

Evaluation of Norwegian
Health Sector Support
To
Botswana

Annexes to the Final Report
Volume II

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1 Annex 1. Detailed Methodology and Study Instruments

1.1 Introduction

In order to have a coherent framework to address the first set of questions posed by the evaluation terms of reference, related to health status and health systems development in Botswana, a *post hoc* logical framework was constructed (see Table below). This Log Frame encompassed all known inputs¹ to the Botswana health sector by Norwegian assistance from 1975 to the present day. Based on our understanding of the nature of Norwegian inputs, the Log Frame organised the many Norwegian inputs according to the ‘nine building blocks for health systems’ as defined in the Ouagadougou Declaration². The information available would suggest that Norwegian assistance contributed to all of these nine building blocks, to a greater or lesser extent, at some stage over the 35 years of cooperation.

These Norwegian supported activities delivered outputs which in turn contributed to a purpose of ‘Ensuring the provision of high quality health care to the population of Botswana, with strong emphasis on the rural populations’. This purpose in turn contributed to an assumed Goal of ‘Improved health for the people of Botswana’.

The Evaluation team used this structure to define indicators for measuring progress at the Output, Outcome and Impact levels. At Impact and Outcome levels, the indicators selected were ones that were found to be available in Botswana and ones where it was assessed that the evaluation would have a reasonable prospect of finding comparable data from previous years to monitor progress. Of course it was recognised that very few data series would go all the way back to 1975.

Given the long duration of the Norwegian support, as well as its flexible nature based on annual work plans rather than predefined outputs to be expected over a particular time frame, it was recognised that the Output indicators would be harder to monitor. However it was anticipated that evidence of achievement against output targets would be assessed from the formal mid-term reviews and evaluations that have been undertaken, as well as other sources.

¹ Based on documentation made available from the NORAD archives.

² WHO (2008): Ouagadougou declaration on Primary Health Care and Health Systems in Africa.

Draft Post-hoc Logical Framework Norwegian Assistance to Botswana Health Sector, 1975-2011

Narrative Summary	Objectively Verifiable Indicators (OVI)	Critical Assumptions
<p>Impact</p> <p>Improved health for the people of Botswana.</p>	<p>Life Expectancy increased Infant Mortality Rate reduced to 27/1,000 by 2011. (<u>Baseline</u>: Year 1973-1977, 57.3 / 1000, Family Health Survey II, 1988) <5yrs Child Mortality Rate reduced to 21/1,000 by 2011 (<u>Baseline</u>: Year 1973-1977, 88.62 / 1000, Family Health Survey II, 1988) Maternal Mortality Rate reduced to 150/100,000 by 2011 (<u>Baseline</u>: 2005, 380/ 100 000 live births, WHO, UNFPA, UNICEF and The World Bank, 2007) Incidence of HIV, particularly amongst the youth, halted & reversed by 2016. Morbidity and mortality caused by TB reduced. (<u>Baseline</u> incidence of TB: 431.4/100 000: MOH Report 1976) The incidence of confirmed malaria reduced to below 20 cases per 1000 People.</p>	<p>Growth in the National economy.</p> <p>Parallel growth and improved quality in the Botswana education system.</p> <p>Any new threats to health are containable.</p>
<p>Outcome</p> <p>To ensure the provision of quality health care to the population of Botswana, with strong emphasis on the rural populations.</p>	<p>Proportion of <1yr old children who are fully immunised. Target 2009 – 80%. Ante-natal attendance coverage (<u>Baseline</u>: 1984, 90%, BFHS) % of births supervised by qualified health worker. (Baseline: 1984, 66%, BFHS) Contraceptive Prevalence rate. % of estimated HIV+ves receiving regular ART. Rate of Protein Energy Malnutrition amongst children. Target 2011: 8%.</p>	

Outputs	Objectively Verifiable Indicators (OVI)	Means of Verification by ET
<p><u>Building Block 1: Leadership & Governance</u></p> <p>Strengthened government leadership and governance for the health sector.</p>	<p>1.1 Norwegian support in line with National Development Plans 1.2 Government institutions and systems utilised for planning and implementation of the Norwegian assistance (planning, financing, financial reporting and Auditing) 1.3 Strengthened health policy and legislation in several areas (pharmaceuticals, dental health, mentally and physically disabled)</p>	<p>Review of : Botswana development Plans Project / Programme agreements Official correspondence Botswana/Norway Programme/Project reports</p>
<p><u>Building Block 2: Health Services Delivery</u></p> <p>Increased access to PHC services, particularly in rural areas. Rural health posts /health stations Health Centres Hospitals Office accommodation Staff Housing Dental Clinics Training institutions Central and regional Medical stores Central & regional maintenance workshops Radios for rural clinics Vehicles for clinics, RHTs, Dental Mental & maintenance services</p>	<p>2.1 % of citizens living within 15km, 8km and 5 km of a health facility. 2.2 No. of hospital Beds/population 2.3 Outpatient attendances / population 2.4 Hospital Inpatient's discharges per 1,000 population 2.5 Norwegian supported constructions in current use and in good condition</p>	<p>Review of Government health statistics</p> <p>Field Visits</p>
<p><u>Building Block 3: Human Resources for Health</u></p> <p>Increased availability of key human resources for health</p>	<p>3.1 Doctor/population 3.2 Nurse/population 3.3 Others (dental therapist/maintenance technician/lab/pharmaceutical technician) / population 3.4 % of Botswana medical officers vs. Foreign medical officers 3.5 TA contributed positively to capacity building and institutional strengthening 3.6 Training assistance contributed positively to capacity building and institutional strengthening</p>	<p>Review of Government health human resources statistics.</p> <p>Interviews with Botswana counterparts of TA and beneficiaries of training.</p>
<p><u>Building Block 4: Health Financing</u></p> <p>Health Financing Options considered</p>	<p>4.1 National Health Accounts developed.</p>	<p>Review of Health Research Unit activities.</p>
<p><u>Building Block 5: Health Information</u></p> <p>Reliable health statistics available 5.1 HIS designed and functioning. 5.2 National Health Status Evaluation undertaken.</p>	<p>5.1 Improved quality and reliability of the HIS 5.2 Health information use for decision making.</p>	<p>Review of : Government health statistics Other outputs from HMIS Interviews with HIS and Planning Officers, MOH.</p>

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<p><u>Building Block 6: Health Technologies</u> Stronger healthcare technology systems in relation to drugs and pharmaceutical supplies and medical equipment management. 6.1 CMS strengthened 6.2 Biomedical Engineering maintenance system established 6.3 Development of standard health infrastructure designs</p>	<p>6.1 Improved procurement and distribution system for drugs and medical supplies 6.2 Reliable system for Quality control of drugs operating regularly 6.3 Budget is allocated for maintenance of equipment and infrastructure 6.4 Infrastructure maintenance systems are operating in health facilities 6.5 Equipment maintenance system operating</p>	<p>Discussions with staff during field visits and at CMS & BEU, Review of any evaluations done of : CMS Biomedical Engineering Unit</p>
<p><u>Building Block 7: Community Ownership and Participation</u> Increased community participation in health services management in Remote Areas.</p>	<p>7.1 Strengthened participation of communities in improving their health. 7.2 Functioning village health committees in remote areas</p>	<p>Review of RADP Evaluation documents Field Visits</p>
<p><u>Building Block 8: Partnerships for Health Development</u> Increased partnership between Norwegian and Botswana institutions. Cooperation agreements between Norwegian and Botswana institutions.</p>	<p>8,1 Continuing Institutional links between institutions in Botswana and institutions in Norway.</p>	<p>Discussions with staff involved in institutional links from (1) Botswana: Planning Unit, MOH Health Research Unit, MOH AIDS/STD Unit, MOH, MLGH Health Statistics Unit, MOH Ministry of Education CCE, Francistown UoB (2) Norway DiS Helsedir Rogaland fylkeslege SSB – Statistics Norway University of Oslo, Bergen and Tromso. Haukeland University Hospital</p>
<p><u>Building Block 9: Research for Health</u> Increased capacity to undertake health and health systems research. Cooperation agreement between MOH and University of Oslo.</p>	<p>9.1 Research outputs 9.2 Evidence of utilisation of relevant research results for decision making</p>	<p>Discussions with staff and review of any evaluations done of the Health Research Unit.</p>

Building Block Activities	Projects	Building Block Activities addressed
Organised according to the nine building blocks for Health Systems Strengthening 1. Leadership & Governance 2. Health Services Delivery 3. Human Resources for Health 4. Health Finance 5. Health Information 6. Health Technologies 7. Community Ownership and Participation 8. Partnerships for Health Development 9. Increased capacity to undertake health and health systems research.	BOT003 – Basic Health Services	1, 2
	Norwegian Volunteers	2
	BOT008 Dental Health	1, 2, 3
	WB Family Health Project	1, 2, 3
	BOT014 Botswana Health Programme.	1, 2, 3, 6
	BOT015 Sector Support to Health	1, 2, 3
	BOT090 Support to RADP	1, 7
	BOT015 Institutional Cooperation with the health sector	1, 3, 5, 8, 9
	BOT2202 Training of Botswana Doctors	3
	BOT2201 Human Resources assistance to the MOH for ARVs	1, 2, 3

1.2 Evaluation Organisation

The Evaluation was organised as five separate, albeit related, thematic sub-studies:

- Health Status
- Health Systems
- Financing
- Stakeholders and Beneficiaries
- Norwegian Programmes and Projects

Each of these is discussed below.

