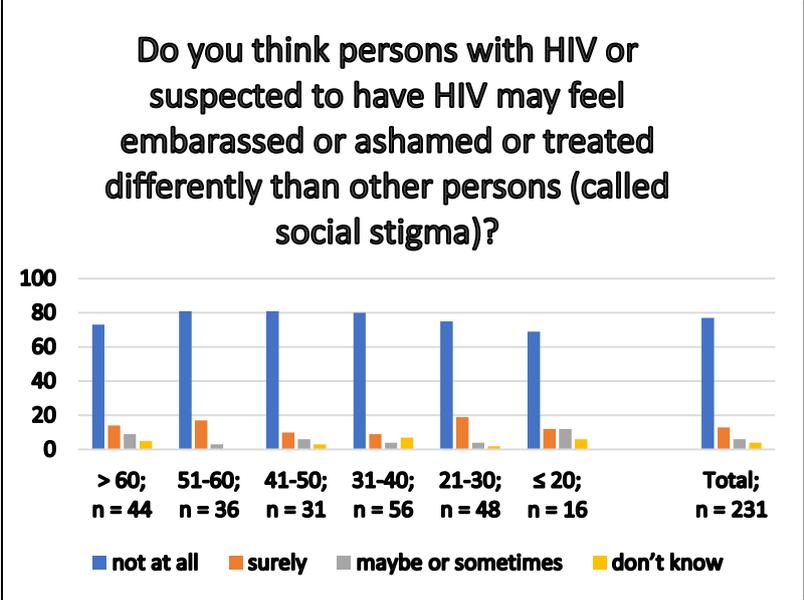
Graph 24; Patient perceptions of social stigma, 1

% of patient-respondents in health centers and OPDs; according to reason to visit the health facility.



Graph 25; Patient perception of social stigma, 2

% of patient – respondents in health centers and OPDs, by age group.

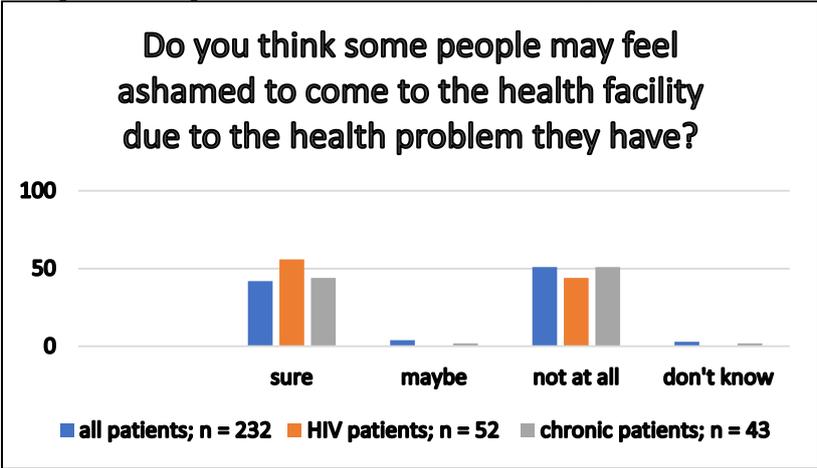


Patients also were asked about reluctance to go to the health facility due to their health problem. The question did not refer to HIV/AIDS, but from the answers one can infer that many patients thought about HIV/AIDS when responding.

Graph 26 shows that nearly half of those surveyed were of the opinion that some people may feel ‘ashamed’ to come to the health facility.

Graph 26; Barriers to visit health facility 1

% of patient – respondents in health centers and OPDs;

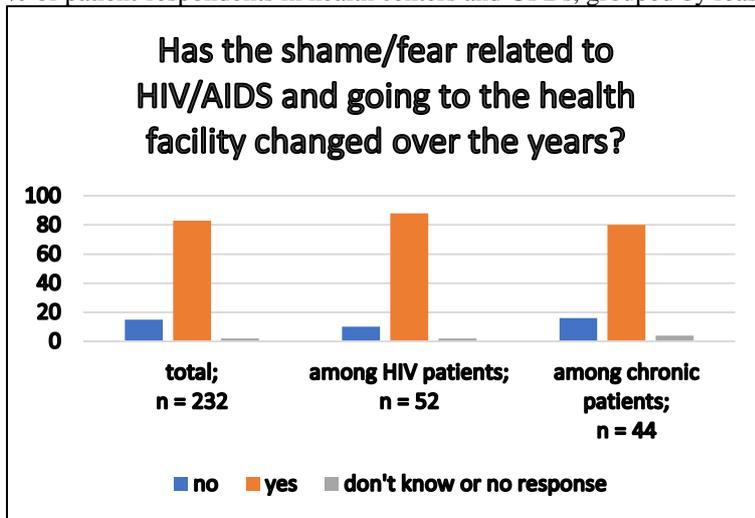


To those who responded ‘maybe’ or ‘sure’, a follow up question was to describe the fear that people may have. While many answers did just confirm the general fear or shame to be diagnosed or recognized as having HIV/AIDS, seven out of 110 respondents mentioned the attitude of health staff as a reason to be fearful: rude behavior, gossiping and lack of confidentiality.

Most respondents think that PLHIV are less reluctant or fearful to visit health facilities than previously. This is shown in Graph 27. The answer ‘yes’ implies that stigma has decreased. Asked for the reasons, many state that nowadays there is an effective treatment and HIV/AIDS no longer needs to be a death sentence.

Graph 27; Change of shame/fear to visit health facility

% of patient-respondents in health centers and OPDs, grouped by reason to visit the health facility.



The data presented in Graphs 24 to 27, all are collected among persons who overcame barriers to go to health facilities or are working with the health services, hence, a selected group, not representative for the entire population.

The VHWs discussed stigma during the FGDs.

According to them, most facilities have designated places for HIV and ART patients. They say perception about delivery of services in designated places differs among clients; some would like it that way because they say it provides a chance for HIV/AIDS clients to meet together and easily discuss issues related to their status; some do not like it that way because they don't want to be identified with people who receive ART because they are afraid of stigma. The VHWs from two FGDs asserted that ART clients need to carry files for their service, this discloses the type of service they are seeking, and in this way they feel stigmatized. VHWs themselves believe that providing the services in designated places improved delivery of services for ART clients.

In some facilities there are designated days for ART clients while in others the clients are seen daily. In the facilities with designated days of ART services, VHWs say people can easily identify ART clients. Perceptions differ on whether giving a specific day disadvantages the ART clients or not. Some believe it provides a chance for the required detailed care to be provided, while some believe they are stigmatized, particularly those who are newly diagnosed. In some HCs in Berea and Qacha's Nek districts, the services are integrated, people receive treatment daily for all illnesses, there is no designated consulting room for HIV and AIDS clients and patients do not have to carry files. VHWs say that in these HCs ART clients are free to access services, they don't feel stigmatized.

The VHWs also opined that there are differences in the practice in relation to nursing staff who provide services. In some facilities specific nurses are allocated for ART while in others all nurses can work in ART. In facilities where one nurse is allocated for ART, the VHWs believe it is obvious that when people go there they are believed to be HIV positive; this promotes stigma.

According to the VHWs dispensing of ART differs by facility; in some facilities ART is dispensed separately, that is, in the designated place where HIV/AIDS services are provided,

yet in others they are given with the rest of the medicines provided to all clients of different diseases. The VHWs say that the latter practice compromises confidentiality of the ART clients because other clients can see that they are on ART and because of the open nature of the dispensary: other clients can also hear the instructions given to ART clients. This integration is mostly found in facilities who have pharmacy technicians. According to VHWs ART clients feel disadvantaged when they have to collect their medicines from the same place as the rest of the clients because they say the line is long, they are not able to discuss among themselves as ART clients and they can easily be identified by other clients that they are HIV positive. There are still some people who throw treatment to the bushes because they don't want to be seen taking it, but their number has declined compared to before renovation of the facility.

There was a perception from the VHWs that stigma has generally declined. In all facilities health education is provided to all patients to reduce stigma. In one health center in Maseru, there is an initiative where adolescents who are on ART meet with their peers to eat and play together. The VHWs say that this allows the youth to be free and relaxed, this relieves any stigma they may experience.

Also, staff in health centers and OPDs was asked if they think that 'persons with HIV or suspected to have HIV may feel embarrassed or ashamed (called social stigma)?' Of the 108 respondents, 56 % answer yes and 36 % answers no. The other 8 % does not express themselves. 24 respondents mentioned that the PLHIV do not like to be recognized as such when they come to the health facility for services: lack of privacy is a main factor and several assert that this is especially the case for persons who have been diagnosed or started treatment recently. Four respondents mention the attitude of fellow health staff as a cause of fear of PLHIV. One mentions that '.... we still recover bottles of ARVs thrown away along the road and sputum bottles'.

Stigma and specific groups

The evaluation attempted to assess in how far stigma of particular groups of PLHIV, like men having Sex with Men (MSM) or Sex Workers (SW) may play a role in avoiding health services, and in how far stigma may be changing.

During the FGD's with the VHWs and the DHMTs the participants asserted that MSM and SW are not identified and try not to be identified; of the former it was often said that 'that does only exist in the city, not in the country side. Indeed, exception were several FGD's and the DHMT in Maseru, where the participants acknowledged the existence of MSM and SW, but they had no impression of the role it would play in health seeking behavior or receiving health services. The above mentioned 2014 report used data from a non-random selection of PLHIV. Among those surveyed, 3% respectively 0.8% of male and female respondents self-identified as gay or lesbian and 1.4% of females self-identified as SW. These data are suggestive for a low level of acceptance of these groups in society. No further data on barriers for access to health services are available.

In summary, all quantitative and qualitative data suggest that stigma related to HIV is declining. From the perspective of stigma and client-friendliness, integration of ART services versus non-integration (either specific location or staff or timing of services or several of these) seems to weigh in favor of integration. However, there may be other factors to take into account when integrating-or-not ART services: availability of space in health facilities, staff and numbers of clients to serve, including possibilities for outreach; also, strategies like CAGs and peer-support.

5.2.1.9 Community outcomes

- What proportion of community members use the HCs and OPDs?
- Who chooses not to seek treatment at HCs and OPDs? Why (i.e., what are the barriers to seeking health care)?

In summary, no information is available on the proportion of community members that uses health services; distance is a barrier (time, costs of transport) as well as inadequate (small) waiting houses for pregnant mothers.

Data

The latest community-based data on the use of health services are from the DHS 2014, that covers the 5-year period 2009-2014 and does not provide information indicative of the effects of the Health Project.

Further, specifically on barriers, the FGDs summarize as follows, with some repetition related to what was discussed above on stigma and (non)integration of HIV services:

‘In all the FGDs it has been mentioned that there are few people who choose not to use health facilities for various reasons. Some say that their health is their own business and private issue and they do not need to account to anyone regarding why they do not seek health care.

Distance has been cited in many FGDs as a hindrance for people to seek health care. Some areas are very far away from the health centers, people have to walk for long distances to reach the facility. In some areas there is no public transport while in others the topography makes it very difficult for people to walk like steep hills and rivers that need to be crossed. Another issue is that of services that are not user friendly whereby in some facilities patients are denied services if they arrive late in the facility, even though it would still be within the normal working hours. This is the case in some health centers in Butha-Buthe, Maseru and Quthing. At times patients are not assisted if they come to the facility outside the normal working hours due to safety precautions, as facilities in Butha-Buthe and Maseru experienced some security threats. When patients do not get services that they need they quit visiting such facilities and go where their health care needs will be met.

At one health center in Qacha’s Nek, the VHWs stated that only a small portion, about a quarter of the people in the catchment area uses the health center. This is due to the fact that the health center is very far from the villages that it serves therefore, it becomes very costly for patients to reach the facility in terms of time taken to travel to the facility by foot and the transport fee paid.

Groups like adolescents as well need their own private space so that they could be free to voice their health care needs, so if such spaces are not available in the health centers they decline to use the facility as stated in four health centers in Qacha’s Nek, Butha-Buthe, Berea and Mafeteng. In a few FGDs it was said that pregnant women, whenever they can, prefer to go straight to hospital for delivery where they would get all the necessary help that they might need which might be not available in the health center. Some pregnant women choose to deliver at home due to the lack of items that the facility asks women to bring for delivery, like delivery pads and new born clothing.

Other barriers stated by the VHWs include unsatisfactory quality and quantity of meals provided at the waiting mothers’ shelters in a Butha-Buthe health center. Furthermore, individual traditional and religious beliefs that conflict with modern medicine have been

reported to make people not to seek services in health centers in Butha-Buthe, Quthing and Qacha's Nek

A sense of being coerced to take HIV test before getting services has been said to make some clients choose not to use certain facilities in Maseru, Butha-Buthe and Berea. Other HIV/AIDS related issues include fear, shame and embarrassment of being seen receiving ART services by acquaintances for clients who are not yet ready to disclose their HIV positive status. In one health center in Maseru district where services are not integrated, clients who come for HIV/AIDS related services feel like they are being discriminated against and exposed for everyone who come to the facility to know that they are receiving ART services. Lack of confidentiality by service providers and VHWs surfaced as another barrier in Maseru and Berea health centers. Scheduling days for different services coupled with limiting the number of patients seen in a day and impatient clients were also said to be hindrances to service acquisition.

Other barriers included; lack of facilities like water, lighting and equipment to conduct deliveries as cited by some facilities in the survey districts, mistrust of services provided at the dispensary by people who are perceived not to be qualified to provide.'

5.2.1.10 Health Professional Outcomes

The ToR ask a series of questions in relation to the outcomes for health professionals in the health centers and OPDs. These questions go beyond issues related to the (re)constructions, they also inquire about other inputs of the Health Project like the development of an incentive scheme and a training calendar.

- How satisfied are health professionals with their work environment now compared to before the Compact began?
- Are HCs (especially more remote HCs) staffed at appropriate levels?
- What factors influence staffing levels, motivation, and productivity of health staff?
- Are staff likely to remain in the profession or at their current location?
- Has staffing, motivation, and productivity changed since the start of the Compact? To what extent are changes related to the Project?
- To what extent do these issues still need to be addressed in order to reach and maintain appropriate staffing levels and achieve a high-quality healthcare system?
- Are health professionals aware of the training opportunities available to them?
- Do they participate in the trainings?
- How do they perceive the relevance and effectiveness of these trainings?
- What is the importance (priority) of available trainings for nurses?
- Has the training calendar been used / is it still in use?
- Are there particular trainings that are more important than others? How so?

Data

The HFS 2018 polled 36 managers, 78 staff in health centers and 30 in OPDs with questions about staffing patterns, satisfaction, training and overall functioning of the facility. For some questions, comparison could be made with answers of their colleagues to the HFS 2011. Further data come from DHMT FGDs and from KII's at central level.

Results.

During the Health Project planning period, according to several key informants, staff shortages were the result of a combination of factors. Lack of funds to contract nursing staff

and staff dissatisfaction were major reasons. Lack of available staff compounded the problems.

Many nursing staff do not like to work in rural and hard-to-reach areas, for obvious reasons. The investment of the Health Project in staff housing in health centers and in training of staff tried to remedy the situation. Also, MoH policies and donor support to allocate incentives to staff working in rural and hard-to-reach facilities intended to remedy the lack of staff in especially the rural areas. In 2013, 230 nurses and nursing attendants working in the 46 health centres situated in the hard-to-reach areas were promised by the MoH monthly hardship allowances of M600 and transport allowances of M250, as well as furnished accommodation. As part of MoH’s policies, since 2014, there is no more periodic rotation of nurses to health centers on the basis of district’s needs. Nurses are placed for long periods of time. While some may not like the location where they are placed, in general this policy is appreciated because it ensures more stability and allows nurses to become more attached to one location.

Even while the training capacity of the NHTC and other training institutes did not really increase over the last years in terms of numbers, there are many nurses unemployed who, after a while, start to look for other job opportunities.

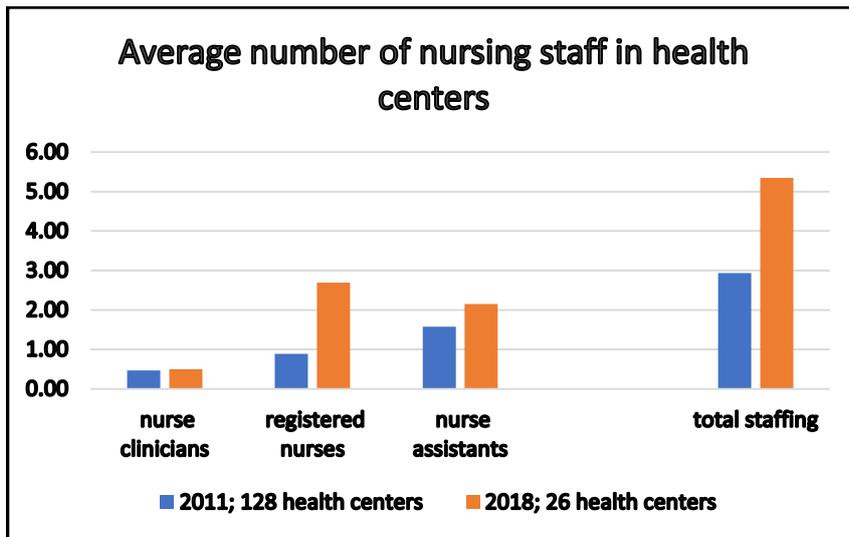
The evaluation has looked into staffing levels and staff satisfaction. These are reported in the pages below.

The standard for complete staffing of health centers, called complement, is two nurse clinicians, two registered nurses and one nurse assistant. Graphs 28 to 31 show the staffing levels according of the HFS 2018. Compared with 2011, there is a no increase of nurse clinicians but a clear increase in registered nurses and nursing assistants, see Graph 28. Both in 2011 and 2018, the average number of positions filled in the CHAL facilities is slightly higher than in the GoL facilities, for nurse clinicians and nurse assistants, see Graph 29.