1.3 Health Status Sub-study

Introduction

The Health sub-study was led by the team Public Health Specialist with the purpose of providing inputs in order to answer the evaluation question:

- What is the chronology of development in the health status of the target groups for assistance, including the main changes, since 1975 and up to 2010?

The evaluation team carried out a retrospective study based primarily on the collection and analysis of secondary quantitative data. This analysis was complemented with inputs from qualitative data collected through semi-structured interviews with key informants both from Botswana as well as from Norway.

The study consisted of an analysis of epidemiological and demographic trends and trends in key socio-economic determinants of health, with particular reference to the effects of the HIV epidemic.

○ *Demographic trends and trends in selected socio-economic determinants of health*

The following data was analysed for this:

Demographic data

- Total population
- Average annual population growth rate
- % of population by age group (0-4; 5-14; 15-24; 25-44; 45-64; 65+)
- Number of births per women of child bearing age
- Life expectancy at birth (in years, for women and men)
- Percentage of teenagers 15-19 who are mothers (by level of education)

Socio-economic determinants of health

- Adult Literacy rate (male, female)
- Percentage of population with access to safe water (by urban and rural areas)
- Percentage of population with access to sanitation (by urban and rural areas)
- Rate of Protein Energy Malnutrition amongst children
- Rate of unemployment (with Finance sub-study)
- Proportion of population living below the poverty line (with Finance sub-study)

○ *Epidemiological trends*

This included the analysis of the following data:

- Causes of outpatient morbidity (percentage by cause of consultation)
- Causes of hospital outpatient morbidity (percentage by cause of consultation)
- Inpatient mortality (percentage by cause of death)
- Infant Mortality Rate
- Under 5 Mortality Rate
- Maternal Mortality Rate
- Prevalence of diarrhoea and respiratory diseases among children
- Incidence rate of tuberculosis / 100 000
- Prevalence rate of tuberculosis / 100 000
- Confirmed malaria cases per 1000 People
- Incidence of HIV.

Data collection

An Excel spread sheet data base was prepared for each of the indicators to enable an analysis of the trends of each. The data from the earliest available year was used as the baseline. Data was collected from five yearly intervals (or closest available) starting from 1975 to the most recently available, with intervening years included where possible.

Analysis of the information

The pivot table function of the Excel software programme was used to produce relevant reports from each data set. Key indicators analysed by this sub-study corresponded to the indicators defined at the impact and outcome levels in the *post-hoc* log frame developed for the evaluation.

1.4 Health Systems Sub-study

The sub-study was led by the Evaluation Team Leader and included an assessment of the following areas: health policy, health services systems delivery, human resources for health and review of health infrastructure.

1.4.1 Health Policy

The Health Policy assessment was led by the team's Health Policy specialist, tracking the major phases of policy development and subsequent changes of the health services in Botswana health sector. The Evaluation also considered the external trends that may have impacted on the Botswana health sector brought about by international health initiatives as well as the internal priority changes (e.g. resulting from new infectious diseases, such as HIV and AIDS).

The Evaluation used secondary data sources, primarily the successive National Development Plans and other major health policy documents in order track the major changes in health policy over the three decades. This analysis was supplemented by key informant interviews in order to put the changes into context in order to produce a descriptive of analysis of major health sector policy changes in Botswana, related to shifts in the international health policy environment.

1.4.2 Health Services Delivery / Systems Development

The assessment of the Health Services Delivery Systems Development was led by the team Public Health Specialist. The evaluation comprised of a retrospective study, based primarily on the collection and analysis of secondary quantitative data. This analysis was complemented with inputs from qualitative data collected through semi-structured interviews with key informants both from Botswana as well as from Norway.

The study consisted of an analysis of trends in four broad areas:

- access to health services and trends in the availability of health services, particularly PHC services, for the Botswana population;
- trends in utilisation of health services;
- analysis of quality of health care services, and
- trends in the evolution of the HIV epidemic and how this has affected the Botswana society in general and in particularly the health care system.

The study collected information on the provision of services at hospitals and primary care level with an emphasis placed on the primary care level to reflect NORAD's support, particularly in the period 1975-1996, focussed largely at this level. A brief description of the approach for the analysis of each area is presented below.

○ *Access to health services and trends in the offer of health services made available to the Botswana population (particularly primary care services)*

This area included the analysis of the following data:

Access to health services:

- % of citizens living within 15km, 8km and 5 km of a health facility (by urban and rural population).

Health services available

- Number of health facilities by type of facility
- No. of hospital beds by type of facility
- No. of hospital beds/population
- Doctor/population (with HR sub-study)
- Nurse/population (with HR sub-study)
- Other cadres/population (pharmaceutical technician /maintenance technician/ lab technician/ dental therapist /) (with HR sub-study)
- Package of services provided by each type of health facility
- What were the main changes in the provision of health care services, particularly in rural area over the period under study? (Stakeholder perceptions study, review of documentation)

○ *Trends in utilisation of health services*

This area included the analysis of the following data:

- Number of Outpatient attendances per type of facility
- OPD visit / population
- Number of hospital admissions per type of facility
- Number of inpatient days per type of facility
- Inpatient admissions per 1,000 population
- Number of child welfare attendances

- Proportion of <1yr old children who are fully immunised. (Due to change in indicators used, for the earlier years, the proportion of children under 1 yr old immunised with DPT, BCG, Polio.)
 - Ante-natal attendance coverage
 - % of births supervised by qualified health worker.
 - Couple Years of Protection / Contraceptive Prevalence rate.
- *Trends in the evolution of the HIV epidemics and how it has affected the Batswana society in general and in particularly the health care system*

This area included the analysis of the following data:

- Number of adults, women and children living with HIV
- HIV prevalence among the population aged 15-49 (percentage)
- HIV prevalence among pregnant women (percentage)
- Incidence of HIV particularly amongst the youth
- Percentage of HIV+ pregnant women who receive ARV to reduce the risk of mother to child transmission
- Percentage of women and men aged 15-49 who receive and HIV test in the last 12 months and who know their results.
- % of adults and children with advanced HIV infection receiving ARV therapy

Data collection

An Excel spread sheet data base was prepared for each of the indicators to enable an analysis of the trends of each. The data from the earliest available year was used as the baseline. Data was collected from five yearly intervals (or closest available) starting from 1975 to the most recently available, with intervening years included where possible.

Analysis of the information

The pivot table function of the Excel software programme was used to produce relevant reports from each data set. Key indicators analysed by this sub-study corresponded to the indicators defined at the Outcome level in the *post-hoc* log frame developed for the evaluation.

1.4.3 Human Resources for Health

The assessment of Human Resources for Health (HRH) was led by the team Human Resources Specialist. The objectives of the HRH study were twofold, firstly, to track the changes in the availability of HRH from 1975 to 2010, and secondly to assess the relevance, effectiveness, efficiency and sustainability of the Norwegian contributions to this change.

The changes in the numbers of the principal cadres of health workers available in Botswana was assessed through the analysis of secondary data, supplemented by key informant interviews, to provide trend data for:

- No. of Medical Doctors per population
- No. of Nurses per population

For each of the technical areas that Norway provided training support, Doctors, Dental Technicians, Laboratory Technicians, Pharmacy Technicians/Pharmacists, Midwives, Specialist Anaesthetics, ARV delivery, etc. the inputs (volunteers, lecturers, tutors etc.) provided by Norway were tracked as well as information on the numbers trained.

In order to assess the relevance, effectiveness, efficiency and sustainability of the training provided, the views of HRH professionals in the MoH, tutors and the intermediate beneficiaries, the stakeholders who have benefited from training programmes, were sought.

1.4.4 Health infrastructure review

The evaluation of the Norwegian support to the development of physical facilities for the provision of health services in Botswana, was carried out as a self-standing study, led by the team Capital Planning Specialist, under the umbrella of the broad evaluation of the extensive Norwegian support to the global development of the Botswana health system. The sub-study consisted of a review of relevant documents from the NORAD archive, key informant interviews with officials currently involved in the various capital works development and field trips to facilities constructed with Norwegian assistance both in Gaborone and in Tutume Sub District. In Tutume key informant interviews were held with council representatives and members of the district health team, and health staff in the facilities visited.

At central ministerial level, information on policies, planning norms and implementation strategies that have guided capital investments in health infrastructure since the early 1970s, and the strategies employed to sustain these investments were sought through a series of interviews with key officials in the ministries concerned with the definition, planning and implementation of capital projects and their maintenance. Ministries visited included: I) Ministry of Health, Project Planning Unit and Ministerial Technical Unit; II) Ministry of Infrastructure, Science and Technology (MIST), Department of Building and Engineering Services (DBES) Architectural Design Unit, and III) Ministry of Local Government. At central level, visits were also made to the Biomedical Workshop at Princess Marina Hospital, and to the Central Medical Stores and the Institute of Health Sciences where Norway supported significant construction work.

At district level, discussions were held with the District Commissioner, District Health Office, District Local Government Office and the District office of MIST, Department of Building and Engineering Services (DBES) concerning District authorities' inputs to the project definition process; their responsibilities, role and involvement in project implementation; functional strengths and weaknesses at the time of implementation and at present; and observed issues of sustainability of the overall district portfolio of health infrastructure and each health facility.

At health facility level, a selection of health facilities, built with Norwegian assistance, were visited in Tutume District, including staff housing, health posts, health clinics with, and without, maternity unit, and a primary hospital. At these facilities, discussions were held with staff to identify advantages and disadvantages of the functional layout and allocation of space, and the facility's ability to meet past and present functional demands. Any alterations made to the original physical structure, and the reasons for these, were examined and discussed with the staff. The technical appropriateness of the originally chosen structural design and construction concept and its ability to withstand the climate and many years of intensive use was observed along with an assessment of the functional suitability of the original utilities (water and power supply, and drainage system) design and their current condition. The suitability of possible adaptations made to the original building structure was considered, from both functional and technical perspectives. The effectiveness of current arrangements to protect the capital investments in building infrastructure and medical equipment in the form of maintenance routines was assessed along with an assessment of the

routines for handling and processing of solid and liquid medical waste, and the resulting environmental impact of the health facility operations.

1.4.5 Finance Sub-study

The finance sub-study was led by the team Health Economist in order to describe the evolution, from 1975 until 2010, of (1) economic and health expenditure trends, (2) the trends in domestic health expenditure and in NORAD's aid to the health sector, and (3) the correlations between economic indicators, health expenditure indicators and health status indicators. These included:

- Total expenditure on health as % of gross domestic product,
- General government expenditure on health as % of total expenditure on health,
- General government expenditure on health as % of total government expenditure,
- External resources for health as % of total expenditure on health,
- Per capita total expenditure on health,
- Per capita government expenditure on health.

○ *Materials and Methods*

The Botswana Financial Year was used: April Year N to March Year N+1.

The Financial Year for National Accounts was July Year N to June Year N+1.

Sources³ for GDP data:

1. *CSO, National Accounts of Botswana 1988/89 and 1989/90, September 1997*
Data collected:
 - a. GDP by type of economic activity at current prices (1974/75 till 1989/90)
 - b. GDP by type of economic activity at constant 1985/86 prices (1974/75 till 1989/90)
2. *MFDP, 2005 Annual Economic Report Published as Supplement to the 2005 Budget Speech, February 2005*
Data collected:
 - a. GDP by type of economic activity including the adjustment items at current prices (1993/94 till 2003/04)
 - b. GDP by type of economic activity including the adjustment items at constant 1993/94 prices (1993/94 till 2003/04)
3. *CSO, National Accounts Statistics of Botswana Quarterly Gross Domestic Product 1993/94 – 2002/03, September 2004*
Data collected:
 - a. Value Added by type of economic activity including the adjustment items at current prices (1993/94 till 2002/03)
 - b. Value Added by type of economic activity including the adjustment items at constant 1993/94 prices (1993/94 till 2002/03)
4. *CSO, National Accounts Statistics of Botswana Quarterly Gross Domestic Product 1994/95 – 2004/05, August 2006*
Data collected:
 - a. Value Added by type of economic activity including the adjustment items at current prices (1994/95 till 2004/05)
 - b. Value Added by type of economic activity including the adjustment items at constant 1993/94 prices (1993/94 till 2004/05)
5. *Bank of Botswana, Financial Report, December 2010*

³ In case of discrepancy between sources, data from sources 4 and 5 were kept.

Data collected:

- a. Value Added by type of economic activity including the adjustment items at current prices (2005 to 2009 – Calendar Years)
 - b. Value Added by type of economic activity including the adjustment items at constant 1993/94 prices (2005 to 2009 – Calendar Years)
6. *NDP 4 (Project Review October 78); NDP 6; NDP 7; NDP 8; Mid-Term Review of NDP 8; NDP 9; Mid-Term Review of NDP 9; NDP 10*

Sources for Government spending on health

1. *MFDP, Estimates of Expenditure from the Consolidated and Development Fund, 1979/80 to 2010/11 (32 Books).*

Each book includes:

- For the Consolidated Fund: authorised expenditure Year N+1, estimate expenditure Year N+2, actual expenditure Year N-2, authorised expenditure to 31/12 of Year N-1, estimate expenditure for the current year; by ministry, by department and by account.
- For the Development Fund: original NDP TEC, revised NDP TEC, cumulative expenditure, actual expenditure Year N-2, revised expenditure Year N-1, estimate expenditure current year, by ministry, by department and by project.

Data collected:

- a. Consolidated Fund: actual expenditure by Ministry, by department of the MoH, for NACA (State President), and for the PHC Department of MOLG
 - b. Development Fund: revised NDP TEC, cumulative expenditure, actual expenditure Year N-2
2. *Financial Statements, Tables and Estimates of Consolidated and Development Fund Revenues, 1980/81 (for the years 1973/74 till 1978/79); 1984/85 (for the years 1977/78 to 1982/83); 1990/91 (for the years 1983/84 to 1988/89); 1993/94 (for the years 1986/87 to 1991/92); 1997/98 (for the years 1990/91 to 1995/96); 2000/01; 2004/05 (for the years 1997/98 to 2002/03); and 2010/11 (for the years 2003/04 to 2010/11) (8 Books).*

Data collected⁴:

- a. Consolidated Fund: actual expenditure by Ministry
 - b. Development Fund: actual expenditure by Ministry
 - c. Development Fund Revenue by type of source
3. *MoH, Organisational Review – Status Report, 2002*
 4. *MoH, Organisational Review – Options Report, 2002*

Norwegian assistance to health sector in Botswana

Budget and actual expenditure of the Norwegian assistance to the health sector through the different projects and programmes (including projects not targeting directly the health sector but having a health component), broken down by type of assistance (bi-lateral, multi-lateral, volunteers, NGOs, technical assistance), by project/programme, by area (Health System Strengthening blocks), and by category of cost (pending on the availability of this information).

⁴ In case of discrepancy between sources, data from source 2 were kept.

1.5 Beneficiaries and Stakeholders Sub-study

The Stakeholder / Beneficiary sub-study was coordinated by the team leader with contributions from the Social Scientist (Botswana beneficiaries), the Policy Specialist (Botswana stakeholders) and the Public Health Specialist (Norwegian stakeholders).

Beneficiaries of the programme were defined as the people of Botswana, the ultimate objective of the Norwegian assistance who, through improved health services were the ultimate beneficiaries. Stakeholders in the programme were defined as individuals or institutions that have been involved in the programme of cooperation at some stage over the last thirty five years. Such people included Norwegian or Botswana officials who were involved in planning, agreeing and monitoring the collaboration, who may have been involved in implementing some parts of the collaboration or been intermediate beneficiaries, such as individuals who have received training as a result of the collaboration.

1.5.1 Beneficiaries

The purposes of this sub-study were:

- To gain the views of the beneficiaries in relation to changes in health services delivery in Botswana over the last 35 years, particularly, if possible, with reference to any Norwegian supported inputs.
- To gain the views of Botswana and Norwegian Stakeholders as to the relevance, effectiveness, efficiency and sustainability of the Norwegian – Botswana cooperation in the health sector.

Sources of Data

Literature Review

Data was collected from relevant literature, being reports and studies on community participation in development in Botswana, particularly health service planning and delivery. Reports reviewed were obtained from the MoH library, MOLG, Botswana National Archives, District Council offices and National AIDS Coordinating Agency. Information gathered was:

- Various manuals, frameworks, policies and priorities for community participation such as the National Strategic Framework on HIV/AIDS, District Planning Manual, Guidelines for Community Projects and Guidelines for village level committees.
- Several evaluations and reviews of community projects, evaluating the roles and performances of community groups as key players in development (and health delivery) processes.