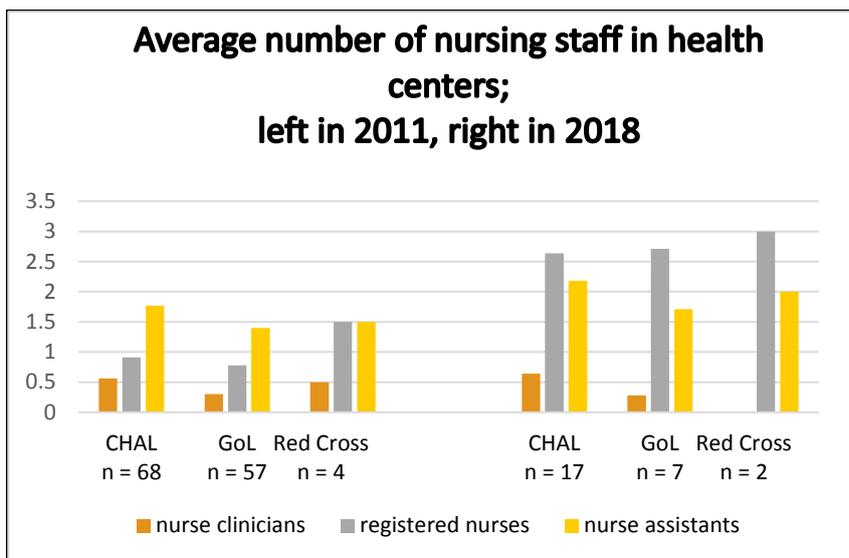
Around 50 % of health centers do have a nurse clinician, this did not change over the years. Between 2011 and 2018, the % of health centers without a registered nurse has been reduced from 42 % to 0 %. In total, in the 26 health centers included in the HFS 2018, 133 positions have been filled, out of a standard of $26 \times 5 = 130$, which is 102 %. However, in 2018, among 26 health centers, the full staff complement of five nursing positions is not achieved in seven health centers, mostly in rural areas, see Graph 30. In nine health centers more than 5 nursing positions have been filled, with a maximum of nine in one health center. This reflects an uneven placement of nursing staff. Adequacy of staffing can only be assessed against the population number covered, number of users and other factors. This is not assessed here.

health centers in the HFS 2018	26
Health centers with a staff complement below 5	7
Health centers with a staff complement of 5	10
Health centers with a staff complement above 5	9

Graph 28; Average number of nursing staff in health centers



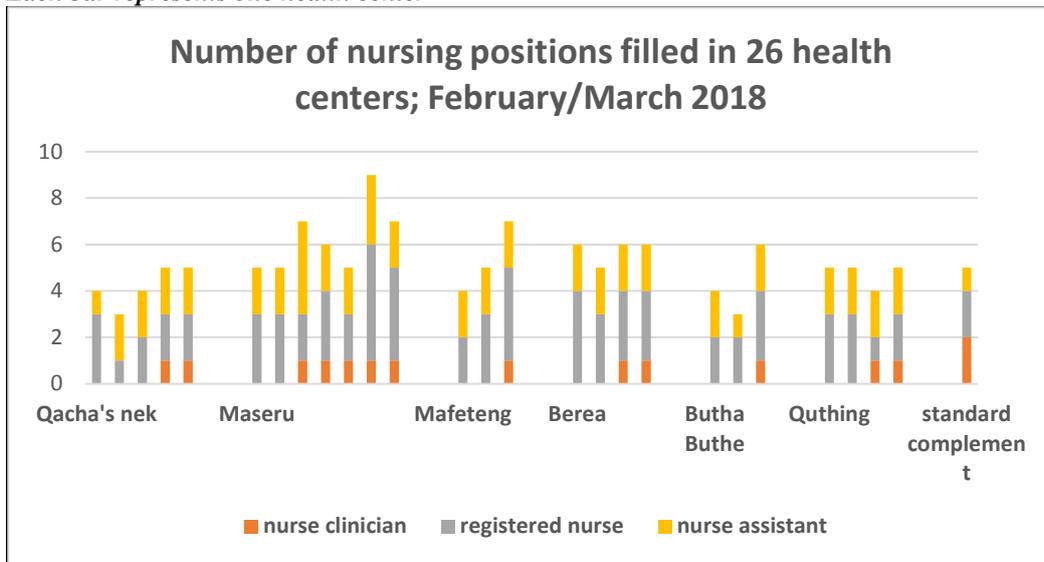
Graph 29; Number of nursing staff in health centers, for GoL, CHAL and RC



N = number of health centers surveyed

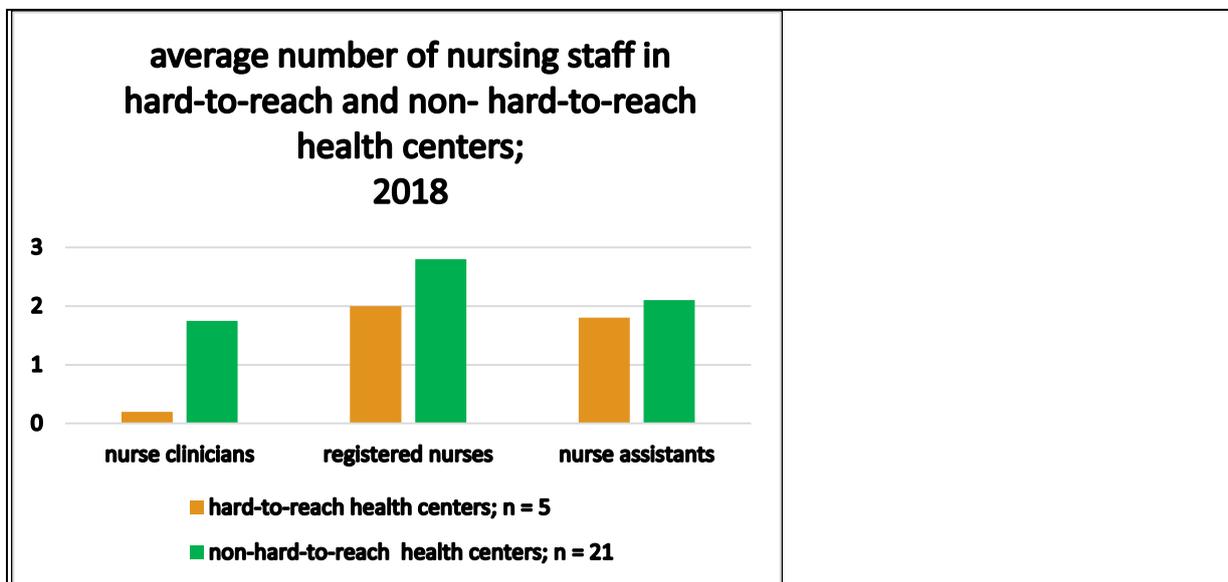
Graph 30; Nursing staff of health centers 3

Each bar represents one health center



In spite of measures to make work in hard-to-reach health centers attractive, there still is a gap in staffing between these health centers and the non-hard-to-reach ones, as Graph 32 shows.

Graph 31; Nursing staff in hard-to-reach health centers



In support of functioning of especially the program for PLHIV and of data registration, several programs have funded temporary staff in the health centers and OPDs, which is part of the explanation of the staff increase. These additional staff are much appreciated but among managers and DHMTs concerns exist about the temporary nature of these positions.

In conclusion, according to the HFS 2018, current staffing levels have increased compared to the HFS 2011, this is in line with the data collected through the AJR's. Some 27 % of health centers still do not have the full complement of 5 nursing staff however and there is some difference between hard-to-reach and not-hard-to-reach health centers.

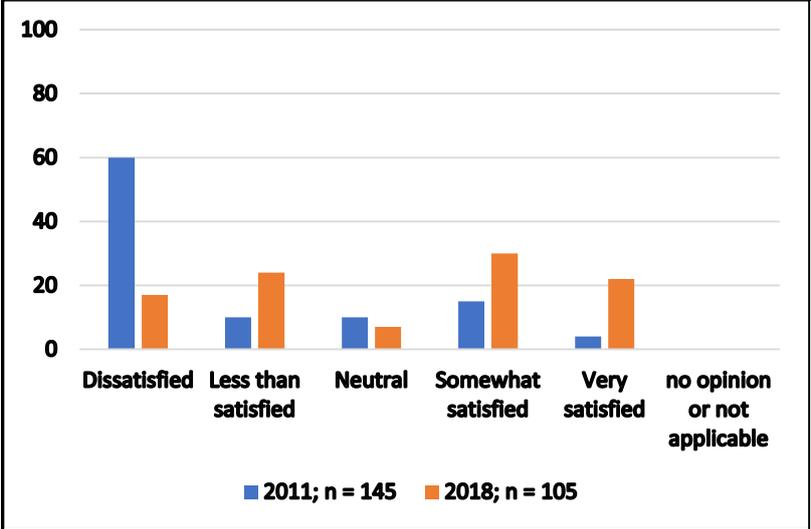
For staff satisfaction, in 2018 opinion was asked from staff in health centers and OPDs and compared with similar data from 2011. Among the total of 108 staff in 2018, 11 were temporarily contracted by a project of EGPAF or the World Bank, all others were employed by the MoH. Staff with temporary employment in general is younger than staff permanently employed and has different working/living experience and perspectives. Therefore, the information from all staff interviewed is separated from the information from the staff with permanent employment.

As Graph 32 shows, satisfaction with working conditions in general has increased since 2011 and dissatisfaction has decreased. These differences are statistically significant, both for all and for permanent staff.

Some staff receives financial and material incentives, due to living or working conditions: for example, living/working in a hard-to-reach area qualifies for incentives. In 2011, staff was asked about their satisfaction with the financial incentives and in 2018 the question was repeated. Graph 33 shows that there was a significant decrease of dissatisfaction and a non-significant increase of satisfaction, both for all and for permanent staff. This may well be related to the introduction of Performance Based Financing, that is being rolled out to all districts, after a pilot in four districts.

Graph 32; Staff satisfaction with working conditions

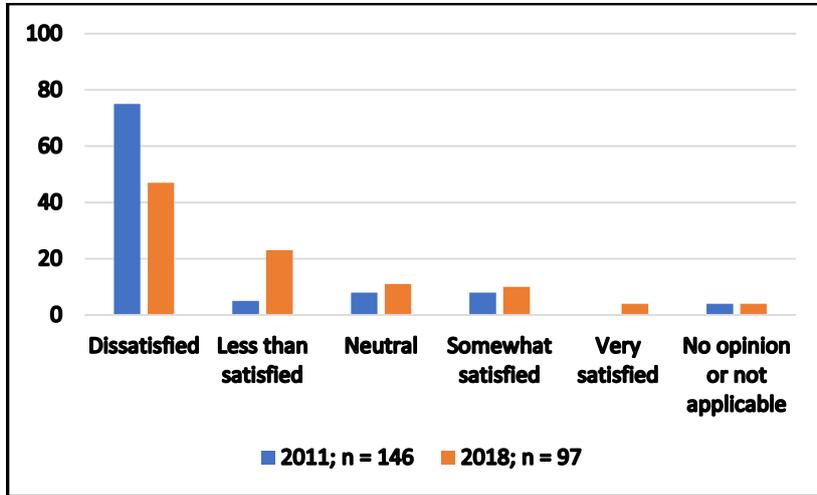
% of all staff respondents in OPDs and health centers (permanent and temporary staff)



% of all staff respondents in OPDs and health centers

Graph 33; Staff satisfaction with financial incentives

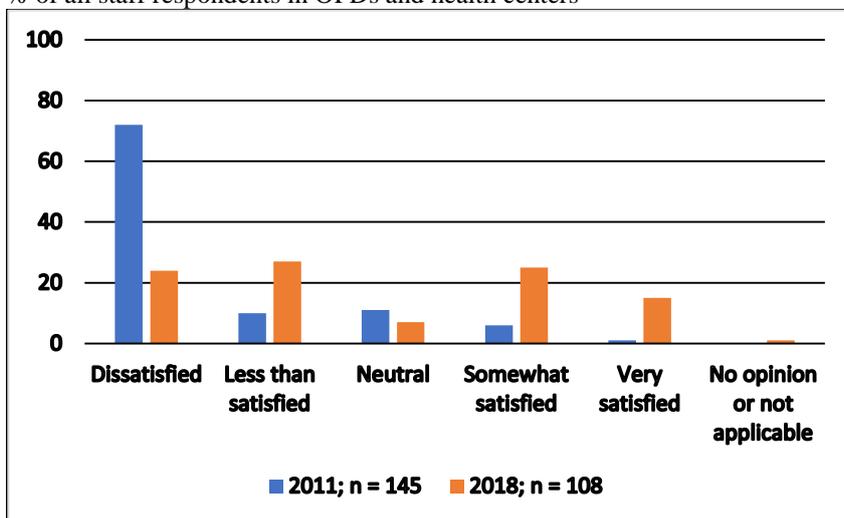
% of all staff respondents in OPDs and health centers



Staff satisfaction with the current salary is shown in Graph 34. Increase of satisfaction and decrease of satisfaction are significant, statistically, both for all staff and for the permanent staff.

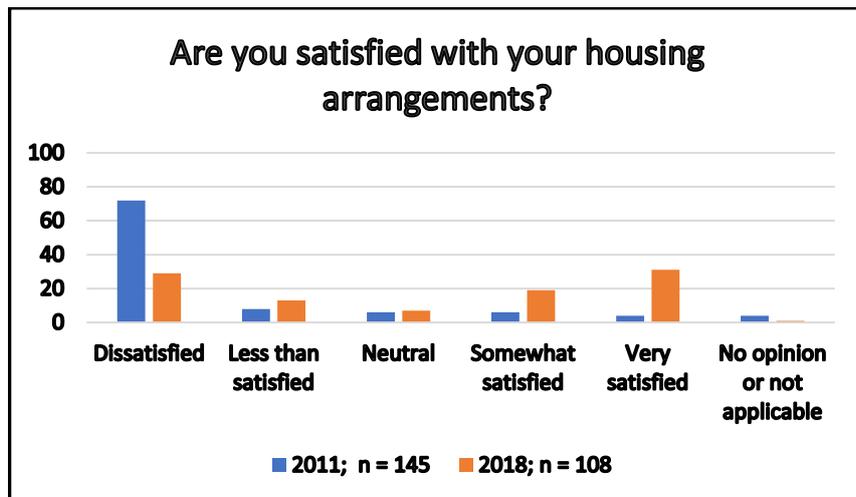
Graph 34; Staff satisfaction with salary

% of all staff respondents in OPDs and health centers



Graph 35; Staff satisfaction with housing arrangements

% of all staff respondents in OPDs and health centers



61 of 78 staff in health centers live in a house that belongs to the health center, the others live in the adjacent community. OPDs (hospitals) in general do not provide accommodation to staff, with a few exceptions.

The increase in satisfaction with housing arrangements and the decrease of dissatisfaction, shown in Graph 35, are statistically significant.

In 2011, staff was asked about their satisfaction with career path so far and about promotion opportunities in future.

In 2018, during the pilot phase of the HFS, staff that was interviewed asked to split this question in two, in order to differentiate between career path to date and opportunities in future. During the survey itself this split was made. This reduces the comparability of the answers in 2011 and 2018 somewhat, however.

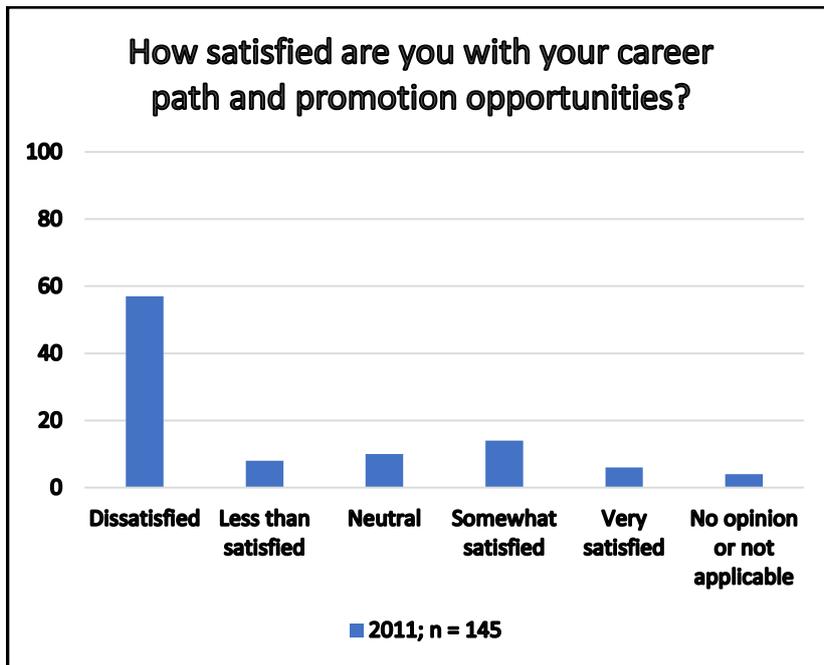
Further, the answers from staff on a permanent contract are more interesting than from those on a temporary contract, since the latter are mostly young staff with a very short career as yet. For the 2011 staff respondents' information on permanent and temporary contracts is not available; although allegedly, in that period very few staff on a temporary contract did work in the health facilities.

Graph 36 and 37 show the answers in 2011 and 2018 about career path and promotion opportunities.

Graph 38 differentiates between registered nurses and nurse assistants for the promotion opportunities question. It shows that nurse assistants are less satisfied and more dissatisfied than nurses. These differences are not statistically significant.

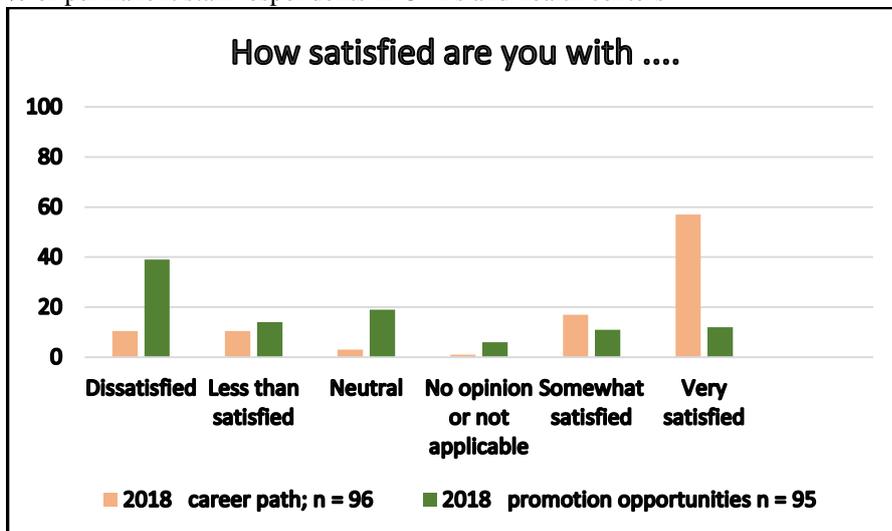
Graph 36; Staff satisfaction with career path and promotion opportunities

% of staff respondents in OPDs and health centers

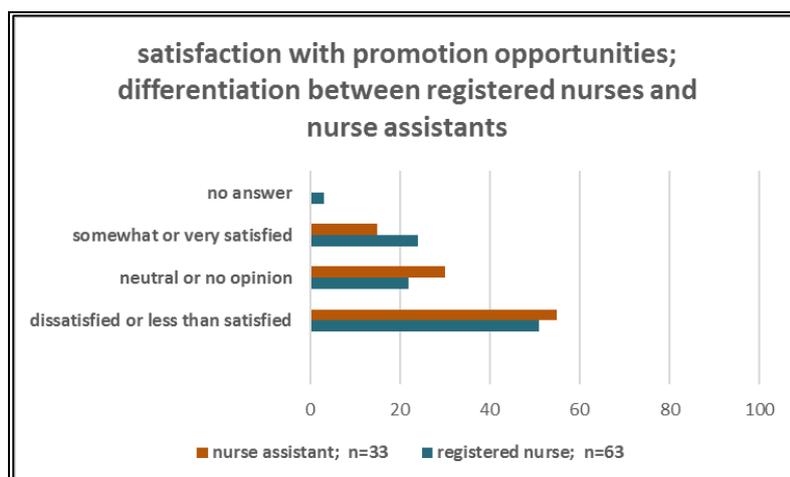


Graph 37; Staff satisfaction with career path and promotion opportunities in 2018

% of permanent staff respondents in OPDs and health centers



Graph 38; Staff satisfaction with promotion opportunities; 2018
 % of staff respondents on permanent contracts in OPDs and health centers



Another measure of staff (dis)satisfaction with the workplace or working and living conditions is mobility. In 2018, the question was asked if staff intends to move to another working location or intends to stay. This question was not asked in 2011, so no comparison can be made. The question was phrased as follows: Are you considering whether to leave for a new job or a new location in the coming years? Around 30 % of staff intends to move as soon as possible and another 32 % intends to move at some point in future. The specific reasons for this have not been systematically explored.

Table 17 shows the answers, split for staff in health centers and OPDs and for CHAL, Red Cross and government facilities. With the numbers surveyed, no significant difference can be observed based on ownership of the facilities and of health centers and OPDs.

Table 16 Health center staff intentions to stay or move

	No, no intention to move	yes, I would like to move to another location, as soon as I can	yes, I would like to move to another location, at some (undefined) point in the future	No answer	Total
CHAL and Red Cross HC's	22	14	23	1	60
CHAL OPDs	7	4	3	0	14
GoL HC's	7	6	5	0	18
GoL OPDs	5	7	4	0	16
total	41	31	35	1	108
%	38	29	32	1	100 %

With the numbers of staff surveyed, there are some differences in satisfaction between staff in hard-to-reach health centers and those in the other health centers, as Table 18 shows: staff in

hard-to-reach facilities are more often less than satisfied or dissatisfied; the small numbers do not allow for a firm conclusion, however.

Table 17; Staff satisfaction in hard-to-reach and other health centers

How satisfied are you with:	Staff in 5 hard-to-reach health centers 15 staff in total			Staff in the other 21 health centers 63 staff in total			
	Very or somewhat satisfied	Neutral	Less than satisfied or dissatisfied	Very or somewhat satisfied	Neutral	Less than satisfied or dissatisfied	No opinion
Financial incentives – number	3	0	12	8	12	36	7
Financial incentives - %	25	0	75	13	19	57	11
Salary – number	5	0	10	26	8	28	1
Salary - %	33	0	67	41	13	44	1
The health center as working place – number	10	0	5	45	3	15	0
The health center as working place - %	67	0	33	71	5	24	0
Housing – number	5	0	10	31	4	27	1
Housing - %	33	0	67	49	6	43	1
Prospects for work – number	8	4	3	35	10	14	4
Prospects for work - %	53	27	20	56	16	22	6

When staff was asked about their intention to stay or move to another location, no significant differences were found, as Table 19 shows.

Table 18; Staff intentions to move

15 staff in 5 hard-to-reach health centers			58 staff in the other 21 health centers		
No, no intention to move	yes, I would like to move to another location, as soon as I can	yes, I would like to move to another location, at some (undefined) point in the future	No, no intention to move	yes, I would like to move to another location, as soon as I can	yes, I would like to move to another location, at some (undefined) point in the future
4	5	6	26	23	9
27 %	33 %	40 %	45 %	40 %	15 %

In 2018, staff in health centers was also asked what, if anything, could be improved about housing and working conditions and to give a maximum of three suggestions.

- The most frequent suggestion was to increase the number of working spaces in the health center: 43 times. Mostly, specific spaces were mentioned, such as an ART corner, counselling room, waiting room and storage space.
- A second frequent suggestion was to increase the number of staff houses: 33 times. Further, several interviewees mentioned the need for better equipment of staff houses, because sometimes equipment is absent or broken.
- The improvement of utilities like water and energy has a high priority: suggestions range from drilling a borehole for water to linking to the LEC net, because the solar panels do not supply sufficient energy for fridges and other equipment. Maintenance of the health center and the staff houses was mentioned more than 40 times as well. This includes maintenance of utilities such as water and electricity.
- A next frequent mention was the increase of the number of shelters for mothers who wait for the delivery at the health center. Also, it was suggested to add a kitchen to the shelter, because mothers are now often improvising when cooking meals.
- Heating was often mentioned, both for the health center and for the staff houses.

Of the 30 staff members surveyed in the OPDs, 20 suggested to increase the space at the OPD, mostly referring to waiting spaces, consultation and counselling rooms. Increase of the number of staff houses was mentioned by 14 and more or better functioning equipment was mentioned by five. Improvement of various utilities, water, electricity, heating and internet, was mentioned by eight.

Training.

Since the Health Project, the CEIP is not implemented and not updated. Early in 2018, there is no annual central general training calendar for nurses. At MoH level each program, like HIV/AIDS, TB and MCH plans trainings mostly on the basis of the needs observed and the funding at can acquire from a donor to the program or from the MoH itself. Only when funding becomes available, they recruit participants for which often the DHMT is invited to propose candidates from its district. These processes do not align with an annual or comprehensive training planning.

In summary, staff satisfaction with working and living conditions in 2018 has improved compared to seven years earlier. However, 50 % is still dissatisfied with the salary and 40 with housing conditions. Satisfaction with the career path has increased but with future promotions opportunities it has not. Nearly 30 % wants to move as quickly as possible to another location.

5.3 The central facilities

This section discusses the results of the construction of the facilities in the Botsabelo complex: the NHTC, NRL and the BTS; this included from trainings, transport and other contributions.

5.3.1 The National Health Training College

A specific question from the ToR is:

- Did the NHTC investment contribute to increased enrollment and graduation from NHTC?

In the period of planning the Compact, a serious shortage of nurses was observed in the peripheral health facilities. Also, the NHTC suffered from constraints in the area of resources, policies and governance. Therefore, the Health Project invested in the NHTC.

The NHTC provides training courses for para-medical professions. At the time of the Health Project the NHTC offered 10 different programs with a total student population of around 500. It was and is one of six training institutions in the country for para-medical professions. CHAL operates four nursing colleges and Baylor one.

In order to help remedy the shortages of nursing staff in the peripheral health facilities and to increase the capacity of the NHTC, the Health Project constructed dormitories for 120 students, adding to existing dormitories. Also, the Project constructed accommodation for 6 staff and provided 50 computers for the library of the NHTC. Another component of the Project, the Health Systems Strengthening Activity strengthened tutor and mentoring capacities.

Early in 2018, the 50 computers are functioning. NHTC itself has an IT team to operate the IT system.

Student conditions are challenging. In spite of the dormitory increase, about 50 % of students lodge with private families in Maseru because of the NHTC's limited capacity. Privacy and security are serious concerns. Students on the campus have been on strike various times over the last few years, with issues ranging from quality of food to lack of security.

The NHTC Strategy Plan 2013/14 – 2017/18 in its SWOT analysis mentions many weaknesses and threats, nevertheless has the ambition to grow its number of students with 10 % per year.

Results

Early in 2018, 451 students are enrolled in the NHTC, in 11 different courses. The latest course added is that of a diploma course (2 years) for dental therapist that has 18 students in total; the students did not graduate as yet. Table 20 shows the number of graduates per year, per course.

Table 19; NHTC graduates per program from 2009/2010 to 2017/2018

PROGRAM	NUMBER OF GRADUATES								
	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
General nursing	74	68	44	38	58	54	44	46	82
Nursing assistant	39	32	79	45	32	31	29	30	36
Midwifery	38	51	72	61	46	62	62	41	53
Nurse clinician/primary health care	3	3	-	11	11	10	10	17	17
Ophthalmic nursing	14	14	-	5	5	8	12	9	10
Mental health	7	-	-	-	-	-	-	4	11
Pharmacy	16	18	11	14	23	23	15	18	22
Medical lab sciences	20	15		12	14	23	16	18	2
Environmental health	21	2	19	13	-	26	13	-	-
Auxiliary	-	21	8	40	18	21	21	22	21
Anaesthetic nursing	3	-	-	-	-	-	-	-	-
TOTAL	235	224	233	239	207	258	222	205	254

The conclusion is that the investment in the NHTC did not result in an increase of graduates. It is to note that there are 6 training institutions in the country for nursing and other para-medical professions and the NHTC is only one of them.

Nurses that graduate from the NHTC have trouble in finding employment, mostly due to a shortage of funding to employ nurses and health staff in general. Many unemployed nurses seek jobs either abroad or in other sectors, while there is a shortage of nurses (and other health staff) in the health services²⁹. According to several Key Informers, ‘nurses are trained to be unemployed’. While the objective of the Health Project to help to increase the number of graduates from the NHTC has not been achieved, the construction of dormitories certainly has helped to increase safe lodging for students, for a large part young girls, who otherwise have to find accommodation in surrounding neighborhoods.

When asked, the DHMTs did not observe any change in quality of nurses graduated at the NHTC over the years since the Compact support. When comparing freshly graduated nurses from the NHTC and from other training institutions, several DHMTs asserted that trainees from the CHAL training schools apparently have had more opportunity to get clinical experience in adjacent hospitals than the NHTC students. However, there has not been any formal evaluation of the quality of nurses.

5.3.2 The National Reference Laboratory

Questions from the ToR for the NRL are:

- To what extent do NRL interventions contribute to an improved health care system?
- Has the availability and use of laboratory services changed since the Compact started?
- Has the processing time for these services been reduced?

- Are more tests (or a larger proportion of tests) being processed at the NRL than sent to private laboratories or out of the country for processing?

The NRL carries out tests to support clinical care, it is not accredited, and it is not a Public Health Laboratory – Lesotho has none. The National Tuberculosis Reference Laboratory is a separate entity under the same direction as the NRL.

The construction of the NRL was finished early in 2012 and started operations several months later.

With regards to the construction, it is five times the size of the previous laboratory and in general it is of good quality with an adequate design, but it is of note that there is a lack of storage rooms and there is no space for histopathology. To some extent this is remedied by using the laboratory of the NHTC, where NRL technicians teach the laboratory course: they carry out some priority histopathology tests.

Medical waste is collected and transported to the incinerator of the Queen Elizabeth II facility in Maseru. MoH Estate Department is responsible for the maintenance but has little capacity. There is no maintenance of the infrastructure, currently resulting in some leakage at ventilation inlet points.

With regards to equipment supplied by the Health Project, some came without technical support in the region or maintenance contract. Example: chemistry analyzer from India. It operated for two years and then went down, it would have needed maintenance every six months. The NRL uses another analyzer, all tests can still be performed but at lower capacity than required. The equipment that was purchased in South Africa mostly came with a maintenance contract.

After the construction and equipment of the NRL by the Health Project, it has received further support, amongst others through a Laboratory Management Information System (LMIS) from CDC, that also contributes by funding tests supplies³⁰. The LMIS is in operation but with connectivity problems which delays completeness of reporting.

The NRL is tasked is to supervise and strengthen district laboratories, which should lead to short turn-around time of test-results and avoid overloading of the NRL. For example, all districts have a Genexpert machine for MDR-TB testing. For viral load testing currently five platforms operate in three facilities in Maseru, Mafeteng and Leribe, in addition to machines operated by SolidarMed and PIH. As a reference laboratory, NRL supervises district labs which, in turn, supervise labs within the district (cascading system). NRL also functions as district lab for Maseru district.

QMMH has outsourced its laboratory services to Ampath company. NRL has no information on the tests done by Ampath. The latter does not carry out TB tests, neither smear nor culture, that remains the remit of the NRL.

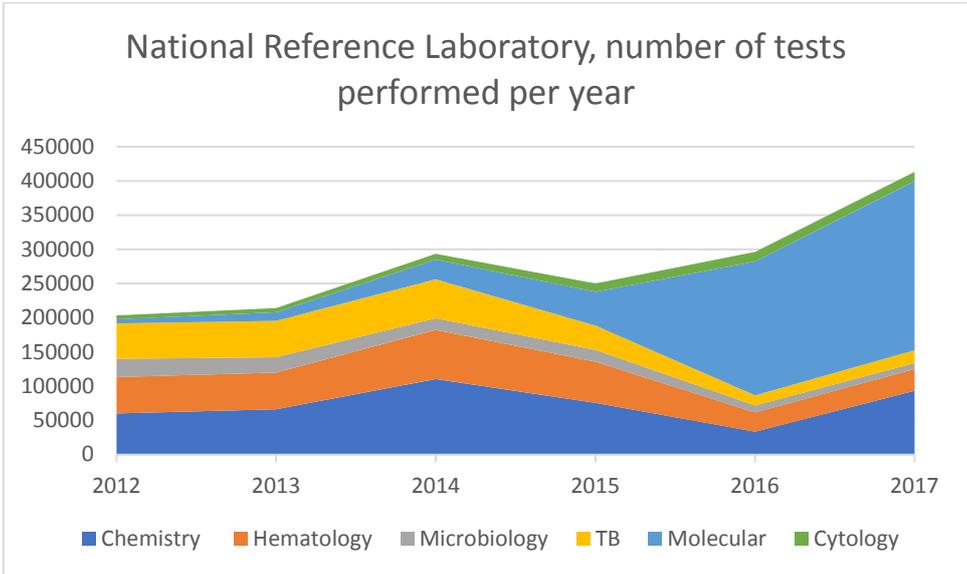
Since the introduction of Test & Treat in June 2016, viral load testing for HIV increased enormously, and a backlog of tests has built up. According to doctors working in the districts, response to samples from the districts may take up to three months. Early in 2018, staff in the NRL works 2 x 8 hours shifts to catch up with the backlog and delays are being reduced. CD4 count is still done, recently a new machine was installed.

Some tests are not carried out by the NRL for lack of reagents or because equipment was not maintained, like TSH¹⁴ and PSA¹⁵. Physicians do not send samples to the NRL but directly to laboratories in South Africa, for those patients who are able to pay. All in all, availability of some tests varies over the years, depending on supplies and maintenance. Physicians in the OPD's confirm that this affects treatment of patients, although no quantification is possible.

Antibiotic Susceptibility Testing (AST) is carried out manually in the NRL, which limits its capacity. As a matter of policy, only exceptionally does the NRL send tests to any other laboratory, in or outside Lesotho.

Graph 39 shows the number of tests carried out by the NRL. The increase of viral load testing (molecular) since 2016 is clearly visible.

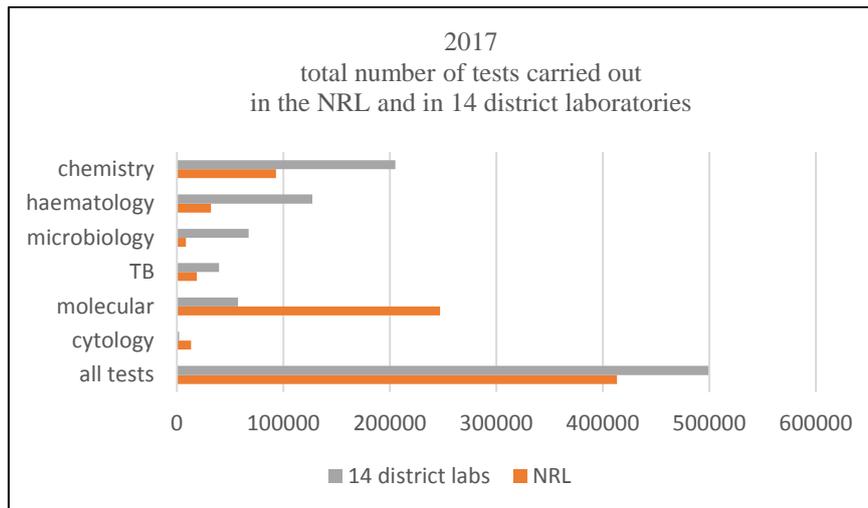
Graph 39; NRL tests performed per year.



The number of tests reaches the Compact target of 400,000 in 2017 only. However, in view of the decentralization strategy, the number of tests itself is not an indicator anymore of capacity. Graph 40 shows the number of tests in the districts compared to those carried out by the NRL. The numbers of tests of QMMH are not included.

¹⁴ TSH = Thyroid Stimulating Hormone
¹⁵ PSA = Prostate Surface Antigen

Graph 40; Total laboratory tests performed per year



NB; For 4 out of 18 district laboratories data were not available.

While the total number of laboratory tests did only increase when viral load testing started in 2015, the sheer number of tests does not say all about the NRL performance. Quality and turnaround time are as important indicators. However, there are no systematic district-based data on turnaround time, these are not registered.

5.3.3 The Blood Transfusion Services.

Questions from the ToR

- To what extent do the BTS interventions contribute to an improved health care system?
- Has the availability and use of blood used in the treatment of patients changed since the Compact started?
- Has the processing time for these services been reduced?

The BTS collects blood and blood products and provides these to all relevant health facilities in the country, which is all hospitals. The Health Project constructed the main premises in the Botsabelo complex, adjacent to the NRL. It also constructed two regional centers, in Leribe and Mohale’s Hoek, serving as blood collection and distribution centers and it supplied vehicles.

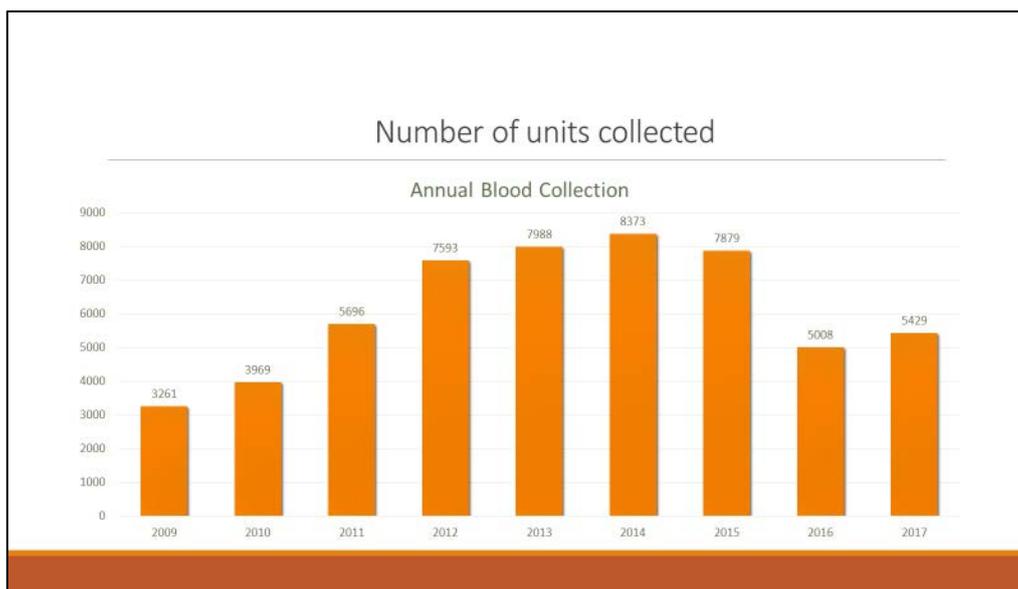
The construction of the central BTS was finished by the end of 2012 and its equipment functioned by January 2013. The design and quality of the BTS construction are adequate, although it lacks a hall for meetings and activities with groups of donors. For lack of maintenance, especially of the building, the roof is leaking somewhat. Maintenance of equipment, like fridges and air conditioners, is done by local companies contracted by the MOH and they function well. Critical equipment like testing and grouping machines are serviced by the original suppliers and functions well.

For lack of staff, BTS struggles to keep the regional hubs open. For five years, PEPFAR provided funds for 26 staff, this finished in June 2016. The MOH took over the renewal of contracts for project staff from July 2016 to December 2018. Henceforward, staff is around 16, including seven for management. The regional centers were closed in January 2018 and

re-opened in February 2018 when the respective hospitals (Motebang and Nts'ekhe) deployed one nurse each to the centers for blood collection.

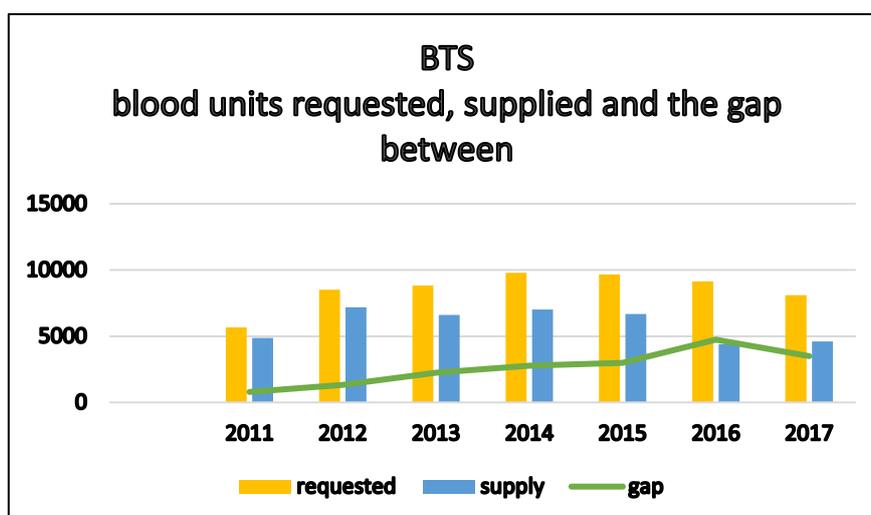
BTS used to organize blood collection campaigns for which it mostly targets schools and higher education institutes. Since the Ministry of Education started to require parents' consent for school pupils to donate blood in 2015, blood collection became more labor some and, also due to staff shortage, the number of units collected were reduced. The lack of transport caused by poor maintenance and service of vehicles also contributed to lower numbers of units collected. Graph 41 shows the units of blood collected per year, since 2009.

Graph 41; Units of blood collected by BTS, per year.



100 % of all blood collected is screened for HIV, HbsAg¹⁶, HCV¹⁷ and syphilis. Between 85 and 90 % of blood collected can be used. BTS dispatches blood to hospitals on demand. There is a gap between demand and supply. There are no centralized statistics of the actual use of blood.

Graph 42; Units of blood requested, supplied and gap



¹⁶ Marker of Hepatitis B infection

¹⁷ HCV = Hepatitis C virus

QMMH is the main user of blood. District hospitals used to have some stock of blood for emergencies, but their stocks have dwindled down to just a few units or nothing. Adequate management of the blood units in stock before they expire, i.e. sending the blood back to BTS for quick use, is a challenge for the hospitals.

In none of the six district hospitals visited for this evaluation the lack of blood had led to a catastrophic situation during an emergency during the last few years. However, transfusion of blood for severely anemic patients, for example due to HIV, is very restricted which results in avoidable morbidity. Also, physicians in the hospitals rather refer patients for some more complex surgery to QMMH hospital than risking surgery without adequate supply of blood.