Field Work

Information was also obtained through field work during which various stakeholders were contacted for interviews and health facilities visited. Tutume sub-district was selected for the one-week field work. The reasons for selecting this sub-district was (1) the considerable amount of Norwegian contribution in the health sector in the district, and (2) due to the cross-sectional representation of the populations (which includes poor, marginalised, remote and disadvantaged). (3) It was also relatively easily accessible, in consideration of the study's time constraints.

Pre-Field Work Preparations

Prior to the team's visit to the field, a Research Assistant⁵ was recruited and trained. She then travelled to Tutume and other selected villages and spent 3 days making initial contacts with community leaders and appointments for the team's field work activities. We were able to meet adequate numbers of people. The Research Assistant participated in the subsequent consultations and assisted with interpretation during the meetings, as the people predominantly speak Kalanga language in which she was fluent.

Data collection tools

The following discussion guides show the key points raised with the various groups met during the field visit.

⁵ Ms Nthati Boemo.

SUB-STUDY 4: INDIVIDUAL AND COMMUNITY PERCEPTIONS: Discussion Guide

	Key Questions	Primary Respondents	Data Collection Tools
1. What have been the main changes since 1975 in the health status of the individuals and communities and the health care system in BOT			
1.2 Development in the health status of the target groups for assistance	<p>Since Independence what have been the main changes in the disease patterns and health of the local population? Discuss</p> <p>What socio-economic factors have influenced the changes in health status of different groups?</p> <p>What have been the major health needs and expectations of the community?</p> <p>Describe the health care services and practices available over the years.</p> <p>Are people suffering from the same illnesses as they were around Independence or are there different ones? Discuss</p>	<p>Health care workers (serving & retired)</p> <p>Community groups.</p> <p>Community members</p> <p>Community leaders</p> <p>Politicians.</p> <p>Council staff.</p> <p>Local media & other opinion leaders.</p>	<p>Public consultations (<i>kgotla meetings in study communities</i>).</p> <p>Focus groups discussions</p> <p>Key informant interviews</p> <p>Reports</p>
1.2 Improvements in the health of target user groups for assistance	<p>Describe the major improvements in the health status of different groups in the community (mortality, nutrition, health education).</p> <p>Are people living longer?</p> <p>Are fewer children dying now than before? Other groups? E.g. rehabilitation of disabled, youth health?</p>	As above	
1.3 Capacity of the Botswana health care system to fulfil its core functions to improve and safeguard the health of its population	<p>What were the health services like in this village at independence? Did you have a health facility or did you have to travel somewhere else to see a doctor or nurse? If there was no facility when did the facility come here?</p> <p>Has the health facility remained the same since it first arrived or has it been upgraded either physically or with better staff? When did these improvements take place? How did the community participate in the decisions and processes towards these improvements?</p> <p>What services does the clinic provide and when did they start? (1) OPD, (2) In Patient cares (3) ANC (4) EPI (5) Maternity (6) HIV testing (7) ARV delivery (8) Health education.</p> <p>Is there any difference between the way these services were provided before and now? How the provision of services has changed over time in this facility? In this village?</p> <p>What factors necessitated these improvements?</p>	<p>Village Health Committees, Village development Committees, Child Welfare Committees, Community-based organisations, NGOs. Other institutions</p> <p>Community District council staff (serving and retired)</p> <p>Retired health staff who interacted with Norwegian personnel (if available)</p>	<p>Reports</p> <p>FGDs</p> <p>Key informant interviews</p>

	Key Questions	Primary Respondents	Data Collection Tools
	<p>Have drugs / medicines always been supplied by the clinic? Is there transport to take emergencies to a hospital? Are there community groups, institutions and networks which participate in the design and provision of health services? How have they participated? Describe the initiatives for strengthening community health systems Describe system for coordinating health systems at community level How has the role of the District Council, with regards to health service provision, changed since independence? How has the relationship between District Councils and MoH with regards to health service provision evolved over time?</p> <p>For those that interacted with Norwegian staff: In which areas did you interacted with the Norwegian staff (planning, coordination, implementation)? What were the main characteristics of this interaction? What was the main contribution of the Norwegian collaboration? Could it have been done in a different way? What happened when the Norwegian collaboration stopped? How were activities continued?</p>		
<p>1.4 To what extent have the improvements made at the user and the systemic levels prior to the onset of the HIV and AIDS epidemic contributed to the capacity of the Botswana Health Systems to handle the epidemic</p>	<p>When AIDS first arrived in Botswana, what help was the health facility able to provide? (1) HIV Testing, (2) Counselling, (3) treatment of OI, (4) HIV/AIDS education and awareness, (5) information dissemination, (6) community mobilisation for prevention and mitigation (7) home-based care.</p> <p>How clinic staff worked with/assisted the community to deal with the epidemic To what extent have the facilities improved access to health by all groups in the community? How has the community assisted those individuals or families with AIDS? Does the clinic now provide ARVs? When did this start?</p>	<p>HIV/AIDS community based organisations.</p> <p>Health care staff Community networks and institutions</p>	<p>FGDs</p> <p>Interviews Reports</p>

<p>2.1 To what extent has the assistance been responsive to the needs and expectations of the target users groups for assistance</p>	<p>Describe the health needs of the community (different groups) What expectations does the community have on the health sector To what extent have these been met over the years? (various groups) What involvement does the local community have in how the clinic is run? Is there any system that enables ‘the community’ voice to be heard to influence changes in the health services provided by the clinic?(I think these last 2 points fit well under 2.3?</p>	<p>Community consultations FGDs with community groups (men, women, youth, children). Community-based organisations/committees and networks Politicians Community leaders Other stakeholders</p>	<p>FGDs checklist</p>
<p>2.2 What are the stakeholder perceptions of the achievements and limitations of the Norwegian assistance</p>	<p>Is the community aware that there was assistance from another country in the building of the clinic? If they are which country? If they are aware, were they satisfied with what was done? If not why not? For those that interacted with Norwegian staff: In which areas did you interact with the Norwegian staff (planning, coordination, implementation)? What were the main characteristics of this interaction? What was the main contribution of the Norwegian collaboration? Could it have been done in a different way? What happened when the Norwegian collaboration stopped? How were activities continued?</p>	<p>Contact representatives of other development partners in the community.</p>	<p>Key informant interviews</p>

1.5.2 Botswana and Norwegian stakeholders

The evaluation team identified and contacted key informants that had been involved in the planning of Botswana's health services and also the planning of the NORAD assistance to the health sector, both in Botswana and in Norway. A variety of informants were contacted by telephone (mainly the Norwegian stakeholders) or in person (the Botswana stakeholders) from various time periods to provide a range of views in order (1) to supplement the findings of the data collection exercises under the other sub-studies, and (2) to explore their views on the relevance, effectiveness, efficiency and sustainability of the Norwegian inputs.

Discussions with these stakeholders followed a set of key discussion points to ensure that all key points were raised, but with the flexibility to explore particular areas of interest as they arose. The following pages provide the outline of discussion points for each category of stakeholder.

○ *Botswana Stakeholders - key discussion points*

Introduction

Provide a short explanation of what the evaluation team is doing and why we think the informant may be able to help. Assure interviewees that the discussion will remain confidential and that any comments they make will not be attributed to them in our final report. Their name will be included in the report as someone we have contacted unless they would prefer us not to mention their name. If someone wishes their name not to be mentioned in the report, be sure to note this.

Obtain their Name and contact details if they think they did have some involvement in the Norwegian – Botswana (N-B) collaboration. Ask them if they can provide contact information for any other potentially relevant informants.

Establish what aspects of the N-B collaboration the informant was involved with. Were they:

- A decision maker involved in high level interactions with Norwegian Government/NORAD officials?
- Someone involved in the detailed planning of aspect(s) of the Norwegian programme?
- Someone who benefitted from a formal training programme either funded by NORAD, implemented in Botswana by (wholly or partly) a Norwegian trainer, or undertaken in Norway?
- Someone who participated in some more informal training involving Norwegian Technical Assistance, such as working alongside such a TA being mentored?
- Someone involved, from the Botswana side, in managing or implementing the institutional links between Botswana and Norwegian organisations?

It is possible that an informant will fit into more than one of the above categories. If they do follow the following discussion guides for each of the appropriate categories.

Try not use this as a questionnaire but hold an open conversation steering the conversation to ensure all points are covered, but allow other points to be made.

(1) Decision makers and (2) Planners

Obtain a description of their interactions with Norwegian officials – when did it take place, which NORAD programme it related to, what were the principal roles of the informant in the interactions. Remember that one individual may have been involved in several phases of the cooperation and that their views on the relevance, effectiveness etc. of the different activities may have varied with the different phases.