As Graph 42 shows, since 2011 demand for blood increased. Since the new BTS started to function, in 2013, supply marginally increased and there is a clear decrease since 2015. In 2016 and 2017, demand decreased as well. The supply gap increases year after year, only in 2017 it decreased.

There is no absolute benchmark for the need for blood. Demand for blood is influenced by availability: when physicians know that there is no blood available, they demand less. For example, a hospital will call with the BTS to inquire about availability of blood units for a specific patient. When there is no blood available, there will not be a request. Regularly, then, the hospital will then refer and transfer the patient to QMMH, that has a reserve of blood units, as national referral hospital.

This is a clear example where QMMH gets cases referred that can be managed at district level if it were not for lack of resources.

5.4 Health system strengthening

5.4.1 Strengthening of pre- and in-service training capacity.

Pre-service training capacity, NHTC, is discussed elsewhere.

One major contribution of the Health Project was the CEIP, referred to earlier. At the time of the evaluation it does not function and hardly anybody knows what it is or recalls that it has been developed.

The definition of in-service training elicits quite some debate. Does it include or exclude introduction of new activities, like the introduction of new vaccines? Does in-service training equal the supervision that is given by the various members of the DHMT when they come for their regular visits? During the HFS 2018 this definition has been used.

Of staff in health centers and OPDs, 87 % affirms to have received in-service training over the last 12 months. In 2011, this was 100 %.

In 2011, 81 % of staff was somewhat or very satisfied with the in-service training, in 2018, this was 83 %.

5.4.2 Support to Research and Development Unit of the MoH

ToR questions:

- What is the role of the Research Unit at the MoH in contributing to an improved health system?

- Is it functioning according to plan? Is research generated through this mechanism?
- Do research findings inform health policy?

Data

This section is informed by data obtained from the Research Unit in the MoH and by KII's with MoH staff.

Results

The Research Unit of the MoH, with three staff, is positioned in the Department of Planning and Statistics. Its main activity is to lead and coordinate the ERB and, hence, to advise on research proposals submitted. The ERB is registered at the Office for Human Research Protections (OHRP) and Federal Wide Assurance (FWA) in the USA. Currently, the ERB has 24 members who work pro bono, most of them have been trained but due to turn-over, retraining would be required. Time availability of ERB members is limited which constrains somewhat the speed of review of the research proposals. There are two local ERB's and a third one is being created in 2018 for the NHTC. Students, for example those at the NHTC, submit their research proposals to the local ERBs, post graduate students and others to the national ERB. Exception is made for the National University of Lesotho (NUL): their students submit proposals to the national ERB. The national ERB counter-signs for the decisions made by the local ERB's. The local ERB's have been trained in 2016 for the last time, by the R&D Unit, but would need re-training, according to the R&D Unit coordinator.

The number of research proposals over the years evaluated by the ERB is shown in Table 21. It is not clear if the 2017 reduction is incidental or structural.

year	Number of proposals
2013	150
2014	146
2015	146
2016	198
2017	118

Table 20 *Research proposals reviewed by MoH Research Unit*

The list of subjects of the research proposals reviewed in 2017 shows the diverse areas of research:

HIV/AIDS	28	Mental health	5
Non-Communicable Diseases	23	Environmental Health	3
Mother and Child Health	12	Pharmacy	3
Health System	11	HIV + TB	3
TB	10	Nutrition	3
Education in health	8	Other subjects	9

Next to advice on proposals for submission to the ERB, the Research Unit also stimulates, supports and advices research initiatives.

Twice a year, a half-day Research Forum in Maseru is organized by the Research Unit, where seven particularly interesting research proposals are presented. Attendance varies between 30 and 60 participants.

The MoH itself initiates or is involved in many research projects: in 2015, they were 31 of the research proposals or one fifth. However, according to key informers, few of the research-based recommendations that would require MoH policies or other action are followed up, little knowledge management is taking place. A notable exception is the development of CAGs: see chapter 5.2.1.8 and the VHW study, see chapter 5.6.

Referring to the recommendations of the 2010 needs assessment, there is no agreed national policy or list of priorities for research in health and social welfare.

The capacity of the Research Unit to actively stimulate research is limited, it would need strengthening with further staff and possibly repositioning in the MoH, to ensure sufficient interaction within the Ministry.

5.4.3 Support to decentralization of service delivery

5.4.3.1 EMRS and HMIS

EMRS

Questions from the ToR

- Has it been rolled out to all hospitals?
- Does it work?
- To what extent is EMRS used in the treatment of patients?
- Regarding the pharmacy module in particular, does it work and is it used in practice?
- Does EMRS contribute to an improved health care system generally and integration of HIV/AIDS services specifically? If so, how? If not, why not?

Data

The information on EMRS has mainly been collected through KII's at the MoH and in various DHMTs and through observations in the OPD of Butha-Buthe Hospital, where the EMRS was piloted. Some information comes from the final PIU report.

<p>During the evaluation visit to Butha-Buthe OPD/hospital in March 2018, it is observed that staff at the reception of the OPD is not able to handle the software of the EMRS after a reboot took place, following an energy cut. The helpdesk was unavailable (holiday). Staff resorts to paper registration of patients.</p>

Results

Initially it was the PIU to develop the EMRS, later the MoH took over. With MCA-L support, in 2011, the Department of Planning and Statistics of the MoH had commissioned and received two preparatory reports: '*ICT Requirements for HMIS and EMR Solutions, 2011*' and '*EMR Design and Implementation Plan, 2011*'. A 10-month pilot of the EMRS in the Motebang hospital of Leribe was conducted in 2012 and reported on by the Clinical Services Directorate of the MoH. However, at the end of the pilot the system was not

stable/functioning properly. At CED, the roll out had not started yet, although in all 16 OPDs hardware for the EMRS had been delivered, because according to staff interviewed ‘there was pressure in the MoH to complete the project’. Then, the MoH contracted a company to do a roll out of the EMR system in all OPDs, starting January 2014. However, the roll out was incomplete and mostly limited to the patient registration module. Some of the hardware purchased is used for other purposes and some is not used at all. Most of the hospitals still use this module until today.

LMDA took over from the MoH but had to conclude, in 2015, that a restart from scratch was required. An open source system is being piloted in 2018 in two health centers and one hospital in Butha-Buthe and Maseru districts, with equipment provided by ICAP, which is PEPFAR funded. The pilot only caters for the TB and HIV programs, as yet.

In retrospect, the capacity of the MoH departments involved was insufficient to plan and manage a technically complex project like the introduction and support to EMRS.

Infrastructural gaps in the health facilities, including connectivity, were not considered sufficiently. The roll out was forced upon the MoH by donors.

In terms of the impact of the MCA Health Project, the investment in EMRS has largely been without results. However, the lessons learned from an assessment done by an independent consultant on the implementation have given valuable guidance on the new system being implemented.

- Is the IT system being utilized and maintained?

The Health Project contributed to the construction of a physical communications network (cables of fibers on poles, above ground network) between hospitals and government data centers. It included LAN infrastructure in hospitals, whereby nearly all service points are networked. Mid-2018, LMDA and MoH were in the process of completing the connection at all service points. Finally, it also included the installation of VOIP between hospitals and between hospitals and MoH, which reduces communication costs. Since the systems are operational, the impact of this contribution is good.

- What is the status of the HMIS developed under the Compact? Does it facilitate the provision of data to the MoH?

Initially, the development of an electronic HMIS was taken up by the Department of Planning in the MoH, which did not have the right skill mix for this. The South African company contracted for the HMIS development delivered a system that was technically outdated by the time it became operational: it was heavy in the sense of storage capacity and amounts of data to store, slow because of the intense use of data transmission, inflexible in terms of adaptation to new requirements and it did not easily allow for data monitoring and feedback by users. Also, the initial provider did not finish the configuration and installation and the MoH was supposed to finish that. Later, the ICT department took over. It abandoned the HMIS and introduced the DHIS2 system, which is open source. It allows for easy uploading by data clerks in health centers and hospitals. In health centers, they all received a tablet and training in its use, in 2016. DHIS2 operates well and improvement of timeliness, precision and completeness of data is ongoing.

The HMIS failure was clear from the beginning. A recent study on sustainability of health information systems in southern Africa emphasizes the preconditions for success of such an undertaking³¹. The lesson learned is that it was externally driven and, under time pressure, insufficiently considered the various assets and constraints of the health system, such as the

limited implementation power in the districts. According to MoH, outsourcing through PPPs would be too expensive, so the in-house capacities and their limitations need to be taken as a given.

- How does the MoH use data collected at various levels of the health care system?

At health center level, a large amount of paper registers is used, and data clerks upload the data to the DHIS2 system. Still, individual programs like HIV/AIDS, TB and EPI each require their own reporting frequency, format and detail, especially when they are supported by donors. Therefore, data collection and reporting constitute a heavy burden on staff of the health facilities.

The current system allows for uploading at the level of health centers and OPDs of monthly reports and other communication, such as ordering of drugs, with the use of the above-mentioned tablets. The uploaded data can be viewed and downloaded by the DHMT and by the MoH. The DHMT still has the role to monitor reports and if necessary correct them. Also, the drugs orders are verified at DHMT level and if necessary corrected.

The various programs each use the reported data for monitoring and evaluation at local, district and national level. MoH departments for specific programs like HIV and TB and supporting agencies alike use the data for close monitoring.

- Are the data sent to the MOH considered timely and reliable? If not, why not?

Currently, there is strict monitoring by DHMTs and the MoH of timely reporting by health centers and hospitals/OPDs. Precision and timelines of reporting have increased considerably over the years. As illustration: the AJR 2015/16 review selected 4 indicators for verification at hospital level and 5 indicators at health center level. The aim was to check whether the information contained in the primary source documents had been captured and summarized correctly for submission to the next level of reporting. For example, the districts average in the accuracy of reporting on first ANC attendees was 95 %, on the total number of clients who tested for HIV in 2015 it was 93 %; on the immunization reported accuracy varied between 60.7 % and 99.8 %.

- Do mechanisms exist to identify and resolve potential data quality problems within the system? If not, why not?

The progressive introduction over the past years of data clerks in health centers was a big step forward to improve data quality.

For reports from the health facilities, DHMTs are the first line for monitoring data quality, as mentioned above. The different members of the DHMT, like the PH nurse, verify reporting from the health facilities and correct when required. The district pharmacist also verifies drug ordering. Their feedback is the first step to improve quality. The MoH works on data quality and timeliness, amongst others through the process of the AJR's, that each year document the percentage of reports that have been delivered. Individual programs, like HIV/AIDS, TB and immunizations, have their own mechanisms to monitor and improve data quality.

- Are there sufficient personnel located in the districts to use and maintain the HMIS?

Several donors support the MoH by funding data clerks for the health centers and OPDs, for the registration and uploading of data. Also, in each district a helpdesk supports staff with the use of the DHIS2. As long as these donor support continues, staff is sufficient to use the HMIS. However, for system maintenance, including EMRS, there are few donor-funded staff

available. When these are unavailable, system functioning is compromised, as the case of Butha-Buthe OPD shows.

5.4.3.2 District health management

ToR questions:

- How did the Compact contribute to the GOL's plans for decentralizing health services and changing the role of the DHMTs?
- Do these changes contribute to an improved health system? If so, how so? If not, why not?

Data

FGDs were held with six DHMTs and KIIs with the MoH and with several donors. Several reports inform this section.

The Health Project supported decentralization amongst others by developing the following three tools:

- Health Services Decentralization Plan of February 2009
- Health systems strengthening technical assistance, HS-A-012-09 Transport Management for DHMTs, Training Modules Curriculum; National Institute for Health and Welfare, Finland (no date)
- Health systems strengthening technical assistance HS-A-012-09 Communication Systems and Procedures for DHMTs, Training Modules, National Institute for Health and Welfare, Finland (no date)

Results

The pace of development of DHMTs varies. Since 2014, PiH supports the decentralization process in four districts, of which DHMT support is a part.

In several districts, the members of the DHMT and the District Medical Officer, who in most districts chairs the DHMT, did not receive an introduction to their responsibilities, they were just nominated. The full scope of their responsibilities is unclear to them.

In one out of six DHMTs consulted, the DHMT still is based in the hospital and does not have its own offices.

Currently, also WHO supports decentralization actively, as one of the agreed priorities between MoH and WHO. In 2017 and 2018, it fielded several missions to do a needs assessment and develop a plan for program implementation; it also developed SOPs that addressed the handover of tasks and responsibilities to decentralized levels. The tools developed by the Health Project have not been used recently.

Several DHMTs expressed their doubts about the decentralization, because in some respects a re-centralization seems to be ongoing, like decisions on staff allocations, that were previously taken at the level of the district and now at the level of MoH.

The contribution of the Health Project to decentralization was not known: in no DHMT, the tools mentioned above were in use or even recognized. .

5.4.3.3 TB surveillance and control

This sub(Activity) has not been carried out. Increase of TB detection rate and improvement of treatment were objectives of the Health Project, but it was left to MoH and other donors to work on this. TB indicators were used to measure overall outcomes of the Project.

5.4.3.4 Health services quality.

Several clinical guidelines were developed under this (sub)Activity.

- ‘Clinical guidelines for primary health care for children’.
In 2018, 28 % of staff in health centers and 33 % of staff in OPDs was familiar with these guidelines.
- ‘Management of Hypertension & Diabetes in Primary Health Care settings in Lesotho’.
In 2018, 33 % of staff in health centers and 50 % of staff in OPDs was familiar with these guidelines.

Two proxy indicators for attention to quality were studied during the HFS2018:

- Does staff discuss the monthly statistics? In health centers this was done according to 73 % of its staff and in OPDs according to 83 % of its staff.
- Are graphs with statistics of the facility’s performance displayed on the wall somewhere, visible for staff? This indicator was used because it reflects the intention to monitor and share results of the work with staff.
In three out of 10 OPDs, recent graphs were found and in two others graphs that were more than 3 months old. In five OPDs these graphs were not found.
In 14 of 26 health centers recent graphs were displayed and in five older ones. No graphs were displayed in seven health centers.

These indicators do not show the full scope of working on quality of care, but the results suggest that some attention is paid to quality, but that it is difficult to sustain: the initial intention and action to jointly monitor work done often is not followed up, presumably because of workload

5.4.3.5 Health facility maintenance.

One of the (sub)Activities of the Health Project was a contribution to development of maintenance capacity. Several policies and plans were made:

- Asset Management Policy
 - Inventory and Asset management strategic plan
 - Preventive Maintenance Strategy
 - Inventory & Asset Management Systems document
- Further, a software program was developed for asset management.

In some DHMTs the documents above are recognized but in none of six DHMTs they are used.

According to one key informer, the inventory and asset management system, software plus process descriptions, technically speaking was a success: the functionalities are adequate and still useful. However, the initial data entry in the system, that describe all assets, did never happen and therefore the system is unused. MoH staff had to be trained to train stores officers for example, but there was no general process description of who does what and when. LMDA took over the responsibility and had to start from scratch: it erased all data and created a new data base with no clear plan on how to keep the inventory up to date at all times; keep track of new assets coming in and those being discarded, depreciation value, movement of the assets from office to office, etc.

Post-Compact maintenance of health facilities per sé is not subject of this evaluation. However, the investments of the Health Project in asset management warrant a closer look at the maintenance; the conclusion may inform future policy. Also, the utilization and satisfaction of patients and staff with the (re)constructed facilities may be influenced by the current state of the facilities. Therefore, this evaluation seeks to summarize maintenance processes and their outcomes. Health care Waste Management is dealt with separately.

Maintenance of central facilities is a responsibility of the MoH. According to MoH, due to resource constraints, maintenance of the buildings and the environment is minimal, early in 2018 leading to some problems of roof leakage (BTS) and ventilation inlet points (NRL).

Maintenance of peripheral facilities is a responsibility of LMDA and is divided in so-called hard facilities (buildings, equipment, utilities), soft facilities (laundry, cleaning, gardening), environment and waste management, and IT. LMDA was initially created in 2014 to help complete the unfinished business of the Health Project and had several mandates over the years:

1. 2 years: January 2015 to December 2016.
2. Extension with 3 months to March 31, 2017
3. Extension with 1 year to March 31, 2018
4. Extension with 1 month to April 30, 2018
5. Extension with 5 years, to April 30, 2023.

During the first mandate, LMDA had to organize itself and establish procedures and criteria for tendering and procurement. It took until October-December 2015 for the first contracts with suppliers to be signed. Until these suppliers started operating, the level of maintenance was inadequate. During 2016 maintenance was carried out. When the mandate was extended with 3 months late in December 2016, contracts with suppliers were extended as well.

With the mandate extension from April 2017 onwards, project staff was reduced from 36 to 14. This time the extension was 1 year until March 31, 2018, with the intention for MoH to take over after that date. LMDA wanted to launch new tenders, in order to support the development of market mechanisms; so, no automatic extensions of contracts was done. When the deadline of the mandate approached, LMDA proposed another extension as of April 1, 2018, with a strategic outlook of 5 years with 36 technical staff. Approval was not obtained at the time and LMDA was requested to revise the proposal (with more focus on staff complement). At the time, the proposal was under review for cabinet approval. An extension of 1 month should allow for a new proposal and decision. This was the current situation. In preparation of the third mandate extension, early 2017, when MoH was expected to take over future maintenance, MoH and LMDA met to discuss how contracting of service providers for maintenance would be done. There were a number of options considered and analysed to determine what would be the best way forward, to carry out health facilities maintenance. On the basis of the analysis of the options, LMDA made recommendations of the most favourable option. However, MoH was in favour of a different option, and this resulted in a stalemate. Relationships deteriorated to the point that LMDA was denied access to health facilities (managers got instructions not to allow LMDA contractors on the premises) and that funds for LMDA did not come through. In October 2017, MoH and LMDA reached agreement and funds became available again. However, as a result of the disagreements at the time between March and October 2017, no maintenance was done at all.

In 2015, LMDA carried out the 'Health Facilities Maintenance Baseline Survey'³² in order to provide an information base against which the Health Facilities Maintenance Program could be monitored and assessed and a benchmark to measure effectiveness of the Program before and after implementation. An assessment of staff satisfaction and maintenance practices was done in 156 health centers and 17 hospitals in the 10 districts to inform performance indicators.

The Assessment concluded the following:

- The Survey findings indicate mixed reactions in terms of maintenance practices and satisfaction level across the different projects. While there is some level of satisfaction at surveyed health facilities, there is generally a significant proportion of dissatisfied respondents and the general reasons put forth include long response time, lack of onsite support, poor quality of existing maintenance and lack of funds for maintenance.
- The findings further indicate that the conditions of equipment and furniture at the health facilities is generally in good condition which could be linked to the MCA-Lesotho Compact I intervention for construction and rehabilitation of health facilities. However, there are facilities which indicated the need for either major repairs or complete replacement of equipment and furniture.
- There were no major issues related to environment and waste management explained largely by the few health facilities that indicated shortage of liners and irregular collection and disposal. However, a significant proportion of health facilities continue to practice wrong waste management practices such as burying or burning of waste on the premises or using malfunctioning incinerators, thereby increasing the risk of exposure to hazardous chemicals to patients and the community at large.

Maintenance processes approach.

LMDA itself has few maintenance staff, but in general works are done through contracting service providers/contractors – that are supervised. When LMDA had 36 staff, it tried to visit all facilities once per two months for supervision of service providers/contractors and contact with facility management. It operated an elaborate system of coordinated site visits by two regional teams of 3-4 persons each. This worked in the period that LMDA had two regional offices: Mohale's Hoek and Leribe. Also, LMDA tried to set up stakeholders' meetings with DHMT, facilities and contractors. Enthusiasm was limited however, and health center managers and DHMT members requested per diem for travel and accommodation for attending meetings. While the capacity was stretched to the limit to achieve the target of one in 2 months, when the number of LMDA project staff was reduced to 14, the supervision almost stopped.

LMDA is aware of critical comments on its performance. These comments concern the maintenance itself and also the communication by LMDA.

LMDA acknowledges that its communication could have been better. However, it works with a system of 'task orders', whereby priorities for maintenance are discussed and countersigned by management of the facilities – who not always remember their own role in priority setting once the contractor arrives in the facility. In relation to performance, in addition to the above described organizational challenges, a number of issues needs to be taken into account.

- LMDA is tasked to do the maintenance not only for the 138 health centers and 14 OPDs constructed or renovated by MCA, but also the other 17 health centers and 3 hospitals. These in general were in a more deplorable state and required comparatively more maintenance attention, to the point of constructing new systems for electricity

and water supply. In two of them, a new solar system was constructed and in others new boreholes were drilled and spring water supply was augmented. So, these facilities had to get high priority.

- The solar systems for health centers constructed by MCA were intended to power lighting, but in practice were used for heavier equipment like fridges and even ironing. Due to overload, several systems failed quite often. Further, the service providers/contractors selected had little or no expertise with solar heating and generators and its maintenance and attempts to repair were ineffective. This was as a result of scarcity or lack of expertise on the market. From October 2017 onwards, selected experts were engaged by the contractor. Also, for specialized equipment experts are engaged.
- Quite a few health centers have to share their water with the adjacent community and then often there simply is not enough water. Due to increased numbers of patients, the water demand has also grown higher than anticipated. LMDA therefore had to engage in the augmentation of water source, through either drilling boreholes or catching springs where possible, for health care facilities.
- Some septic tanks for waste water proved to dysfunction, for several reasons: users flushed or threw away waste like pampers, that then caused blockages. Other septic tanks were constructed in soft soil and started to move and leak; they had to be reconstructed.

Underlying the various challenges and performance issues, according to LMDA there are two main factors that constrain maintenance

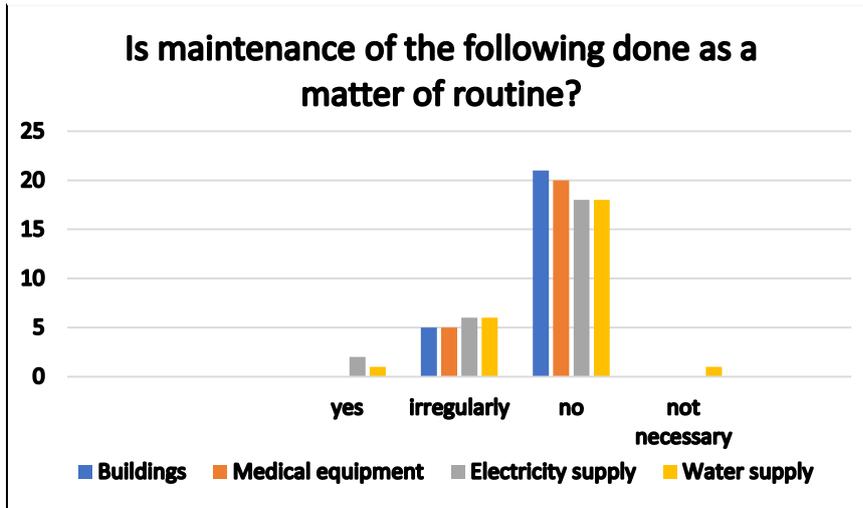
- There is not a culture of maintenance in Lesotho. When something is broken it needs to be repaired but to invest resources and effort to ensure equipment or infrastructure that is functioning well at all times, is perceived as waste.
- The question: who is in command of maintenance, LMDA or the MoH, has negatively impacted on relations and performance of LMDA.

Results

According to the HFS 2018 in 26 health centers, there was one health center without any patient toilet and in two other health centers none of the patient toilets was functioning, due to maintenance issues. Many of the staff toilets also are not functioning.

Managers were asked about routine maintenance of the buildings and of the utilities in their facilities. Graph 43 shows that in the large majority of cases irregular or no maintenance at all is done. In two health centers in Qacha's Nek the manager informed that regular maintenance of the solar system is done. In one case, that does not prevent malfunction of the batteries.

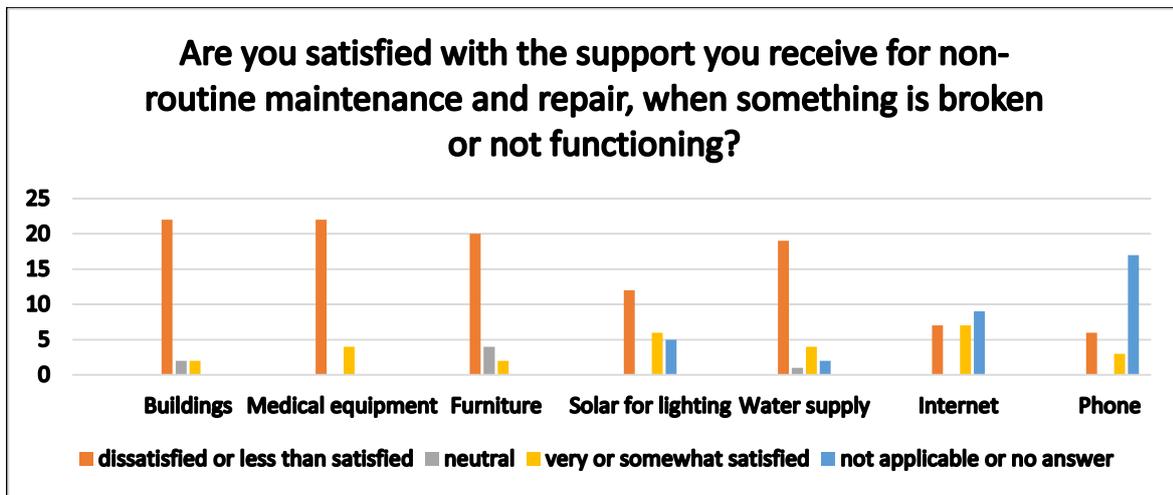
Graph 43; Managers' replies to question about maintenance



Total number of managers answering is 26.

Managers of health centers were also asked about their satisfaction with non-routine maintenance. shows that dissatisfaction levels with non-routine maintenance are high.

Graph 44; Managers' satisfaction with maintenance /repair in 26 health centers.



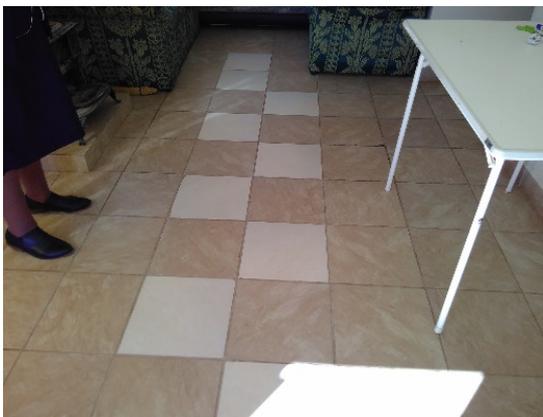
Total number of managers answering is 26.

According to the HFS 2018, in the 26 health centers visited, there is a total of 115 staff houses of which 101 have been built or re-built by the MCA Health Project.

Many of the staff houses built by the Health Project have major issues of maintenance, varying from absence of energy or water to leakages, fissures in walls or low-quality repairs.



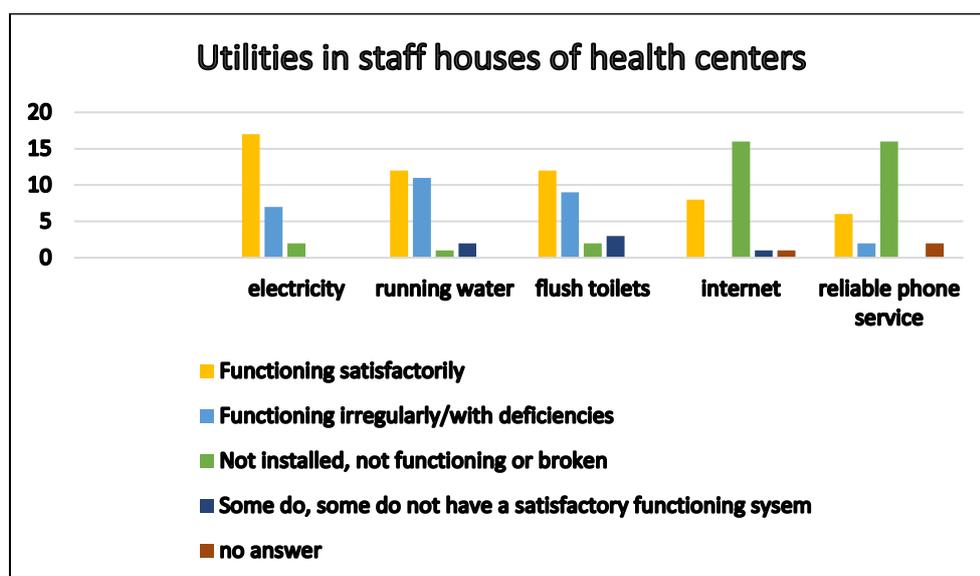
Picture 8; Leakage in staff house



Picture 9; Inadequate repair in staff house

shows the status of utilities in staff houses of health centers. Electricity and water supply are not working properly or at all in staff houses of respectively nine and 12 of the health centers. Indeed, in 17 health centers staff houses had electricity during the whole month prior to the survey; three health centers had no electricity at all and three also had interruptions of several days. Four of the health centers are connected to a working back-up generator. In six health centers, there is a generator but not connected.

Graph 45; Utilities in staff houses of 26 health centers.



5.4.3.6 Communications and outreach

This (sub)Activity was intended to ensure that all stakeholders, partners and beneficiaries were abreast of Project developments.

A 'baseline informative assessment' was carried out in 2009. This helped the MoH to develop in 2010 a Community Participation Framework and curricula for training of trainers at the level of the DHMTs and of Community Facilitators

The Baseline Informative Report identified the following key areas:

- Generally, females are more knowledgeable about diseases and more likely to seek health care compared to their male counterparts;
- There is a significant gap between knowledge of diseases and health seeking behavior; and
- HCs are more utilized than hospitals

Barriers to health seeking behavior:

- Dissatisfaction due to long waiting time at Hospitals OPDs, unavailability of drugs and financial liquidity to seek medical service; and
- De-motivated staff; generally, staff is not satisfied with working conditions.

Training of trainers in community participatory approaches was done for 12 officers of the DHMTs to enable them to mentor trained Community Facilitators. A total of 141 Village Health Workers were trained as Community Facilitators in seven districts.

To facilitate public meetings and special events, project brochures and banners were developed in-house at the initial phase of the Health Project. A dedicated firm was engaged in May 2011 through to August 2013, to assist the MOH Health Education Division develop and implement Ministerial multi-media information materials and products. The overall goal was to promote behavior change for improved health outcomes; with specific objectives of increasing health seeking behavior among the public and improving health service delivery among the health professionals.

The firm assisted in implementing a multimedia campaign consisting of composite multimedia materials and products. The materials were developed into seven batches of different materials on print, radio, television, mobile and website focusing on various health issues.

The Community Facilitators used meetings and communication materials to inform the public on the Health Project. Also, pre- and post-construction meetings were held by the PIU and contractors with the local authorities and the population.

Many health centers were closed during the (re)construction and the population needed to be informed about the closure. Also, the population was encouraged to use the facilities once re-opened. Issues like waiting times and staff attitudes were discussed. In general, the thrust of the communication was that the GoL with MCC support was observant of the needs of the population and was addressing them.

5.5 Health Care Waste Management

ToR questions

- Has the rollout of HCWM been completed?
- Is the overall system functioning according to plan?
- Do health facilities have the materials and equipment required for HCWM?
- To what extent do health professionals use HCWM materials and equipment according to proper procedure?
- Is waste being picked up and transported to facilities with incinerators on a regular basis? What happens when waste is brought to facilities with incinerators? What happens with any waste that is not transferred to other facilities?
- Are closed systems functioning well?
- Is maintenance and oversight taking place?

Data

KIIs with LMDA, MoH and FGDs with DHMTs inform this section, as well as the HFS2011 and 2018.

Results

All DHMTs do have a Health Inspector (HI) who is in charge, amongst others, of organizing waste management. The HI has a team of environmental health assistants, trained during two years at the NHTC, of whom some work from the district office and some are affected in the health facilities. In 2011, the HFS found 41 environmental health assistants in 130 health centers, which is a rate of 31 %; in 2018 the HFS found five in 26 health centers, which is 19 %.

Since 2015, LMDA is tasked to lead maintenance and HCWM in all districts. It works through PPP's and manages contracts with a range of suppliers, see the section on maintenance and LMDA in section 5.2.

Picture 10; Supplies of health care waste material in a health center, February 2018



According to HFS 2011, out of 131 health centers, in 65 health centers medical waste is burned (not incinerated) and buried or just buried on site. Sharps are burned and/or buried in 6 health centers. In 16 health centers, expired medicines are burned and buried on site or flushed down the toilet. 10 health centers claimed they never had expired medicines. 93 health centers have no properly functioning incinerator or brick furnace. It is of note that a furnace or incinerator is not a minimum requirement for a health center, according to the norms established by the MoH.

In 2018, all 10 hospitals/OPDs visited have functioning incinerators for hazardous waste, although not all of them are properly functioning and maintained. All visited 26 health centers do have a furnace and/or a waste pit. Further, hazardous waste disposal is done through a centralized system: three suppliers contracted by LMDA distribute health care waste materials and collect hazardous waste for which four specialized vehicles, owned by LMDA, are available. During the evaluation data collection period early in 2018, the health centers were all well supplied with bags and containers, see Picture 1. The contractors also have instructed DHMTs, that instruct health facilities to make HCWM plans.



Picture 11; Waste waiting to be burned in a health center

A needs assessment addressing Emergency Obstetric and Neonatal care observed in 2015 that OPDs and health centers visited had materials for separation and handling of waste. Sharps containers, containers for decontamination, trash containers and containers for contaminated waste were equally available in hospitals and at health center level³³.

During the HFS 2018, in all health centers managers assert that the three different types of waste are collected in separate waste containers. In most health centers, general waste is collected and burned on site, in a furnace. Eight of 26 health centers visited do not have a furnace however and then a situation can be found as shown in Picture 2.

The HFS in 2011 and 2018 inquired about various aspects of health care waste management: the use of SOPs for expired drugs and of a reporting and recoding system for HCWM, and the training in HCWM that was or was not received. The answers in Table 22 show that there is slight progress in the attention for health care waste.

Table 21; Health care waste management in 2011 and 2018

	Facilities with SOPs for expired medicines management		Facilities in which staff did NOT receive training in HCWM during the last 3 years?		Facilities with active use of reporting + recoding system for HCWM	
	2011	2018	2011	2018	2011	2018
Health centers	72/130	18/26	57/131	10/25	15/128	11/25
	55 %	69%	44 %	40%	12 %	44 %
OPDs	8/14	10/10	3/10	4/12	4/14	2/10
	57 %	100 %	30 %	25 %	29 %	20 %

The following obstacles to good waste management were mentioned in the 26 health centers:

- Irregular or delayed collection of waste by the designated company, 3x
- Fenced area cannot be locked, 2x
- No furnace or incinerator at the facility, 2x
- Sometimes out of stock of material, 5x
- Not all staff understands necessity or methods of waste management 2x
- Placenta pit is filled with water

The following improvements for HCWM were suggested by the managers of the 26 health centers:

- More frequent collection of waste, 7x;
- New padlock or repair of fence, 2x
- Training in HCWM, 8x; some emphasize that training should be given to all staff, not only nursing staff
- More regular supplies. 3x; in one health center the need to order supplies timely is mentioned.
- Build an incinerator, 2x
- Drain the placenta pit, 1x
- More storage space for waste that waits to be collected, 1x

In the 10 OPDs the obstacles and suggested improvements were exactly the same.

In terms of supervision for HCWM, 11 of 26 health centers indicate that they did not receive a visit during the last six months; seven of nine OPDs did not receive such a visit.

When asked about training needs, only one of 78 health center staff mentioned waste management and none of 30 staff in OPDs.

5.6 Overall results of the Health Project: strengthening the delivery of health services

5.6.1 Services in the community

Before summarizing and concluding on the results of the Health Project, this section addresses a major element of the health services that has not been addressed directly by the Health Project.

The current delivery platform, of which the health centers are the backbone, is far from perfect, for several reasons. It has to deal daily with large and increasing numbers of patients: lack of space and staff are major impediments, plus a series of quality issues. Plans to increase permanent staff of health centers, from the current complement of five to 12, wait for final decision and funding to be implemented. Further, access remains an issue: several surveys show that a considerable part of the population does not use the health services because of distance, financial barriers, lack of trust and other reasons^{34,35}.

Therefore, GoL and donors are strategizing on bringing services closer to the community and to expand the delivery platform, allowing for easier access to services for the population. While in the past there was emphasis on hospitals and health centers, the ambition now is to deliver health care at community level. This is the only way to ensure that the nearly 25 % of the population that needs ART has sustainable access.

For the development of health care at community level several strategies are being pursued, that complement each other. A major one is the CAG's, that have been discussed in chapter 5.2.1.8. Other strategies are the outreach and VHWs. The following sections detail the role of the latter two.

Outreach

Staff from many health centers carries out day-trips to deliver outreach services in villages in the area they serve, this is called health posts. Of the 26 health centers surveyed in 2018, 25 conduct these outreach services. The one health center in Maseru district that does not do outreach considers that all the population lives in villages close by and outreach is not needed.

The current MoH plan foresees to position a nurse-assistant in approximately 700 health posts – out of the 940 health posts in the country. They will be assisted by VHW supervisors: these are VHWs with additional training, who also conduct household visits. All health posts should have a building, for which a standard design has been developed. The assumption is that at least a part of the health posts buildings will be built by communities themselves; the example of a community in Mokhotlong that built itself a health post suggests that this community model is feasible. One health post covers around 7-10 villages.

Source: MoH, April 2018

The total number of health posts for the 25 health centers is 78, which makes around three on average per health center. Mostly, the outreach is done once per month per location. To 59 of the 78 locations, at least five visits were conducted during the last 6 months.

Only five of the 78 health posts have a dedicated building, 51 health posts take place in a building of the village chief or another community building like a school and most others are done under a tree or improvised each time.

Nearly unanimously, managers of the 25 health centers consider the outreach very useful, to facilitate health access to far away population. Two mentioned that it takes away the necessity for some population to pay for transport and most mention that patients come to the health post that otherwise would not have come to the health center, especially elderly patients. HIV testing, provision of ART and immunization are the services mentioned most by the managers. Several of them also state that crowding in the health center is reduced due to the outreach.

Among the obstacles to outreach, the lack of transport is mentioned 10 times and road conditions 11 times. In one case, a car has to be hired at a price of M900 per day. Other obstacles are the lack of staff in the health center – one has to choose between the patients that come to the health center and the outreach – seven times. The health post space is inadequate because it is small and there is no privacy. This is mentioned seven times as well.

VHWs.

The dense network of VHWs has been subject of many strategies and investments have been large, albeit not consistent. A 2013 inventory mapped more than 7,000 VHWs in the country³⁶. This was followed by a proposal for the 2014 ‘Primary Health Care Revitalisation; Village Health Workers draft policy framework – towards ONE Village Health Workers program’ that has not been adopted yet and early in 2018 is being reviewed to produce a final version.

A 2017 study on VHWs and improving treatment outcomes for HIV/AIDS and TB was presented by Prof Makatjane of the NUL during the Research Forum of April 2018. This feeds into the new policy, that includes a redefinition of the selection criteria for VHWs and their training program. The aim is to get a younger and higher educated population of VHWs. The maximum age to be admitted to the training is 50 years and the maximum age of functioning is 60. The training will be increased from two to six weeks.

In 2011, all but six of 131 health centers surveyed have a list of the VHWs in their area and the average number of VHWs per health center is 40. Among these are some that have not received training but are nevertheless counted as VHW. All of the 26 health centers surveyed in 2018, do have a staff member that supervises and manages the system of VHWs, all do have a list of VHWs with on average 47 VHWs per health center. According to the manager, in 18 of the health centers all villages in the area do have at least one VHW and in the other eight ‘most’ of the villages have one.

In principle, VHWs are elected by the community under leadership of the chieftain. The requirements for the VHWs are, amongst others, that they should have completed primary school. Not all elected VHWs do respect this criterion.

The view of MoH is that, over the past years, the nurses in health centers did training of VHWs, but in a non-standardized manner and without agreed content and quality. They would accept the VHWs that did not respect the selection criteria. Then, they would propose the names of the VHWs to the DHMT. So, the national database was filled with VHWs, of whom some are not entitled to the M400 indemnity, because they don’t fit the criteria. That is one of the reasons why many VHWs do not receive the indemnity while they think they would

receive it. In general, there are too many VHWs, sometimes several in a village. Estimates are 12-14,000, while there would be budget for 7,000.