Relevance: in the opinion of the interviewee, were the activities that Norway was supporting appropriate for Botswana at that time, were they high priorities for the GOB at that time? If Norway had not provided this support, what would have happened – would the GOB or another partner have provided them?

Effectiveness: in the opinion of the interviewee, was the programme supported by Norway delivered as planned? Were all the activities carried out in the timetable envisioned for them? Did the activities result in the anticipated outcomes? If not request their opinion as to what the main problems were that led to delays or underperformance? Were plans overambitious? Were there any unanticipated positive results?

Efficiency: in the opinion of the interviewee, was the programme supported by Norway delivered in an efficient manner? Could the same activities been supported through some other mechanism that might have been cheaper to implement (mention the provision of doctors, the building of infrastructure, the training of doctors)? Were there mechanisms to ensure communication and coordination between MoH and Councils/Ministry of Local Government and Lands and NORAD? If so, were these effective in facilitating project activities? How? Were Botswana's own management, financial and accounting systems used to implement projects or were external systems used, for instance to manage the funds?

Sustainability: in the opinion of the interviewee, have the programme/activities supported by Norway been sustained? Depending on what activities the interviewee was involved in, this might vary (E.g. Are health structures built still being used? Are the health workers trained still working in the Botswana health system (public or private)? Are the health systems introduced and supported (e.g. CMS, Dental services) still operating as effectively as when they started?)

How did the participation of Norwegian TA in leadership positions (e.g., at regional/district level) facilitate or hinder the consolidation of the health services delivery systems, particularly for the provision of primary health services in rural areas? What was their contribution to building capacity at local level (e.g. leadership capacity, planning, monitoring and evaluation, team building, improved coordination between MoH and MLG, strengthening of community participation?)

Finally, we want to explore the nature of these interactions, so in the opinion of the interviewee:

- Were the interactions between N-B officials collegiate, with participants treated as equals?
- Were the views of the Botswana representatives treated seriously?
- Were the contributions made by Norwegian participants helpful or not?

- How were any disagreements resolved?

The N-B cooperation has been going on for 35 years. Did the longevity of this relationship help to ensure a mutual understanding between the two sides?

- Does the interviewee believe that the Norwegian collaboration in the period 1975-1988 contribute to the health sector being better prepared to face the HIV epidemic? If yes or no, please explain.
- What would you say are the three most important contributions of the NORAD collaboration to the health sector in Botswana?
- Were there any missed opportunities?

(3) People who received formal training

Obtain a description of the formal training programme they participated in: title of programme, location, dates and duration.

Relevance: in the opinion of the interviewee, was the training programme a high priority to address Botswana's needs at the time? Was it also a personal high priority in terms of the interviewees own career path?

If Norway had not supported this training programme, what would have happened – would the GOB or another partner have supported them?

Effectiveness: in the opinion of the interviewee, was the training programme of good quality and did it provide the necessary skills that the interviewee had anticipated? Did the interviewee end up with the skills s/he needed when they went back to work?

If not request their opinion as to why they think the course did not turn out as anticipated.

Efficiency: in the opinion of the interviewee, was the training programme/course followed the most efficient way of getting the skills it provided, or could it have been done more efficiently through some other way (such as in another country, on-the job training rather than a course)?

Sustainability: what has been the career path of the interviewee since the training took place? Did they use the skills gained by the training when that finished? If not, why not?

Has their career since the training been entirely in Botswana or have they also worked in some other country? If so for how long and did they then return to work in Botswana?

Has their career since the training been entirely in the Botswana Public Sector, or have they also worked in the Botswana private sector? If so for how long and did they then return to work in the public sector?

(4) People who received Informal training/mentoring

Obtain a description of the informal training / mentoring they received from one or more Norwegian technical assistants: Job title of interviewee and the TA, main roles when working together, dates and duration.

Relevance: in the opinion of the interviewee, did the TA provide training or mentoring to you in skills that were a high priority to address Botswana's needs at the time? Were they also a personal high priority in terms of the interviewees own career path?

If the TA had not provided this training /mentoring, what would have happened – would the GOB or another partner have supported them in some way?

Effectiveness: in the opinion of the interviewee, was the training /mentoring provided in an organised fashion with a clear understanding by the TA of what skills s/he was trying to share and by the interviewee what skills s/he was supposed to get out the training /mentoring? Did the relationship provide the necessary skills that the interviewee had anticipated? Did the interviewee end up with the skills s/he needed?

If not, request their opinion as to why the role of the TA in training /mentoring did not turn out as anticipated?

Efficiency: in the opinion of the interviewee, was the training /mentoring the most efficient way at that time of getting the skills it provided, or could it have been done more efficiently through some other way (such as in a formal training course)?

Sustainability: what has been the career path of the interviewee since the training /mentoring took place? Did they use the skills gained on returning from the course, are they still using them? If not, why not?

Has their career since the training been entirely in Botswana or have they also worked in some other country? If so, for how long and did they then return to work in Botswana?

Has their career since the training been entirely in the Botswana Public Sector, or have they also worked in the Botswana private sector? If so, for how long and did they then return to work in the public sector?

(5) Managers / Implementers of Institutional Links Programme

This group relates specifically to officials involved in ‘BOT2202 – Institutional Cooperation with the health sector’ in which several Norwegian institutions had collaborative agreements with a number of Botswana institutions – in the MoH, the Planning Unit was responsible for coordination and the Health Research Unit, the HIV/STI Unit and the Health Statistics Unit had institutional links with Norwegian institutions. In addition the MLGH, the Ministry of Education and CCE, University of Botswana in Francistown had links.

Obtain a short description of which institution in Norway their unit was linked with, the objectives of the institutional agreement and how it operated.

Relevance: in the opinion of the interviewee, were the objectives and activities supported by the institutional agreement a high priority to address Botswana’s needs at the time? In the view of interviewee, what were the most important outcomes achieved by the arrangement?

If Norway had not supported this institutional arrangement, what would have happened – would the GOB or another partner have supported them?

Effectiveness: in the opinion of the interviewee, did the institutional arrangements work and deliver the objectives that had been agreed for the arrangement? Were all the activities carried out in the timetable envisioned for them? Did the activities result in the anticipated outcomes? If not request their opinion as to what the main problems were that led to delays or underperformance? Were plans overambitious?

Were there any un-anticipated positive outcomes?

Efficiency: in the opinion of the interviewee, was this institutional arrangement delivered in an efficient manner? Could the same activities been supported through some other mechanism that might have been cheaper to implement?

Were Botswana's own management, financial and accounting systems used to implement the links or were external systems used, for instance to manage the funds?

Sustainability: in the opinion of the interviewee, has the programme/activities supported by Norway been sustained? Depending on what activities the interviewee was involved in, this might vary (E.g. health research continuing, quality improvement systems introduced etc.). Does the unit still have any relationship with the Norwegian Institution (formal or informal)?

Finally, we want to explore the nature of these interactions, so in the opinion of the interviewee:

- Were the interactions between N-B institutional representatives collegiate, with participants treated as equals?
- Were the views of the Botswana representatives treated seriously?
- Were the contributions made by Norwegian participants helpful or not?
- How were any disagreements resolved?
- The G-B cooperation has been going on for 35 years. Did the longevity of this relationship help to ensure a mutual understanding between the two sides
- Does the interviewee believe that the Norwegian collaboration in the period 1975-1988 contribute to the health sector being better prepared to face the HIV epidemic? If yes or no, please explain.
- What would you say are the three most important contribution of the NORAD collaboration to the health sector in Botswana?
- Were there any missed opportunities?

○ *Norwegian Stakeholders - key discussion points*

Introduction

Provide a short explanation of what the Evaluation team are doing and why we think the informant may be able to help. Assure interviewees that the discussion will remain confidential and that any comments they make will not be attributed to them in our final report. Their name will be included in the report as someone we have contacted unless they would prefer us not to mention their name. If someone wishes their name not to be mentioned in the report, be sure to note this.

Obtain their Name and contact details if they think they did have some involvement in the Norwegian – Botswana (N-B) collaboration.

Establish what aspects of the N-B collaboration the informant was involved with. Were they:

- A decision maker involved in high level interactions with Norwegian Government/NORAD officials?
- Someone involved in the detailed planning of aspect(s) of the Norwegian programme?
- Someone who work in the Botswana health sector as a volunteer, technical assistant or consultant?
- Someone involved, from the Norwegian side, in managing or implementing the institutional links between Botswana and Norwegian organisations?

It is possible that an informant will fit into more than one of the above categories. If they do, follow the following discussion guides for each of the appropriate categories.

Try not use this as a questionnaire but hold an open conversation steering the conversation to ensure all points are covered, but allow other points to be made.

(1) Decision makers and (2) Planners

Obtain a description of their interactions with Botswana officials – when did it take place, which NORAD programme it related to, what were the principal roles of the informant in the interactions? Remember that one individual may have been involved in several phases of the cooperation and that their views on the relevance, effectiveness etc. of the different activities may have varied with the different phases. If this occurs, try to separate the views for the different phases.

Relevance: in the opinion of the interviewee, were the activities that Norway was supporting appropriate for Botswana at that time, were they high priorities for the GOB at that time? If Norway had not provided this support, what would have happened – would the GOB or another partner have provided them?

Effectiveness: in the opinion of the interviewee, was the programme supported by Norway delivered as planned? Were all the activities carried out in the timetable envisioned for them? Did the activities result in the anticipated outcomes?

If not request their opinion as to what the main problems were that led to delays or underperformance? Were plans overambitious?

Can you mention key factors that facilitated the implementation of the programme you were involved with?

Were there any un-anticipated positive outcomes?

Efficiency: in the opinion of the interviewee, was the programme supported by Norway delivered in an efficient manner? Could the same activities been supported through some other mechanism that might have been cheaper to implement?

Were Botswana's own management, financial and accounting systems used to implement projects or were external systems used, for instance to manage the funds?

Were their mechanisms to ensure communication and coordination between MoH and Councils/Ministry of Local Government and Lands and NORAD? If so, were these effective in facilitating project activities? How?

Sustainability: Interviewees may have little knowledge of subsequent events, but if they have maintained some contact with Botswana they may have some opinion on whether the activities have been sustained or not. So, in the opinion of the interviewee, has the programme/activities supported by Norway been sustained? Depending on what activities the interviewee was involved in, this might vary (E.g. Are health structures built still being used? Are health workers trained still working in the Botswana health system (public or private)? Are the health systems introduced and supported (e.g. CMS, Dental services) still operating as effectively as when they started?)

Finally, we want to explore the nature of these interactions, so in the opinion of the interviewee:

- Were the interactions between N-B officials collegiate, with participants treated as equals?
- Were the views of the Botswana representatives treated seriously?
- Were the contributions made by Norwegian participants accepted as helpful by their Botswana counterparts or not?
- How were any disagreements resolved?
- The N-B cooperation has been going on for 35 years. Did the longevity of this relationship help to ensure a mutual understanding between the two sides?
- How did the participation of Norwegian TA in leadership positions (e.g., at regional/district level) facilitate or hinder the consolidation of the health services delivery systems, particularly for the provision of primary health services in rural areas? What was their contribution to building capacity at local level (e.g. leadership capacity, planning, monitoring and evaluation, team building, improved coordination between MoH and MLGL, strengthening of community participation)?
- Do you think that the Norwegian collaboration in the health sector in the period 1975-1988 contributed to the health sector being better prepared to face the HIV epidemic? If yes or no, please explain.
- What would you say are the three most important contributions of the NORAD collaboration to development of the health sector in Botswana?
- Were there any missed opportunities?

(3) People who worked in Botswana as a volunteer, technical assistant or consultant

Obtain a description of their role in Botswana and whether TA, volunteer or consultant. When and for how long was their involvement and what was their job title and their main roles.

Did they have a counterpart and were thus able to support/mentor a Botswana or were they operating in a line position with no counterpart?

Relevance: in the opinion of the interviewee, was the work they did a high priority to address Botswana's needs at the time?

If the interviewee had not been there, what would have happened – would the GOB or another partner undertake the role in some way?

Effectiveness: in the opinion of the interviewee, were they effective in what was expected of them? Did they have the necessary support (equipment, transport, institutional framework etc.) to undertake their role properly?

If not, request their opinion as to why they feel they were not as effective in their role as they would have hoped?

If they had a counterpart, were satisfactory arrangements in place to enable training /mentoring to be carried out. Did they have a clear understanding of what skills they were supposed to share? Do they feel that they were able to carry this out satisfactorily with the counterpart benefitting from the relationship?

If not, request their opinion as to why they felt their mentoring role was not as successful they would have hoped.

Efficiency: in the opinion of the interviewee, was his/her role the most efficient way of achieving the objectives of their job, or could it have been done more efficiently through some other way?

Sustainability Interviewees may have little knowledge of subsequent events once they left Botswana, but if they have maintained some contact with Botswana they may have some opinion on whether the activities they were involved in or introduced have been sustained or not. So, in the opinion of the interviewee, has the programme/activities they were involved with been sustained?

(4) Managers / Implementers of Institutional Links Programme

This group relates specifically to officials involved in 'BOT2202 – Institutional Cooperation with the health sector' in which several Norwegian institutions had collaborative agreements with a number of Botswana institutions.

Obtain a short description of the Norwegian institution, the objectives of the institutional agreement and how it operated.

Relevance: in the opinion of the interviewee, were the objectives and activities supported by the institutional agreement a high priority to address Botswana's needs at the time? In the view of interviewee, what were the most important outcomes achieved by the arrangement?

If Norway had not supported this institutional arrangement, what would have happened – would the GOB or another partner have supported them?

Effectiveness: in the opinion of the interviewee, did the institutional arrangements work and deliver the objectives that had been agreed for the arrangement? Were all the activities carried out in the timetable envisioned for them? Did the activities result in the anticipated outcomes?

If not request their opinion as to what the main problems were that led to delays or underperformance? Were plans overambitious?

Efficiency: in the opinion of the interviewee, was this institutional arrangement delivered in an efficient manner? Could the same activities have been supported through some other mechanism that might have been cheaper to implement?

Were Botswana's own management, financial and accounting systems used to implement the links or were external systems used, for instance to manage the funds?

Sustainability: in the understanding of the interviewee, has the programme/activities supported by Norway been sustained? Depending on what activities the interviewee was involved in, this might vary (E.g. health research continuing, quality improvement systems introduced etc.).

- Does the Norwegian institution still have any relationship with the Botswana Institution (formal or informal)?
- How did the participation of Norwegian TA in leadership positions (e.g., at regional/district level) facilitate or hinder the consolidation of the health services delivery systems, particularly for the provision of primary health services in rural areas? What was their contribution to building capacity at local level (e.g. leadership capacity, planning, monitoring and evaluation, team building, improved coordination between MoH and MLGL, strengthening of community participation)
- Do you think that the Norwegian collaboration in the health sector in the period 1975-1988 contributed to the health sector being better prepared to face the HIV epidemic? If yes or no, please explain.
- What would you say are the three most important contributions of the NORAD collaboration to development of the health sector in Botswana?
- Were there any missed opportunities?

2 Annex 2. Details of Field Work, itinerary and informants consulted

The Capital Sub-Study took place between 20 February and 11 March 2011 and consisted of key informant interviews of officials in Gaborone as well as a field visit to Tutume Sub District. In Tutume Sub District, site visits to fifteen health facilities were conducted as well as key informant interviews with council representatives and health officials.

For the stakeholder study, the field work consisted of telephone interviews with key informants in Europe (Norway, Denmark and UK) (8 – 18 March) and in Botswana (21 March-1st April). The following table shows the timetable & the list of informants consulted.

Date	Name	Position	Sub-Study
Feb 24	Ms P. Malatzi, Mr W.R. Farley	Head of Capital Planning MTU Manager	Capital
Feb 28	Mr E. Zibani,	Deputy District Commissioner Tutume	Capital
March 1	Dr I.M. Kempanju Mr Itumeleng Mojilaleng Ms HwisisoDikeleko Dr Ali Kapuya Milambo Ms Wililani Mudongo Mrs K. Motihagodi Mrs K.G. Tihalgfle Udvani Mrs Mavis Chavapih Ms Colleen Morewagae Ms Sofi Cwekwedere Nil Nil Nil	Public Health Specialist/Tutume DHMT Chief Registered Nurse Health Education Assistant (HEA) Chief Medical Officer Gweta HC Chief Nurse Nata HC Nurse in Charge Moseitse HP Principal Registered Nurse, Maitengwe HC Nursing Officer Dagwi HP Nurse, Changate HP State Registered Nurse Nkange HC SenejeHealth Post Goshwe Health Post Matobo Health Post	Capital
2	Mrs Pauline M. Itshekeng Mrs Eldan O. Hloman Nil Ms Mboko Matebu Maje S. Kedelobnye	Chief Medical Officer Tutume Hospital Nurse in Charge Mathangwane HP Makobo Health Post Cleaner Matsitama HP Assistant Nursing Officer Marapong HP	Capital
3	Mr Alexander Makoni Mr Molebi Mazara Mr MoHammed O. Rahman Mr B. Gaborone Mr Peter Mosinyi	P. Administrative Officer Tutume Council Quantity Surveyor Tutume Council Principal Electrical Engineer Senior Technical Officer Architect	Capital
4	Mr Gideon Tembo Mr Tom Brown Mr Steven Ludick	Principal Architect Department of Local Government, Technical Services Chief Operating Officer Central Medical Stores Acting Director MoLG, Department of Primary Health Care Services	Capital
7	Ms Motsumi Malebogo Mr A.R.Marchall	Head of Department Biomedical Workshop, Princess Marina Hospital Assistant Director – Architecture, Ministry of Infrastructure, DBES	Capital
8	Mrs Elinah Ntema Dr Tore Steen Ms. Jytte Rosall Dr. Egil Bovin Prof. Benedicte Ingstad	Principal Institute of Health Research, Dental Therapist Training School 1985-8, 1991-8, 2005-8. 1991- 94 1985-7, 1995-97 1984- 85	Capital Norwegian Stakeholders