In conclusion, the improvement of access of the population to health services is built largely on a vastly expanded system of health centers, health posts, CAG's and VHWs. Next to investments in coverage, quality improvement also will increase its efficiency.

5.6.2 What did the Health Project achieve?

The ToC, introduced in section 2.1.1, captures the expected effects of all the inputs and Activities of the Health Project. The description in Annex 1 offers a more detailed critique of the various steps in the multiple chains of cause – effect that are included in the ToC. In the sections above, these steps have been touched upon.

In summary, according to the evaluators, the steps described in general are logic. Several of the many cause-effect links are not logic but they do not affect the overall framework. The ToC includes 11 assumptions that are critical for the achievement of the various levels of outcomes. What is not included in these steps is a quantification or the relative importance of an input or output of the Health Project in bringing about a change. For example, there is no estimation of the effect of improved working conditions of staff on the increase of quantity of staff, that in itself leads to improved health outcomes. These quantifications are extremely difficult to make. A complex but not quantitative ToC as the one for the Health Project is difficult to use for planning and prioritization. The Investment Memorandum of the Health Project actually has captured the priorities without ToC. Thus, the role of ToC in shaping and monitoring the Health Project is unclear.

The previous sections show that the implementation of the Health Project did not run smoothly: many delays and huge additional costs, also for the GoL, occurred during construction / renovation of the 138 Health Centers, the largest component. Construction and equipment of the 14 OPDs and the central facilities, NHTC, NRL and BTS, was implemented with less problems and less delays.

Implementation of the other components of the Health Project met also with planning and implementation challenges, sometimes leading to non-finished (sub)Activities, like Health Care Waste Management and the EMRS. Further, some of the deliverables of the Health Project like the CEIP, HMIS and Asset management have been abandoned relatively quickly or are not used.

However, by and large, the dominant perception among population, health staff, managers and policy makers is that the Health Project helped to strengthen the delivery of health services, as was the goal of the Health Project '*.... To increase access to life-extending anti-retroviral therapy and essential health services by providing a sustainable delivery platform*'.

During the dissemination meetings of this report in Maseru, the attendants agreed with the statement that the increase of patients on ART over the last years would not have been possible without adequate facilities.

In spite of all the shortcomings described earlier, the new health centers and OPDs offer a very much improved setting for the delivery of services and the Health Project as such, in

combination with investments by the GoL and support of various other donors, has generated new élan among the stakeholders in health.

For health centers, the newly proposed standard includes a nurse-in-charge, two nurse-midwives, three nurse-assistants of whom one is tasked specially to liaise with waiting mothers, one environmental health officer, one pharmacy technician, one laboratory technician, one data clerk and one counsellor. Further there is a VHW coordinator, preferably with a PH background.

Source: MoH, April 2018

Increased staffing of the health centers is among the positive developments to which the Health Project contributed, amongst others by providing a more satisfactory working environment. Even so, there is uneven distribution of staff and the existing complement of five nurses per health center is insufficient to cope with all tasks, including outreach and effective supervision of VHWs.

The available utilization data show increase of the use of health services.

As a result, the health system now is better able to cope with the challenge of providing HIV/AIDS care to a quarter of the population, in addition to prevention and care for all other health issues.

5.7 Results of the evaluator's post-compact ERR assessment

ERR, its merit and its use.

For an analysis of the ERR of the Health Project, complementary information was collected from MCC. In March 2018, a workshop with Basotho stakeholders discussed ERR methodology, results and how it can be used.

In how far can ERR reliably estimate the economic benefits of the Health Project, either ex-ante or ex-post? Several factors may affect useful results.

- In a complex system as the health system, benefits in terms of productive life-years are difficult to quantify, in view of the various interactions and cascades of cause-effects and cause-benefits. Interdependency of the various components of the Health System, as shown in the ToC, implies that dysfunction of one component can annul the benefits of investing in other components.
- The low quality of the data, as was discussed in the chapter on methodology, affects the results strongly. For example, in 2007 the number of people on ART before the Health Project was estimated by MCC at 12,000, with ART coverage at 20 %, implying that the total number of PLHIV was 60,000. In the 2014 version MCC increased these baseline data to, respectively 104,000 PLHIV and 52 % coverage, seemingly because of new and better data. In percentages, this has led to a much lower increase of ART coverage, and a lower reduction of adult HIV/AIDS mortality than initially calculated: from 33% to 13%. This contributes to a drop in the calculated ERR from 12.3 in 2007 to 5.2 % in 2014. This is what *Table 2-2 Key parameters for ERR analysis* shows. However, latest UNAIDS data¹⁸ show that in 2007 the estimated number of PLHIV was 230,000 and in 2010, two years into the Compact and before it could have any effect, coverage of ART was 29 % and at the end of the Compact in 2013, it was 33 %. In 2017, it is 74 %. In absolute numbers, the increase of ART coverage between 2007 and 2017 is closer to 103,000. The implication is that the increase of ART coverage is nearly double that of the 2014 ERR calculation and this would lead to a considerable increase of the ERR. This is just one example of issues with data quality. Gradually, data quality is increasing, so future comparisons can be more trustworthy.
- Regarding one of the major benefit streams: how much mortality reduction can be achieved when HIV persons start to use and sustain the use of ARV's? No data in Lesotho were available at the time of planning the Health Project and also internationally there were few documented data available: only one single publication was found that estimated the reduction at 13 %¹⁹. This is the percentage used to calculate for the ERR the number of PLHIV surviving. Meanwhile, more data are available and survival rates as high as 90 % have been reported, but they vary widely, depending on local conditions^{37,38,39}.
- Further, there are additional benefit streams that may significantly contribute to the economic benefits of the Health Project; Just like HIV, TB is highly prevalent in Lesotho and the absolute number of TB patients dying per year is higher than the absolute number of maternal deaths. Many TB patents are co-infected with of HIV and a strengthened health system may lead to

¹⁸ <http://www.unaids.org/en/regionscountries/countries/lesotho>

¹⁹ Personal communication; source not identified

an increase of the number of TB patients and co-infected patients under treatment and cured. This would be an additional benefit stream. Other economic benefit streams may include reduction of days of sick leave and of replacement costs when employees are affected by HIV/AIDS.

- Finally, the ERR calculation weighs costs and benefits. The question is: whose costs? Direct costs have increased during the Health Project and even after the project costs were expended, as shown by *Table 2-4; summary of Health Project expenses, planned and implemented*. Third parties contribute to the costs, like the provision of ARV's and the running costs of the health services, that need to be taken into account as well. Further, out-of-pocket expenses of the beneficiaries may be hidden costs.
- In conclusion, the benefits of the Health Project in terms of reduction of mortality and morbidity probably are considerably higher than the 2014 ERR calculation shows. However, the associated costs also are much higher than calculated in 2014. Whether the resulting ERR is higher than the 5.2 % calculated cannot be assessed, for lack of insight in the methodology.

In summary, the results of the ERR in Lesotho context are of limited validity, due to data issues, methodological issues and the fact that not all benefit streams and costs have been included.

Beneficiary analysis

According to the Investment Memorandum and the Compact, 17,000 HIV positive persons and 'poor urban and rural citizens who seek and receive improved health services from the nearest GoL, CHAL, or Lesotho Red Cross Society health centers' would be the primary beneficiaries. In addition, there would be secondary beneficiaries, amongst others medical workers, as a result of lower risk of infection from hazardous waste. In 2008, the Health Project was intended to benefit 1.8 million Basotho country wide²⁰. Following a change in MCC guidelines for beneficiary analysis²¹, the various versions of the M&E Plan mention lower numbers of beneficiaries: 752,000 would have increased incomes as a result of the Health Project. This estimate was derived using 50 % of health clinic catchment area populations, which was defined by the Ministry of Health using the 2004 Department of Health Survey. The 50 % is based on the top ten causes of all out-patient care delivered by MCC-funded health clinics.

The 2011 MCC Audit (ref) considers the 752,000 an overstated number because it inaccurately depicts the project's impact.

From an evaluation perspective, the challenge of estimating the number of beneficiaries is twofold, not unlike the ERR calculation. First, the methodology to meaningfully define the target group and the contribution of the Health Project to their increased incomes – which is not attribution. The 50 % estimate in the M&E Plans must be seen as a choice for want of a better-defined target group: there is no indication whatsoever about a relationship between the top 10 causes of out-patient care and increased income. The beneficiary analysis could use the target groups as defined in the ERR. Further, as argued before, the data used back in 2004 must be considered as incomplete and imprecise.

²⁰ Source: M&E Plan Amendment, 2012.

For what the ERR can be used.

ERR for health projects being relatively new, it is the evaluator's opinion that its use should be carefully considered, for practical and ethical reasons.

The ethical part comes in when ERR would be used to prioritize health support activities rather on the basis of economic benefits than on their expected effect on reducing morbidity and mortality – expressed in disability adjusted life years (DALY's). It then would disadvantage economically less productive people, like the elderly, disabled or very young and be counter to the efforts to achieve universal access and equity in health services delivery, as part of the Sustainable Development Goals.

The practical part comes in when so many assumptions need to be made and data of low quality need to be used, that the ERR calculations may be wide off reality. This indeed happened with the Health Project's ERR, when the re-estimation in 2014 reduced the ERR from 12 % to 5.2 %.

Conclusion

Both ERR and beneficiary analysis as applied for the Health Project under review must be considered as immature methodology.

Potentially, ERR calculations can help to compare costs and benefits of specific interventions during the planning phase and, hence, to prioritize. The quality of the baseline data, the completeness of the benefit streams used and the availability of benchmarks for expected results determine its usefulness. The risk of this approach is that in a system as complex as the health system, certain components are de-prioritized because of low economic return, whereas they are essential for the functioning of and trust in other elements of the system. One example is the National Reference Laboratory. The calculated benefit of the investment according to the ERR was minimal; however, when health staff does not trust the quality of the results of the NRL because it does not operate under minimum conditions, they lack an important diagnostic tool, leading to inaccurate diagnoses and defensive practice of medicine: resorting to test treatments.

Congruence of methodology of ERR and beneficiary analysis would strengthen both and help to provide more solid data. They then may become a better planning- and accountability tool. Both can only meaningfully function when data are minimally precise and complete – which was not the case in Lesotho during the planning phase and early days of the Health Project. This is an external factor on which MCC can only have limited influence. Over the past 10 years, data quality has improved, and the Health Project has modestly contributed to that.

5.7.1 Results of the Evaluator's post-compact ERR estimate

What factors would alter the previous post-Compact ERR estimate? Some of the factors have been mentioned above already.

Factors that may lead to increase of the ERR

- Higher increase of ART coverage, nearly double that of the 2014 ERR analysis.
- Increased reduction of mortality of PLHIV on ART (increase from 13 %).
- Additional benefit streams, such as
 - Reduction of morbidity in general, not attributable to specific diseases
 - Reduction of TB morbidity and mortality
 - Reduction in business closure in SME, due to reduced morbidity/mortality
 - Reduction of sick days of employees

- Reduction of replacement costs of employees
- Reduction of costs of ART from USD 300 per year to a lower figure, due to price reduction of ARVs.

Factors that may lead to decrease of ERR

- Cost-increase of the Health Project, by 87 % of the initial budget
- Investments in the National Reference Lab may not lead to reduced costs of tests or shorter turn-around times, as probably is the case. Some tests currently (PSA, TSH) are not available at all in the NRL and are not sent to a foreign laboratory anymore, meaning they are not available in Lesotho – unless patients pay themselves for tests at a private laboratory in South Africa. This is the case for a minority of patients only.

5.8 Policy implications

Questions from the ToR

- What lessons can MCC or the Government of Lesotho apply in future programs related to program design, implementation, and sustaining results?
- What could have been done better? How so?

The overall and dominating challenges were the delays at many levels of the Health Project.

5.8.1 Planning, design and sustainability.

The planning and design of the Health Project were based on common knowledge and understanding of a series of problems the health services were confronted with, at the time. These problems or issues have only been partially documented or quantified. While the evaluators concur with the list of issues described in the Compact, a comprehensive root cause and context analysis was not made, at least not documented. No ToC was made upfront.

The overall aim of the Health Project, to help develop a ‘sustainable delivery platform....’ and the choice to invest in infrastructure were to the point. In the area of health systems strengthening, a deeper analysis and ToC were sorely missed.

This has led to a low rationale for selection of some of the Activities or (sub)Activities and unrealistic planning. Decentralization is a case in point. The role of the Ministry of Local Development and Chieftainship was recognized late in the process, leading to expectations towards the MoH that it couldn’t fulfil. Only in 2016 an assessment was made of the health system’s readiness for decentralization⁴⁰. The CEIP is not used at all, because it was not sufficiently embedded in the processes regarding staff training and retention. Another example is the HMIS and EMRS, that addressed real needs, but their planning did insufficiently take into account available resources, working processes and skills level of management and health professionals. For example, an EMRS may be quite helpful to improve quality of care and save time of health professionals, but it needs much more than software development and a quick training.

During the first years of the Health Project, the content of several of the Activities was developed. In absence of documentation, it is not clear why ‘TB surveillance and infection

control' is on the list of (sub)Activities as part of the Support to Decentralization Activity, while no TB oriented activity has been undertaken.

The ToC has been developed retro-actively, after the Health Project. It is recommended to do that during the planning phase of a project, to increase focus and effectiveness and more alignment with contributions from the MoH itself and other donors.

Partially through the conditions precedent, the Compact attempted to stimulate sustainability. The GoL's financial commitments to sustain salaries and other expenses after the Health Project were key. However, there is a risk that, under pressure of MCC's pending offer for a Compact, commitments are extracted that either cannot be respected or that come at the expense of other activities, that need to be scaled down. This is even more the case, because the GoL did and does spend a relatively high proportion of its budget on the health sector and there will not be much space for any increase.

There have been many delays in each phase of the Health Project: in planning and design, in construction, in procurement of equipment, materials and services, in the health system strengthening. Non-delay, like the OPD constructions, was actually rather the exception than the norm. Several factors led to the delays: the first year of the Compact had to be used to decide and plan the Activities which reduced the time available for implementation; lack of experience of MoH, PIU and MCA-L with the required procedures and with the technical components of contracts; lack of human capacity and other resources in MoH; limited available resources like contractors and suppliers in Lesotho. Delays create additional pressure, lead to shortcutting procedures and affect quality of work in every respect, including the use of well formulated contracts with suppliers. Also, additional costs are the result. In particular, it affects the possibility to use a participatory approach, like consultations on design of health facilities and setting of priorities with DHMT's.

Some delays also resulted from internal MoH disagreements on responsibilities and tasks, low capacity and delayed decision taking. Mitigation can be only limited, and delays need to be adequately anticipated. This should result from an appropriate root cause and context analysis.

The five-year time frame of the Compact worked against it. Projects of this complexity and scope in a context like Lesotho's are better done in a slower pace and with more anticipation to 'known unknowns' and 'unknown unknowns'. It is recommended to allow for Compact time-flexibility.

The one outstanding feature of the Health Project is its system-wide approach, with emphasis on Primary Health Care. In general, this is not popular among donors because most results are very long-term, cannot be attributed to one single intervention or sets of interventions and are less visible than construction of hospitals in urban areas. A system-support approach contrasts with a program approach that is able to claim more concretely the results, numbers of patients treated or cured, and those results are also more visible.

The choice for the system-wide approach for the Health Project can be considered as good practice that may be shared widely. Recognition of implementation weaknesses only strengthens credibility and may serve as lessons for others and for the future.

5.8.2 Constructions

The 2011 Audit referred to earlier in this report challenges the choice of some of the health centers to be (re)constructed and no documentation does exist on what was done with these observations.

Concerning the actual constructions of facilities, the following lessons learned have been suggested by the ‘MCC investment in the Lesotho water & health sector projects; final implementation report’:

1. The design of health facilities is a specialized discipline and is not a fit candidate for a vaguely- scoped Design – Build contract.
2. In order to maximize the effectiveness of local contractors, a simple set of tasks will lead to highest prospects for success
3. Servicing widely- scattered sites leads to inefficient project delivery by contractors.
4. Small and inexperienced contractors will likely fail if assigned a work load beyond their experience and capacity.
5. MCA and PMCS must have skilled key staff and use rigorous project management tools to monitor progress, make mid- course corrections, control scope creep, and manage design and construction quality.
6. Initial project scoping, conceptual and detailed design benefits from committed input from end – users. For the OPD constructions there was involvement of end-users but for the health centers there wasn’t.

Further, in the section on constructions of chapter 5, it was mentioned that ‘...Furnishing and Equipment’ was one of the highest failure categories and shoddy goods prevailed. This leads to the lesson that selection of suppliers and monitoring of delivered goods should be rigorous.

5.8.3 Program management

In principle, the setup of the governance of the Health Project was adequate: MCA-L would take responsibility for the construction activities and the PIU was in charge of all non-construction activities; close collaboration would ensure coordination.

The PIU’s exit report comprises a series of lessons learned, that are copied in full on the next pages. They include the challenges with most of the (sub)Activities but also point to positive experiences that would be fit for replication in future, like the use of a Risk Management Plan

It is recommended to keep, from the start of the project, a central repository of project documents including reports of management meetings at the various levels. PIU lessons learned and recommendations; December 2013.

Table 22; PIU recommendations for programme management; category Scope management

TECHNICAL AREA				
Category	Issue Name	Challenge/Success	Impact	Recommendation
Scope Management	Ambiguity of THL (HSS Firm) scope of work	The HSS scope was too broad and ambiguous to be implemented under one (1) contract within the Project lifespan.	It was not easy for the consultant to focus and manage all four components; however, the contract obligations were met.	Scope of similar magnitude should be designed not to be assigned 1 consultant; otherwise more time should be allocated to implementation.
	Prerequisites un-readiness	There were a lot of activities that were dependent on availability of prerequisites and involvement of other ministries.	Some activities had to be delayed until the prerequisites were ready, and thereby activities being implemented in a tight schedule within the Project lifespan.	Always ensure that prerequisites are ready before embarking on Projects of this nature. Involvement of key stakeholders from initial stages of the Project should also be ensured.
	Unclear roles	There were no clear roles and responsibilities under decentralization activity.	Team work was jeopardized	Decentralization roles and responsibilities need to be clarified before policy development and implementation.
	Decentralisation implementation misalignment	The MOH was not the lead ministry, (but that of Local Government & Chieftainship) and generally ahead of other ministries in the decentralization process.	It was difficult to synchronize decentralization activities between key ministries.	There has to be improved dialogue between key stakeholders, linkages and alignment of activities for ease of implementation.
	Contract linkages	Linkages between contracted firms was not established earlier and communicated adequately.	Accountability was not vested in consultants whose support was directly aligned with the objectives. Implementation of some activities was not fully achieved.	Contract linkages and roles should be communicated and agreed at the outset of a Project to minimise clashes in cross cutting activities.

Table 23; PIU recommendations for programme management, category integration management

Category	Issue	Challenge/Success	Impact	Recommendation
Integration Management	Project Implementation Unit (PIU) concept	A concept of the PIU as a ‘middle-man’ was new and a success.	Facilitation and coordination role played by the PIU was successful – most deliverables were met within the expected contractual timelines.	PIU is an effective concept that can be adopted for coordination in similar Projects. It needs effective leadership and management skills and has to be embedded within an Implementing Entity.
	MCAL/HPIU interface	It was never clear from the onset how the PIU would interface with MCA-L or how things would be done on day-to-day basis particularly with MCA-L Sections.	In most cases, things were done at ad hoc with respective Sections and accountability was difficult and boundaries were overstepped.	A governance manual that guides interaction between PIUs and MCAs has to be developed to clearly guide how operations and technical aspects between the two (2) entities would be interfaced.
	Health Sector Project coordination set-up	The HSS was designed to support infrastructure components; however, it was evident that the Project coordination set-up was a challenge due to the organizational structure.	The issues of coordination, communication and planning were not as smooth as would have been anticipated. It was difficult to align HSS and Infrastructure schedules.	A similar Project would require a Team Leader managing the entire Sector with Heads of HSS and Infrastructure directly reporting to the Leader.
	Role of Technical Working Groups (TWGs)	TWGs were used to foster collaboration between different stakeholders for efficiency and effectiveness of the overall Project interventions.	There was a sense of ownership by the MOH Programs, while Partners were able to synergize their interventions and minimise duplication.	TWGs are effective supportive structures and are recommended to foster collaboration between stakeholders.