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Date	Name	Position	Sub-Study
	Dr. Ketil Stordal	2007- 9	
9	Mr. Trond Fagerli Ms Seeletse Lebodi	1988-90, 1993-5 Senior Lecturer, Dental Program	Norwegian Stakeholders Capital
10	Prof. Knut Fylkesnes	1983- 85 plus regular visits	Norwegian Stakeholders
11	Dr. Invar Olsem Dr. Grete Slotterø Eilertsen,	1996- 2000 2005-2009	Norwegian Stakeholders
14	Dr Arne Gronningsaeter Prof Johanne Sunby	2002-2003 1996-2005	Norwegian Stakeholders
15	Dr. Lea Rune Dr Elsa Døhlle	1989- 2003 NORAD HQ, in Botswana 95/98 1997- 99 in Botswana, 2001 – 3 in Oslo	Norwegian Stakeholders
16	Dr. Marit Kromberg Dr. Trude Arnesen Dr Tharald Hetland Architect Hans Skotte	1996- 2002 2005-2008 1988-94 1984-86	Norwegian Stakeholders
17	Ms. Julie Solum Ms. Helga Fogstad	2005-2009 1993-1999	Norwegian Stakeholders
18	Dr Jens Byskov	1977-79, 1984-89	Norwegian Stakeholder
21	Ms. Naledi Mlaudzi	Director, Department of Health Services Relations & Partnership	Botswana key contact
22	Ms Rose Mandevu Dr Winnie Manyeneng	Formerly HIV/STD Unit Formerly Director PHC, MoH	Batswana stakeholders
23	Dr. Eugene Nyarko Dr. Howard Moffat	WHO Representative Former Medical Superintendent, PMRH	Batswana stakeholders
24	Dr. Eddie Maganu Mr John Botsang Mrs Otsweleng	Former Permanent Secretary, MoH Chief Pharmacist, MoH Chief Health Officer, Procurement, MoH	Batswana stakeholders
25	Ms M. Balosong Mr Ludick Mr. Tlabano Musi Mrs. O. Modise	Formerly DPS, Corporate Services, MoH Director, PHC Dept, MOLG HS Relations & Partnerships, MoH Assistant Director, Human Resources, MoH	Batswana stakeholders HR Study
28	Mr. P. Khulumani Mrs. S. El-Halabi Ms. Kelebetse Mbiganyi Mrs Diemo Motlapele	Director, Health Research Unit, MoH a/Director of Public Health, MoH Principal Statistician, MoH Director, Social Sector Statistics, CSO	Batswana stakeholders
29	Dr. Siphwe Ndlovu Mr. Moleleki Mrs Baikepi	Chief Dental Officer Institute of Health Sciences Institute of Health Sciences	Batswana stakeholders
30	Dr. M.Mmalane Mr.Mokgweetsinyama Mrs Ala Moyo Mr. Moses Keetile Dr. Mazonde Dr. Kaimbwe Mmoloki Letebele	Co-Director Botswana – Harvard AIDS Inst. Chief Health Officer, Dir. of Public Health. Male Involvement Programme, NAC NPO- UNFPA Formerly Deputy PS, MoH Chief Medical Officer, Tutume Hospital Principal Dental Therapist, Tutume Hospital	Batswana stakeholders
31	Dr. L. Mazhani Mr L.Lesetedi Mrs.V.Chakalisa Mrs. R. Maganu	Head of Paediatrics, PMH Former Director Medical Services/Deputy PS Former CHO, Rehabilitation Former Human Resources Director, MoH	Batswana stakeholders
April 1	Mr. P. Khulumani Mr.S.S.G Tumelo Mrs. G. Baikepi	Director, Health Research Unit, MoH Formerly PS. MFDP Coordinator, HIS, MoH	Batswana stakeholders
4	Ms Mokopakgosi Mr. M. Moleleki	DPS, Corporate Affairs, MoH Assistant Director, HIS, MoH	Batswana stakeholders
8	Work in Progress Seminar	Chaired by Ms. Naledi Mlaudzi with participation of 23 MOH employees from various departments	

Field Work: Tutume 28 March-1 April 2011.

A Field Visit was made to Tutume Sub-District with meetings held at a number of villages in the sub-District. The following respondents were interviewed or participated in meetings during field work:

PLACE	Type of Interview	Names of Respondents	Position
FOCUS GROUP DISCUSSIONS			
TUTUME VILLAGE			
Magapatona Health Post	<i>FGD with health workers</i>	Mrs. N. Sinyama	Nurse/Midwife
		Ms. A. Matlapeng	Nurse
		Ms. D. Gombo	PMTCT Counselor
		Ms. L. Tapela	Cleaner
	<i>FGD with Community Volunteers (VHC, TB Care Committee, CHBC Committee)</i>	Ms. Chandabona Pansiri	VHC Vice Chairperson
		Ms. Unaswi Molo	VHC member/CHBC Secretary
		Ms. Lillian Titose	VHC/CHBC
		Ms. Bathalosi Moganiwa	VHC/CHBC
		Ms. Tapologo Chidzani	VHC
		Ms. Belelo Mbiganyi	VHC/CHBC
		Ms. Baleseng Baliki	VHC
		Ms. Anastacia D. Keamogetswe	CHBC/TB/VHC
		Ms. Chikadzi Rodgers	CHBC/VHC
		Ms. Chebukani Tabojosi	VHC
		Ms. Emily Seemule	CHBC
		Ms. Prisca Tshwenyego	CHBC
	<i>FGD with PMTCT Peer Mothers</i>	Ms. Mpho Tshiamo	PMTCT Volunteer Peer Mother
		Ms. Kedibonye Alec	PMTCT Volunteer Peer Mother
		Ms. Mosa Matibina	PMTCT Volunteer Peer Mother
District Health Management Team (DHMT) Tutume sub-district	<i>FGD with district health management staff</i>	Dr I.M. Kempanju	Public Health Specialist (head of DHMT)
		Mr. M. Mathuba	Principal Nursing Officer I
		Mr. E. Molwalefhe	Chief Registered Nurse
		Mr. M.A Gaothuse	Nurse/Midwife- PMTCT Programme
		Mr. E.D. Maruping	Monitoring & Evaluation Officer
		Mr. O. Maruatona	Senior Health Education Officer
Social & Community Development Department Tutume Sub-District	<i>FGD with community development officers and RADP project managers</i>	Mrs. B .Makubate	Principal Social Welfare & Community Development Officer
		Ms. M. Holland	Social Welfare & Community Development Officer (former RADP Head).
		Mrs. G. Monyamane	Senior RADP Assistant
		Ms. Matilda Van Zyl	Community Development Officer II

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PLACE	Type of Interview	Names of Respondents	Position	
FOCUS GROUP DISCUSSIONS (CONT'D)				
MOSETSE VILLAGE				
Mosetse Health Post	<i>FGD with health workers</i>	Ms. K. Motlhagodi	Registered Nurse	
		Ms. B. Batshogile	Health Education Assistant	
		Ms. Catherine Gasemotho	Cleaner	
	<i>FGD with community volunteers (VHC, TB Care Committee, CHBC Committee)</i>	Ms. Kakale Mothibi	VHC Secretary	
		Ms. Josephine Ncenga	VHC/TB Care volunteer	
		Ms. Zwenyu Ikula	VHC volunteer	
		Ms. Tawana Paladze	VHC volunteer	
		Ms. Badziile Doctor	VHC volunteer	
		Ms. Dikeledi Makhu	VHC Chairperson	
		Ms. Thuso Makhumalo	VHC volunteer	
		Ms. Elizabeth Chidoda	VHC volunteer	
		Ms. Georgna Rex	CHBC volunteer	
		Ms. Agnes Tawana	CHBC Chairperson	
		Ms. Keakantse Kehitile	CHBC volunteer	
			Ms. Koobongwa Masala	TB Care volunteer
	<i>FGD with Community leaders and customary court staff</i>	Mr. Phelelo William	Headman	
		Mr. Keimelwe L. Mokgadi	Assistant Courtbay	
		Ms. Mawi Mandipa	Library Officer	
		Ms. Timatso John	Cleaner, Mosetse Kgotla	
		Mr. L. Koontse	Station Commander, Mosetse Police	
		Mr. F. Tabona	Police Officer	
		Mr. O. Obinah	Police Officer	
		Ms. Tebogog Gasemotho	Member; Youth Committee	
MANXOTAE VILLAGE				
	<i>FGD with Health workers- Manxotae Health Post</i>	Ms. Ontibile Chaabara	Registered Nurse	
		Ms. Matlhogonolo Ndolo	Senior Health Education Assistant	
		Ms. Wada Bikani	Cleaner	
		Mr. France Modongo	Ambulance Driver	
MAITENGWE VILLAGE				
	<i>FGD with Health workers- Maitengwe Clinic</i>	Ms. K. Vavani	Registered Nurse/Midwife	
		Mrs. Ngambi	Registered Nurse/Midwife	
		Ms. Mpho Hilume	Coordinator-Community Home-based Care	
		Ms. Goitsemodimo Ellias	PMTCT Peer Mother	
		Ms. T. Kelapile	Health Education Assistant	
		Mr. Batisani Maudu	PMTCT Peer Father volunteer	