Table 24; PIU recommendations for programme management; procurement/ human resources management

OPERATIONAL AREA				
Category	Issue	Challenge/Success	Impact	Recommendation
Procurement Management	Overloaded contractors	Some contractors were awarded many contracts running concurrently.	The contractors were unable to deliver according to contractual obligations.	There should be a limit to the number of contracts awarded to a single contractor/supplier.
	Inadequate guidance	Procurement guidance was inadequate; and in the event processes took longer than it was anticipated.	Implementation of some activities was negatively affected.	Continuous guidance on procurement should be done through-out the Project lifespan.
Human Resources Management	Lack of skills transfer	Consultants were located in their own local offices outside the MOH HQ and/ facilities.	Consultants were not fully utilized to ensure skills transfer.	MOH should provide office accommodation for long term consultants. It is imperative that consultants are embedded within Programs and facilities to facilitate working closely with their local counterparts to ensure skills transfer and sustainability.
	Inadequate technical oversight	There was inadequate technical oversight at the beginning of the Project to improve quality of deliverables.	This was overcome as the Project progressed as key stakeholders were mandated to participate in clearance and approval of each deliverable. This added value and improved the technical input and therefore the quality of deliverables.	Always subject deliverables to key stakeholders' review before approval. MOH should sign off on all deliverables before payment for any consultant is done.
	Effective change management	There was some degree of negativity towards some Project activities and reluctance to change.	Progress of some activities was hindered at some facilities ¹¹ . Effective change management tools ¹² were engaged at the later stage of the Project.	Behavior change is a long process and cannot be achieved within a short period of time. The Project needed more time towards positive direction.
	PIU Capacity Building	MCC capacity building initiatives did not cover the PIU.	PIU missed some opportunities that were needed at implementation level.	The design of MCC capacity building initiatives should also include the PIUs.

Table 25; PIU recommendations for programme management; risk and communications management

Category	Issue	Challenge/Success	Impact	Recommendation
Risk Management	Risk Management Plan (RMP) utilization	Development and utilization of a RMP was a success because risks were identified early and planned for in-advance.	Impact was minimal because the risks were mitigated. RMP was a very effective tool.	Projects should be obligated to have RMPs in place and monitor it continuously.
	Adequate contingency	There was adequate contingency planned for within the Project life-span.	Most of unforeseen procurements were realized.	Always have an adequate contingency until the final stage of the Project.
Communications Management	Value of Project Management	A lot of project management ¹³ tools were effectively utilized.	This allowed the Project team to plan together ahead of time and minimize delays in expected deliverables and reduce misunderstandings.	Effective project management tools are essential and should be utilized.
	Bureaucracy	Non-standard communication formalities and difficulty to access some facilities.	The bureaucracy hindered implementation of some activities.	A project could work better if communication is flexible.
	Inadequate consultation of facilities at Project conception	Facilities were inadequately consulted on expected operational changes to be introduced through the Project.	Reluctance to implement some of the expected operational activities including integrated health services.	It is imperative to consult key stakeholders and communicate expected changes at all levels during the project conception.
	Irregular Review Meetings	The PIU conducted Quarterly Review Meetings at the beginning of the Project, which were later on the tight to the MOH review meetings. However, the Ministry was not able to hold the meetings regularly.	The meetings were useful and enhanced ownership of the Project by the MOH Programs.	Periodic project review meetings are essential and should be held on a regular basis.

Table 26; PIU recommendations for programme management; documentation and time management

Category	Issue	Challenge/Success	Impact	Recommendation
Documentation management	Access to documents	Independent up-to-date means of record keeping ¹⁴ were used to document Project related materials at different levels. MOH website was not up to appropriate standards to accommodate Project documents.	The Project materials were available on parallel websites during the Project tenure.	The MOH website should be updated regularly and be to an appropriate standard to allow for all Ministerial documents to be uploaded at all times.
Time Management	Delay in review and approval of deliverables	Often review and approval of deliverables took more than it was expected.	Contractors got frustrated and more so where the delays negatively affected their cash-flow. Implementation progress was hindered in some cases.	It is imperative for key stakeholders to adopt the Project Management Plan and adhere to agreed timelines.

6. Next Steps and/or Future Analysis

6.1 Dissemination procedures

This draft evaluation report has been shared with stakeholders in Lesotho in October 2018. During meetings in Lesotho in October 2018, the findings were discussed with the main stakeholders. For this, representatives from MoH, LMDA and a series of national and international institutions and organizations were invited: CHAL, Red Cross, WHO, CDC, PEPFAR, EGPAF, LENASO.

Two rounds of comments from MCC, respectively in September 2018 and in March 2019, have been used to modify or add to this report.

The comments on the report are summarized in chapters 8 and 9.

6.2 Additional analysis and deliverables expected.

A summary of the findings of the evaluation was presented to the Research Forum of October 2018 in Maseru (see section 5.4.2). The main discussion during the (short) presentation was around contribution by and attribution to the Health Project.

The evaluators will endeavor to write further publications for various public health journals and websites, to share relevant findings, while respecting confidentiality regulations.

7. List of Annexes

The annexes are a separate document which is an integral part of this report.

Annex 1	Theory of Change of the Health Project	Error!
	Bookmark not defined.	
Annex 2	Evaluation questions from the ToR.	1Error!
	Bookmark not defined.	
Annex 3	Districts and health facilities selected for the HFS 2018	1Error!
	Bookmark not defined.	
Annex 4	Informed consent forms	1Error!
	Bookmark not defined.	
Annex 5	Health Centers model 1 and 2.	Error!
	Bookmark not defined.	
Annex 6	FGDs, topics and protocol	Error!
	Bookmark not defined.	
Annex 7	Survey questionnaires	Error!
	Bookmark not defined.	
Annex 8	List of 10 key documents for this evaluation	Error!
	Bookmark not defined.	

8. Stakeholder Comments and Evaluator Responses

Ministry of Health

On October 11, 2018, this evaluation report was presented and discussed during a session with senior staff of the Ministry of Health of Lesotho.

Some observations were made; no data or conclusions in the report were challenged.

Later, the following message was received from the MoH:

‘Presentation of the MCA Evaluation Report

Thank you very much for the presentation on MCA Evaluation Report. It was very informative to us. It was especially appealing to us to find out that people are highly appreciative of this very important initiative. For us this means there is value for money here. It was also pleasing to see the satisfaction that was brought about by this initiative among health staff, particularly nurses and doctors. We believe this has contributed to staff retention. Commensurate with the above our coverage for ART improved tremendously. We believe that client attendance improved in all respects. We observed that a number of facilities providing deliveries improved enormously; this will contribute to reduction of a long-standing problem of high maternal mortality rate in Lesotho, in which we believe that, access was one of the major problems.

We have to say that while the study showed a major weakness towards maintenance and renovation, this indeed has been our challenge but working with LMDA we have multiplied our effort to address this challenge. This is one of the major priorities of the Ministry which is being addressed with urgency.

We believe that this project will have a major impact in the lives of Basotho for many years to come’.

LMDA

On October 10 and 12, 2018, this report was presented and discussed during a session with senior staff of LMDA.

Some observations were made; one main issue of discussion was the functioning of the ITT. Since LMDA is the continuation of MCA-L, this subject was of major interest to LMDA.

According to LMDA, the contracting model for the constructions was design and build: in order to speed up the constructions, the same contractor would design, on the basis of the minimum requirements, the health centers and build them, once the designs were given a ‘no objection’ by the ITT. MCA-L would signal to the MoH the ‘no objection’ and then MoH would accept the start of the construction. LMDA challenges the statement in the report that some designs of health centers and OPDs were not offered to the ITT for assessment. It does acknowledge however that time for studying the designs was too short, two weeks, whereas many of the ITT members, like nurses, were busy with other tasks and would need much more time. So, it has happened indeed that ‘no objection’ was given whilst designs had not been seen by all those relevant. Other Key Informers mention a period of only two days for studying some of the designs; such was the time pressure.

According to LMDA, the text to the left picture on page 58 should specify that ‘Watchman building at entrance of the health center. Too small for its purpose’ is an assessment by the current users. At the time of the construction, the ITT had given a ‘no objection’.

LMDA emphasizes the complex environment of work, with delays (customs!) and deadlines that were very difficult to manage for a government agency.

LMDA also challenges that some constructions were not finished at the end of the Compact and at the end of the period given to LMDA to finish the works. However, some of the constructions are not even finished today, as the picture on page 58 shows.

The comments below have been received in written in October 2018, after the LMDA staff meetings.

Comments	Page in the report, version of September 2018	Evaluators’ reply
<p>Since many years, the GoL reserves a relatively high proportion of its budget on health, but it is inefficiently spent, the leadership role of the Ministry of Health (MoH) traditionally had been weak'. Statement too general and harsh, please substantiate?</p>	<p>Page 21</p>	<p>Various sources make a statement to this effect: MCC’s investment memorandum: ‘The MoHSW has a number of critical weaknesses, many of which are related to low capacities due to poor retention of staff, crisis management modes that make strategic response difficult, and a bloated civil service administrative staff at the central level’.</p>
<p>"...This ex-post evaluation addresses a series of questions that target specific Activities and also a series of outcome indicators'. The evaluation is conducted almost 5 years after project CED or Compact close-out. this implies that some of the information cannot be adequately verified as some key personnel who were employed in Compact are not available. The report states that some reports are not available, some as M&E reports to verify the factuality of the project. It is possible that key respondents were not able to account since they were not part of Compact. Little can be shared on information shared with MCC as they MCA-L simply accounts through reports."</p>	<p>Page 40</p>	<p>Acknowledged. Benefits and constraints of an evaluation 5 years post-Compact are discussed in later chapter."</p>

<p>ERR Further information provided from MCA-Lesotho, so as to present the views from the user.</p>	<p>Page 115 and following</p>	<p>Thank you for the documents that were not made available to the evaluator previously. After consideration of these documents the thrust of the analysis and conclusions is not changed.</p>
<p>ERR It would be helpful to recommend alternative tools to measure the costs and benefits for health investments. If an ERR does not seem to be a good fit for health projects, what could be used to measure the economic benefits of a particular projects? There are always competing needs for public funds and there has to be a way to assess whether by channeling those public funds would be the most efficient use of those funds among all the other available alternatives.</p>	<p>Page 115 and following</p>	<p>As argued below in the report, the ERR may be a useful tool, when the methodology is more mature and when its role and the way it is used are more precisely defined and protocolized. Discussing or proposing alternative tools is beyond the scope of this evaluation.</p>
<p>"... At the onset of the Project, the ERR calculation used several expected benefit streams.....' ... at the time of data collection and analysis of the model, it became evident that the assumptions made in the model were not realistic. Also, the model could not be easily interpreted as it did not have a manual that fully explained how it was developed. this meant placing a lot of assumptions on the tool. The report is correct in that quantifying benefits as speculative, and since the project was not cause effect but attribution."</p>	<p>Page 115 and following</p>	<p>"Comments acknowledged. The last suggestion about attribution probably intends to mention contribution. "</p>
<p>"Also, internationally many different numbers are being used for example on maternal mortality or on the number of patients of certain categories like HIV or TB. This is due to the use of various extrapolation and correction methods. Health conducts annual AJR's. further to that, a Demographic Health Survey is conducted every 5 years. These are credible sources. MCA and LMDA have also conducted evaluation surveys in 2014 and 2016. These reports were used to compile the information as primary sources."</p>	<p>Page 42</p>	<p>Acknowledged. AJR's have been consulted for the evaluation but some of the information is not precise or specific. Key issue is that triangulation of data is required because different sources provide different data.</p>
<p>Health centers sampling. An approximation of 36 HC's is too small</p>	<p>Page 45 and following</p>	<p>The sampling is a way to ensure variability and a non-biased selection. The size of the samples of health centers and of patients and</p>

<p>considered from 134. There high chance for likeliness or closeness leading to bias.</p>		<p>staff could not be calculated ex-ante, on the basis of expected answers/results, because there were so many variables to be assessed. For that reason, the sample size is partially determined by available resources. The fact that some results are significant ($P < 0.05$), shows that the sample size was reasonable.</p>
<p>"Health staff in OPDs and health centers' Did this cater or ensure that most of the staff had adequate information about the MCA-Lesotho Compact? Also, was a distinction between MCA-L and LMDA made, to ensure that respondents understood the context? It would have been favorable to see the questionnaire(s) for all groups"</p>	<p>Page 45 and following</p>	<p>The questions of the staff survey asked about satisfaction levels and views on current status of the facilities. No questions were asked on the entity, MCA-L or LMDA, that was in charge of the constructions.</p> <p>The questionnaires are included in the Annexes.</p>
<p>"Maqokho vignette (MCA or LMDA never finished it)" After Compact close out, Government of Lesotho established LMDA. The Logo's are different and the maintenance programme continued in all clinics that MCA improved. There is little distinction between MCA and LMDA. this might be a result of why such statements may be heard. However, reality on the ground is MCA handed over all works done and concluded to MCC and GoL. This implies that all works were finished and certificates for all health facilities are available.</p>	<p>Page 56</p>	<p>"Survey respondents did not differentiate between MCA-L and LMDA, they only reported on how they viewed the current status and maintenance of the facilities, irrespective of the agency in charge.</p> <p>The status of unfinished business is based on information from survey respondents and KII's and observations by the survey team.</p> <p>One must conclude that certificates for some of the health facilities were given while the works had not been completed. "</p>
<p>5.2.1.1 The constructions and equipment delivered. In many facilities the design is not optimal'. At the time of development of the design proposals were satisfactorily. Time could be factor in such a response.</p>	<p>Page 57</p>	<p>Indeed, the ITT approved the designs and in that sense they were satisfactorily.</p> <p>"The design is not optimal" is based on information of current users."</p>
<p>"The construction of a few health centers has never been completely finished." As stated above, ALL HC were completed and handed over. respondents might have not understood the work done by MCA-L and LMDA and how they overlap.</p>	<p>Page 58</p>	<p>"In the report examples are given of works that have not been finished in 2018, like some fencing around health centers and pavement of the parking lot. It is true that since early 2014, LMDA has completed and repaired some of the deficiencies left behind by the Health Project; not all however."</p>

CHAL

On October 12, 2018, this report was discussed during a meeting with a senior representative of CHAL. The main subject of interest was the supervision and management of the construction activities, since CHAL had been actively involved in the ITT.

Other stakeholders

On October 11, 2018, this report was presented and discussed during a session with several senior representatives of other organizations: WHO, LENASO, Director Laboratory Service, MoH and manager of the BTS.

Some observations were made; no data or conclusions in the report were challenged.

MCC

Substantive comments received from MCC in September 2018 resp. March 2019, with evaluators' comments in April 2019

Page Number refers to version 1 of the report	MCC comments received in September 2018	Evaluators' Responses
10	Note that all MCC-funded implementation activities must cease on CED and MCC is not able to extend compacts beyond CED. There is a 120-day closure period which allows for payment of final invoices, disposition of assets, and the orderly wind-up of the MCA. But any further implementation that takes place cannot be paid with compact funds.	text modified accordingly
10	Based on later discussions, it seems the "increased use of the health centers" is more nuanced.	once the data issue has been clarified (see below), all available data point in the direction of increased use compared before/after Compact
11	"stigma is gradually reduced" The results on this issue seem mixed; does the balance of evidence actually point in one direction more than the other?	all evidence points in the direction of decrease of stigma; in as far as the stigma is still present among a considerable number of people, there is a dilemma as to the organization of HIV service delivery; text has been adapted on pages 75 and following to clarify this
12	P. 42 says that the timing of the evaluation is appropriate given when the cost-benefit analysis expected results to begin to accrue. Is the issue that the timeline does not allow us to see improvements yet, or that we simply don't see improvements in some health outcomes?	It is about the timeline indeed. The text is modified to clarify, also on page 48
12	Note that the "aim of the Compact" was to reduce poverty through economic growth. What you cited was rather the objective of the Health Project.	Corrected

12	Re the recommendation that MCC have greater flexibility in the timeline of our compacts, note that our compacts are time-limited by our founding legislation so MCC does not have the authority to extend compacts beyond 5 years. You can still make this recommendation but should understand the practicality of it.	Acknowledged
12	"The stark increase of patients on ART over the last years would not have possible without adequate facilities." Is evidence presented for this statement?	Statement is rephrased in the summary; see also section 5.6
21	Is this "purpose" of the Health Project documented anywhere? The Compact does not seem to reference the PRSP in the description of the Health Project.	reference added: MCC Lesotho Health Care Infrastructure Due Diligence 2007.
21	Please clarify the reference to the "Investment Committee"; is it a reference to the committee that approved the compact or the team that developed it?	this was the committee that took the Compact decision, clarified in the text
22-23	Please consolidate the simplified logic diagrams so it's clear what type of result is being referenced in each box and increase the size of the text so it's more legible. Also, please consider incorporating the narrative description of the program logic that is captured in MCC's evaluation catalog, which boils the large diagram into a one-paragraph description. https://data.mcc.gov/evaluations/index.php/catalog/217/study-description Finally, it would be helpful for the evaluation to revisit the logic diagram and/or description at the end of the report to assess to what extent the various links in the causal chain came to fruition, and what that means with respect to what we achieved or hoped to achieve. On a related note, it isn't always clear what the conclusions are with respect to the evaluation questions--please consider whether each section weighs the evidence presented and offers conclusions.	revision / review of the ToC is included in the annexes
24	"The expected outcome was a reduced proportion at the end of the Compact." References people on ARV but should reference reductions in mortality instead.	that is correct, sentence corrected
25	"The 2011 Audit Report however" - sentence cuts off.	sentence removed
25	How do you arrive at the estimate that 90% of the country has access to the improved facilities? Note that there is no requirement to provide a numerical estimate for this.	sentence rephrased, but I maintain 90 %

25	"The Health Project was managed via an Implementation Entity Agreement (IEA) between MCA-L and the MoH, through a Health Project Implementation Unit (HPIU or PIU) located within the MoH." The bulk of the funding went to infrastructure which was actually managed by MCA rather than the PIU, and this is not clear based on the above statement.	This is mentioned in the sentence below. Sentence added for clarification. It is also mentioned under 5.8.3
26	Can you explain the decision to renovate 138 health centers while the compact indicated "up to 150" would be renovated?	included additional text in chapter 2.1.5.1 and 2.1.5.2. for clarification.
27	"MCC commissioned an agency" I believe this was our Independent Engineer, which had overseen infrastructure during implementation but xxx can confirm.	this was an engineer from MHW Global, not MCC, as the reference shows
27	Table 2-3 is incomplete	completed
29	"Especially recommendations 1 and 3" I suggest numbering the list above to avoid any doubt about which bullets you're referencing.	done
29-30	Is the numbered list from the Decentralization Strategy? (That's implied but it's unclear how some of these issues actually relate to decentralization.)	some text added to clarify
30	"a degree of HCWM was already implemented" Was this observed or was this "reported" to be implemented? Some of the questions cited in the report have a clear "right answer" so might raise questions about the validity of responses.	text added to clarify: there was a WB funded project from 2005-2008 that included HCWM
30	"Specifically, it supported the development of appropriate legislation, policies, regulations, standards and procedures to guide waste management practices." I suggest mentioning the pilot in this description rather than simply at the end of the section.	this sentence has been moved upwards
32/45	Section 2.1.5.2.3: the line under the heading is out of place and the text mostly does not address the heading. Monitoring targets are those targets included in the M&E Plan. Relevant metrics from the PIU reports should have been captured in the M&E Plan and reported on in the Compact's Indicator Tracking Table. What is reported in Table 5-2 is more relevant. However, most of the data sources in that table differ from those referenced in the M&E Plan and post-Compact M&E Plan, which raises questions about comparability due to potentially different methodologies. MCC can provide relevant ITTs if the evaluator does not already have them. If you have additional context or conflicting information to the ITT data, that can be presented and discussed.	I have read this as 'was the monitoring of targets achieved?' as part of a description of the implementation of the project. This is a chapter that describes the activities and outputs, whereas chapter 5 is about the results. That is why the targets are discussed in chapter 5. For me, to do that in chapter 2 is not a logical buildup of the report. Line has been removed. Table 5-2 expanded

33	Can you clarify the differences between programmatic and systems investments?	text inserted
33	"This evaluation does not provide evidence for its overall effectiveness" Perhaps some nuance would help here? The evaluation should aim to assess effectiveness even though attribution isn't possible.	fair enough. Text modified to align better with overall conclusions.
35	Re references to district chapters - please update since we have decided not to pursue this additional analysis.	sentence deleted
37	"This is due to the use of various extrapolation and correction methods." Do others document the weaknesses in the data? What is considered most reliable, and is that being used for the evaluation?	Yes, there is widespread concern about data quality from the health system. Recent improvements cannot make up for low quality in the past: comparability remains a challenge. It is not possible to assess the most reliable data. Data from surveys like DHS are more reliable. data from AJR come from districts and health facilities and are at the core of the quality concerns.
37	"The MoH made statistical data available" Were you planning to add anything to this? If not, can you briefly describe these sources or reference the appropriate source in the table above?	text added
38	First paragraph says the 2014 DHS mostly covers pre-compact, and one year post-compact. Is that correct? Does it not also cover the compact period?	Yes, covers also the Compact period, has been corrected
40	Was the VHW selection really random given the various conditions considered in their selection?	I cannot guarantee complete random selection, sentence added
41	"In view of the role of Paballong OPD, which specializes in HIV care, it was later decided to accept the Paballong OPD and not to correct this choice." Please explain the rationale for this decision-- simply specializing in HIV care is not a clear reason for why this OPD should be considered relevant to this sample or study.	text amended
42	Given the text in section 4.5.1, would you say that the exposure period is 120 months? Presumably some results would have started to materialize before then?	some results occur immediately or fast, others start to accrue later. The financial net benefit starts only after 10 years and then increases.
43	Reference to USD 144 Million should be corrected to USD 142.3 Million; please check throughout	latest data say 142.7 corrected
43	Re paragraph beginning "Delays in completing...": as mentioned earlier, the Compact was not extended 6 months, and it isn't clear in the text that the bulk of the GOL funding actually came during the Compact period, rather than after CED.	text corrected
43	Key outcomes and outputs used for assessment also include the results described in the program logic diagram, which includes a lot more detail	Acknowledged. But the ToC does not include quantitative information.

	than the indicators in the Compact and M&E Plans	
44	Is it a known fact that a reduction in TB prevalence cannot be achieved in 5 years or is there evidence for this assertion? Also, if I'm correct, there was some infrastructure in the OPDs that was intended to help with TB but M can confirm.	Health system strengthening cannot reduce TB prevalence in 5 years - that is a PH paradigm. WHO estimates that 25 % of the world's population is contaminated with TB; prevalence is reduced when there is increase of hygiene (less crowding) , improvement of nutrition status etc etc. Health Project: what I know is that the construction of the OPDs was designed to create flows of air that limit contamination in the waiting rooms.
44	Report asserts that we don't know the number of deliveries in health centers at baseline but we do know the percentage at baseline, so is it not sufficient to compare that to the percentage post-Compact (as opposed to the number of deliveries at both points)?	The ITT also does not have relevant % of deliveries. As per November 29, 2018: I have renewed my request to MoH for delivery data. These data certainly do exist but it takes MoH time to extract them from the files.
45	See note above re different data sources and potentially different methodologies from those specified in the M&E Plan, which could affect the comparability. Also, there is no analysis of what is presented. This would be more informative if the key outcomes were incorporated into the relevant parts of the report (e.g., in response to question 3.4 "Have overall health outcomes such as infant, child, and maternal mortality; TB treatment success rates; HIV/AIDS treatment, and survival rates changed since the start of the Compact?") and the outputs were presented in the implementation summary section.	information to the tables is added, sources are clarified and updated
45	I was confused by the reference to 468-1030 new TB cases / 100,000; can you clarify what this range means and why it accompanies the value of 724 new cases/100,000?	clarified; this is the confidence interval; not all sources provide a confidence interval (for example AJR) but when they do, it needs to be mentioned.
46	400,000 tests were reported to have been conducted at NRL in 2017. This is a very round number and exactly the same as the Compact target. Please confirm that this figure is correct and supported by documentation.	precise number of tests is inserted
47	The vignette indicates that patients are late "due to the torrential rains"; if there is no evidence for this, I suggest indicating that this is "perhaps" or even "likely" the case.	the survey team reported that they had been in the same rains.
50	Re extension of the antenatal facilities, can you describe the current capacity and how they are used? This will help provide context for why the facilities wouldn't accommodate 4-12 deliveries per month as mentioned in the vignette.	text added under 5.2.1.1
51	Can you use consistent coloring for similar graphs?	done; when colours are different it is because they indicate different things

53	Table 5-3: can you arrange the table in decreasing order of the responses	done
55	What does it mean to define maximum wait times for purposes of the evaluation? These aren't discussed further except to say that it might not be easy to achieve them and to recommend that a national norm be established. Did you plan to analyze the graphs presented against the times established for the evaluation?	text modified to clarify
55-56	What does the italicized section represent/is there a reason that text is italicized?	sentence added to explain
56-57	Please ensure that all graphs are consistent in which year of the HFS survey appears first. It makes sense that 2011 should precede 2018 but the graphs on these pages are presented in the reverse. Similarly, can you present satisfaction/dissatisfaction responses (or any other scales) in the same order throughout?	done
57	Should the second sentence refer to the reduction as "statistically" significant?	correct, word added
57	Can you explain why "It is important to note that satisfaction rates alone cannot be considered evidence of quality care"?	explained by additional sentence
59	Does "remove plaster" refer to "taking off a cast" for a broken bone?	correct, this is the term used by Basotho staff
60	"The average per inhabitant of Lesotho is 0.5" - presumably this was intended to reference "0.5 outpatient visits per year"	the general outpatient consultations section is completely changed - explanation in text
61	"," and "," are not used in numbers consistently in the report. Since changes will be required to ensure consistency, please conform to the American style of "," to separate thousands, and "." to denote decimals	document screened and all made consistent
61	Table 5-5: I think the last two rows would be clearer with labels like "Total" and "% of total"	Tables 5-5 and 5-6 removed completely
62	What is the status of verifying the definitions of patient visits? Actual decreases would warrant further discussion and reconciling with reports that the facilities are too small to accommodate the demand for services	Based on the data available in the MoH: until 2015, the reported numbers from health centers and OPDs for general outpatient consultations did include new and repeat consultations, and they were not differentiated. From 2016 onwards, only new consultations for outpatients are reported and repeat consultations are not reported. As a result there is a decrease of the number of users, but that does reflect rather a change in registration method than a real decrease. This problem does not affect numbers of users or visits for specific programs, such as ART, TB treatment and MCH. With the data made available by the MoH it is not possible to compare general outpatient consultation before/after the Compact.
	Per the EDR, the plan was to describe patients in a bit more detail, including: Level and change in use of health services by specific population	paragraph added in section 5.2.1.8; no data on education level have been found or collected

	groups: rural/urban; education level, Men having Sex with Men (MSM); Sex Workers (SW); but this was not included.	
69	Evaluation doesn't address the fact that the Compact was advocating for integration of ART services (as a part of reducing social stigma)	There is no evidence that this was an "objective" of the project or that any activity was carried out towards this objective.
	There is no discussion of adherence to HIV/AIDS treatment per EDR	included
71	A heading would be useful at the top of the page	done
72	Can you report staffing rates for CHAL and GOL in a table or graph? Does the 95% staffing rate reported earlier reflect the temporary staff funded by donors? Do you know how many/the proportion of positions are held by temporary staff?	Data added. No further data on temporary staff are available. The 95 % has been amended.
72	Graph 25: can you add a bar that represents the full staff complement for comparison purposes?	done in graph 30
	There doesn't seem to be any discussion of staffing in remote clinics (is that where 5% of vacancies are?), staff motivation and productivity, or most of the training questions related to staff.	satisfaction and intentions to (not) move seem are the most relevant items to distinguish between hard-to-reach and not hard to reach; one graph added
76	Table 5-9, 5-10: please consider reporting these in % rather than #s	% added. For table 5-9 the numbers are important since they are small
77	Since the 2011 HFS combined the question on "How do staff feel about their career path so far and about promotion opportunities in future?" the report should be careful about how it compares responses to that question with the separated questions in 2018.	graphs are adapted to avoid this problem
78	What is the trend in enrollment and graduation rates at NHTC? Reporting the number of students enrolled in 2018 does not seem sufficient support for the conclusion that the objective of growing student enrollment has not been achieved.	Data have been received and are included in report.
79	The fact that histopathology tests are conducted at NHTC means that the report that NRL doesn't refer anything out (p. 46) warrants more nuance; similarly, the discussion on p. 80 about tests that aren't conducted for lack of supplies is also important context since presumably some treatment suffers from the decision not to refer tests out	Carrying out the tests at the NHTC is not a matter of referring out, since it still is the NRL staff that carries out the tests; it is just using other spaces. Agree with statement on treatment, added to report - although self-evident.
	Did providers mention anything about their use of NRL services and how these related to treatment of patients, including issues around affordability of tests?	Yes, included in report
81	The reference to "(the end of the year)" is confusing	removed

	The report doesn't seem to address the evaluation question: 7.1 Are essential services offered at all Health Centers? If not, why not?	In chapter 1.2.1 the report mentions that essential health services have not been defined explicitly. Probably for that reason, there are no baseline data and no target in the Compact. Without more precise definition it is not possible to formulate indicators. The latest attempt to assess overall availability of essential health services in health centers was done in 2010, see Figure 3. That list is not authoritative however and indeed presents only a sketchy image of what essential health services are.
84	How do the local ERBs relate to the national ERB? Without retraining are ERB members unable to do their job properly? What is the time commitment of this role? How does the whole process compare to how it was supposed to work?	Some text added.
85	Is it clear why equipment was purchased for all OPDs when the pilot wasn't functioning properly? Is that equipment being used, or was it ever used?	Text added to explain.
86	Mentions "above-mentioned tablets" but it's unclear what tablets are being referenced	Mentioned above in the section: What is the status of the HMIS developed under the Compact? Does it facilitate the provision of data to the MoH?
86	Last sentence on the page cuts off.	corrected
87	60.7% accuracy seems low; does MOH/DHMTs have protocols for addressing weaknesses that are detected?	in short, the answer is no, there is no protocol but the DHMT members feed back as mentioned in the paragraph below
88	What is DMO?	spelled out
89	"These indicators do not show the full scope of working on quality of care, but the results suggest that some attention is paid to quality, but that it is difficult to sustain." - what is the support for concluding that attention to quality is difficult to sustain? What is the connection between posting stats and quality of care?	postings stats reflect the intention to share quantitative results of the work of the health facility ; added in document
89	Re the statement that maintenance isn't the subject of the evaluation per se, it is relevant in terms of lessons learned re sustainability (i.e., Q8)	correct, this sentence added
93	Graph 38: labels run into each other so are hard to read	graph expanded
94	What is the point of Section 5.4.3.6 and the relevance of the box on that page?	text much expanded to clarify
96	The report mentions that "some" health centers don't have a furnace. What proportion is that?	8 of 26 visited; is reported in previous section and inserted here as well.
98	What defines a health post--is it a location or an event? What happens at health centers while health posts are happening?	a health post is service delivery in a village, provided by staff from a health center or OPD, during one-day trips. In the following paragraphs it also says: Other obstacles are the lack of staff in the health center – one has to choose between the patients that come to the health center and the outreach

99	What did the Compact invest in with respect to VHWs?	the text clarifies this: no Compact investment: Before summarizing and concluding on the results of the Health Project, this section addresses a major element of the health services that has not been addressed directly by the Health Project.
99	Can you clarify what is estimated at 12-14,000-- i.e., compensation for whom over what period?	question unclear. Estimates are that there are 12,000 - 14,000 VHWs in the country.
99	What does the reference to "quality improvement also will increase its efficiency" mean?	Rephrased to clarify.
103	How did the Health Project contribute to data quality?	this is covered in the section on HMIS DHIS2
104	There's a heading with no text	heading removed

Comments from MCC received March 2019

Comments received	Page numbering	Evaluators' response
For future project and M&E design in Compact II, it would have been useful to have more discussion around the village health workers and the use of technology in outposts, since access of remote populations is an ongoing issue		A consolidated report on the 26 FGD's with VHWs can be made available or included as an annex. Most of the information has been included in the evaluation report, but it contains some additional info that may be helpful. However, the VHWs were not asked specifically about technology.
The description of geographic coverage could be more specific. What does "central level" mean and can the implementation districts be stated here?	10	This information is included in sections
"It would be clear to add ""an additional USD 87 million to complete the works post-compact"" to this sentence: MCC's initial budget of USD 122 million was increased to USD 142.3 million and the GoL had to contribute USD 87 million. Or you could add the total project cost, summing MCC and GoL's contributions."	11	Text rephrased accordingly.
I suggest referencing the fact that the 5.2% ERR was below MCC's hurdle rate of 10%. The last version of 2014 came to an ERR of 5.2 %, which is below MCC's hurdle rate of 10%.	27	Hurdle rate added
This section doesn't give a clear answer to the evaluation questions. Please provide the evaluator's perspective on the answer to the questions, based on the results reported.	101 (5.4.3)	Text added in various sub-sections, to clarify answers.
I don't understand this sentence: In summary, according to the evaluators, the steps described in general are logic, with some minor deviations from the cause-effect logic	113	Text rephrased
This heading is misleading because it implies that the evaluator re-estimated the ERR. I suggest renaming the section to be something like "Results of the evaluator's post-compact ERR assessment".	Page 115	Heading of the sector is renamed in line with the suggestion.

<p>The bulleted list should indicate more clearly whether you're saying that ART coverage did increase and therefore indicates that the ERR may have increased about 5.2% or whether you're simply saying that an increase in ART coverage would have increased the ERR. (I thought the fact that ART coverage was much higher at baseline than originally modeled meant that there was unlikely to be a large increase in coverage resulting from the project.) I also think this section should conclude with a statement about whether you think, overall, that the ERR was likely to have increased above the 2014 estimate, or decrease, or whether you can't make this determination.</p>		<p>Under the second bullet point the text has been somewhat extended, to clarify better. Under the last bullet point, the text states that the net effect on the ERR value of increased benefits and increased costs cannot be calculated.</p>
<p>When I discussed with the evaluator, we agreed that "the project did a lot of good, we basically rebuilt the entire health system, but we could have done better." As XXX notes in the document, this should come out more clearly as the biggest result. This should be further clarified by where we saw the needle move (more than doubling of PLWHA on treatment, increased number of nurses, and improved satisfaction with work place) and where we didn't (facility based births.)</p> <p>It's also very valid to succinctly highlight in the executive summary and potentially in each section (as YYY suggests) what the key outcomes were. Including where we failed. We tried to do many things that completely failed (HMIS, EMR, sustainable in-service training, decentralization.) There are some common themes to those failures - underresourced, started too late, had one rigid contract, didn't take into account capacity, didn't seek to build capacity/was implemented in parallel.</p> <p>To the extent these may not be fully integrated by the consultant - we can undergo this exercise as part of summarizing our lessons learned.</p>		<p>Evaluators concur that the Health Project did a lot of good. It would be an overstatement to say that it rebuilt the whole health system (for example, the medicines supply was not touched), but indeed it delivered a significant contribution.</p> <p>Textual clarifications have been added.</p>
<p>Reference to the "Five year" clock/timeline being too short should be stricken. They are not supported by evidence or analysis. There are many assumptions behind this statement, and it doesn't unpack those. The rest of the analysis shows where MCC needs to do better – designing prior to EIF, being prepared to implement earlier, having a better understanding of root causes and a clear theory of change... focusing investments on those that we can move the needle on with a defined budget. Etc.</p>	<p>Page 14 and 119</p>	<p>Section 5.8.1 explains the causes of the delays. Some text has been added to further explain. Some causes of delays are not or hardly amenable to change by external support, such as MoH capacity or internal strife. It also argues that local (at the level of district and below) participation in planning and design of the activities is preferable, but that adds time to the process. The evaluators stand by the recommendation to allow for more time-flexibility for a large and complex Compact / Health Project as the one in Lesotho.</p>

9. Stakeholder Statement of Support or Difference

MoH

On October 23, 2018, the following message was received from the MoH:

‘Presentation of the MCA Evaluation Report

Thank you very much for the presentation on MCA Evaluation Report. It was very informative to us. It was especially appealing to us to find out that people are highly appreciative of this very important initiative. For us this means there is value for money here. It was also pleasing to see the satisfaction that was brought about by this initiative among health staff, particularly nurses and doctors. We believe this has contributed to staff retention. Commensurate with the above our coverage for ART improved tremendously. We believe that client attendance improved in all respects. We observed that a number of facilities providing deliveries improved enormously; this will contribute to reduction of a long-standing problem of high maternal mortality rate in Lesotho, in which we believe that, access was one of the major problems.

We have to say that while the study showed a major weakness towards maintenance and renovation, this indeed has been our challenge but working with LMDA we have multiplied our effort to address this challenge. This is one of the major priorities of the Ministry which is being addressed with urgency.

We believe that this project will have a major impact in the lives of Basotho for many years to come’.

CHAL

The following message was received from the CHAL representative on October 12, 2018:

‘I have received and read the preliminary report on the above mentioned. I pretty much concur with all entailed in the report in as much as infrastructure, supply of equipment and health care waste management are concerned. As stated in the report that the post compact 1 maintenance of facilities is not part of this evaluation, all that is in the reported about the LMDA is absolutely correct. Should I feel I could add other information, I will send via email.’

10. References

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- ³ World Bank Group; Lesotho: Systematic Country Diagnostic; June 25, 2015;
<http://documents.worldbank.org/curated/en/2015/07/24756158/lesotho-systematic-country-diagnostic>
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- ⁶ Data from National Tuberculosis Programme 2017
- ⁷ Health Systems' Responsiveness and Its Characteristics: A Cross-Country Comparative Analysis; Silvana Robone, Nigel Rice, Prof. and Peter C Smith, Prof., Health Serv Res. 2011 Dec; 46(6 Pt 2): 2079–2100. doi: 10.1111/j.1475-6773.2011.01291.x
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<http://intranet.mcc.gov/countries/easa/Lesotho/LesothoII/All%20Documents/Health%20Sector%20Due%20Diligence%20Background/PIH/BCG%20Recommendations.pptx>
- ¹¹ Investment Memorandum on the Kingdom of Lesotho's proposed compact; May 2007, page 25.
- ¹² Lesotho Country Proposal to the Millennium Challenge Corporation (MCC); A Programme for Improvement of Water Supply, Rehabilitation of Health Infrastructure and Promotion of Private Business Development, Government of Lesotho (GoL), July 2006.
- ¹³ MCC Lesotho Health Care Infrastructure Due Diligence; 2007; Environmental and Social Screening Impact Assessments; Vol I + 2, including annexes and addendum; Jacobs Government Services, 2007;
- ¹⁴ The chapter "Project assessment: health sector project" of the Investment Memorandum on the Kingdom of Lesotho's proposed compact for the investment committee of the MCC; May 22, 2007.
- ¹⁵ Program Implementation Agreement among the government of the Kingdom of Lesotho, represented by the ministry of finance and development planning, Millennium Challenge Account - Lesotho authority and the Millennium Challenge Corporation dated September 8, 2008;
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- ¹⁷ Audit of the MCC's health sector project in Lesotho; audit report NO. M-000-11-001-P; January 25, 2011
- ¹⁸ MCC investment in the Lesotho water & health sector projects; final implementation report, October 2013;
- ¹⁹ Findings of Independent Engineer Investigations: November – December 2014 Health Infrastructure Deployment; Executive Summary – Investigations of 139 Health Centers in Lesotho
- ²⁰ Independent Engineer Report: Achievements of MCC – Lesotho Health Infrastructure Program, 2010 – 2014; Photographic Documentation of Improved Physical Plant Provided by the MCC Health Infrastructure Program Prepared on behalf of MCC by MWH Global March 2015
- ²¹ WB health reform program Lesotho; ICR review 2010.
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- ²³ IMPROVING HEALTH SYSTEM EFFICIENCY; Reforms for improving the efficiency of health systems: lessons from 10 country cases; Winnie Yip Reem Hafez; WHO/HIS/HGF/SR/15.1 © World Health Organization 2015
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