Evaluation of Norwegian Health Sector Support to Botswana

PLACE	Type of Interview	Names of Respondents	Position
PUBLIC CONSULTATION/KGOTLA MEETING			
MAITENGWE VILLAGE			
<i>Total attendance =121 community members (53 men, 68 women), 23 were young people (17 women, 6 men)</i>			
The following community leaders attended the meeting:			
Chiefs		Mr. Mbuso Vavani	
		Mr. Muhle Mpapho	
		Mr. Getu Mukento	
		Mr. Wulasha Bagwisanyi	
		Kgosi Guthu	
Village Development Committee		Superintendent Maswabi	Station Commander, Maitengwe Police
		Mr. Joe Chipaladza	Chairperson
		Mr. Bulayani Majeremani	Vice Chairperson
		Mr. Solomon Molobe	Secretary
		Maphu Nkwena	Treasurer
		Ms. Moyo Thapelo	Member
		Mr. George Nthoiwa	Member
TUTUME VILLAGE (Thini Ward)			
Village Development Committee		Mr. Norman Nyanga	Chairperson
		Mrs. O.Kakuwa	Vice Chairperson
		Ms. B. Fundanice	Secretary
		Mr. C. Poloko	Member
		Mrs. T. Nyanga	Member
		Ms. N. Ookame	Member
		Mrs. B. Mpoi	Member
		Mr. M. Khwarae	Member
		Mr. Kganetso Lentswe	Secretary, Thini VDC
Farmers Committee : Community Leaders		Mrs. Naiye Nyanga	Chairperson, Farmers Committee
		Mr. Billy Thini	Chief
		Mr. P. Ndzinge	Headman, Thini Ward
		Mr. Nelson Gaseitsiwe	Assistant Headman
		Mr. O. Madimabe	Headman, Ndzinge Ward
		Mr. Steven Joko	Headman, Joko Ward
		Mr. Herbet Ndadi	Headman, Ndadi Ward
		Mr. Lawrence Monyamane	Village Elder, Thini Ward
		Mr. David Book Kgwarae	Village Elder, Ndzinge Ward
PLACE / Type of Interview		Names of Respondents	Position
KEY INFORMANT INTERVIEWS			
Tutume		Pastor Bornwell Maphorisa	Baptist Care & Counselling
		Mr. Enoch Zibani	District Commissioner
		Ms. Rhoda Mongwa	District AIDS Coordinator
		Mr. Thatayotlhe Maithamako	M&E Officer, DMSAC

Annex 3. Terms of Reference

TERMS OF REFERENCE

EVALUATION OF NORWEGIAN HEALTH SECTOR SUPPORT TO BOTSWANA

Introduction

Norway has provided development assistance to Botswana since 1972. Norwegian assistance to health sector in Botswana can be divided into two phases. The *first phase* started in 1975 and initially involved individual projects that focussed on development and upgrading of physical infrastructure in Botswana's decentralised rural health care system. Later in 1980, dental health services were included in the Norwegian assistance, followed by in 1983 an additional element that focussed on strengthening capacity for health research capacity. In 1985 a new agreement was signed between Norway and Botswana which collected the ongoing activities under one umbrella, although the rural health program retained a separate budget for supporting health services, mainly in three rural districts in western Botswana. The program was further consolidated under a more comprehensive health support agreement of 1989-1993, which was later extended for a period of three years to assure completion of infrastructure and technical assistance related activities, and to prepare for a shift towards the second phase focussing on institutional cooperation for capacity development in the Botswana health system. The total expenditure during the first phase that ended in 1996 amounted to NOK 306.5 million and Norway accounted for nearly 80% of all bilateral assistance to Botswana health sector. Initially the assistance was directed towards design and construction of physical facilities in Botswana's decentralised primary health care system. Later technical assistance to relax the manpower constraints facing the Botswana health system became an important input in assistance program.

The *second phase* of the assistance has mainly involved institutional cooperation between Botswana and Norwegian health sector institutions and universities. This phase was initiated by the signing of cooperation agreement for the period 1996-2002. Although the intention was that this agreement would constitute the concluding phase of the Norwegian Botswana cooperation, the same was extended to 2005, with the component covering education of medical students from Botswana at two Norwegian universities running until 2013. The extension of the institutional cooperation program was partly also in response to a request for assistance from Botswana for its National Antiretroviral Treatment (ART) Program. The total Norwegian assistance during the period 1996 -2007 was around NOK 105 million, of which NOK 60 million was allocated to institutional cooperation, while the rest NOK 45 million has been allocated to the ART program. A summary of assistance and assessments that have been conducted so far of the Norwegian assistance is given in the appendix.

Norwegian assistance to the Botswana health sector is an example of long term Norwegian engagement. It is also referred to as an example of assistance with a high degree of ownership by the partner country. Norway has primarily chosen to support the development priorities of the Botswana government. Shortage of local skilled manpower in health sector has been a chronic binding constraint for development of health services in Botswana, and Norwegian assistance has primarily focussed on relaxation of this constraint. Up to the early nineties, the manpower shortage was addressed through technical assistance that included training of local

personnel and supply of medics and para-medics to fill vacancies at the middle management level mainly in Botswana rural health program. At its peak in 1987, Norwegian personnel held 17 positions in the Botswana health system. The second phase has also focussed on manpower development and one of the components in this phase includes training of Botswana medical students in Norway. Included herein is also the research and development component. Two Norwegian Universities are the main cooperating partners for this component.

The notion that a long-term stable external assistance composed of a diverse mix of inputs to health sector will lead to a healthy population and sustainable health system has been the main driving force in the Norwegian Botswana partnership. Since the start of the cooperation, there has been a general consensus between the cooperating partners that assistance is an intermediary measure. The overall objective has been to develop a sustainable health system to enable Botswana to meet the health care needs of its population.

PURPOSE

The main purpose of this evaluation is to:

- Document the outcomes and impacts of Norwegian health sector assistance both for the *users of health services* and for the *health care system* at large in Botswana.
- Outline relevant lessons for design and implementation of future result-oriented health sector programs keeping in view the changing environment for health sector assistance programs in partner countries.

The main users of the findings of the evaluations will be Ministry of Foreign Affairs (MFA), other stakeholders who have direct or indirect interest in the health sector interventions and beneficiaries in the partner countries. In this context, *Ministry of Foreign MFA* refers to its political leadership, its officials, the Norwegian Embassies and the Norwegian Agency for Development Cooperation Norad. The *stakeholders* include non-governmental organisations (NGOs), governmental twinning partners, and universities in Norway, and their counterparts in the South. *Beneficiaries* include individuals, households, communities, and relevant local and national institutions and policy makers that benefit directly or indirectly from the interventions.

OBJECTIVE AND SCOPE

The main objective of the analysis is to evaluate the outcomes and impacts- direct or indirect, intended or unintended, of the Norwegian assistance on the *health of individuals, and communities*, and state of the *health care system* in Botswana. The two main questions posed in this evaluation are

1. What have been the main changes since 1975 in the health status of the *individuals and communities* and the *health care system* in Botswana?
2. To what extent has Norwegian assistance contributed positively to these changes, and the extent to which the assistance was used in a cost-efficient manner?

In answering these questions, the issues to be investigated will include but not necessarily limited to:

- What is the chronology of:
 - Norwegian assistance to health sector in Botswana
 - Government of Botswana spending on health sector
 - Developments in health status of the target groups for assistance
 - Developments in the clinical/non-clinical, governance and policy-making capacity at the local and the national levels of the health system in Botswana
- To what extent has the assistance impacted
 - Improvements in the health of the target user groups for assistance
 - Capacity of the Botswana health care system to fulfil its core functions to improve and safeguard the health of its population
- To what extent has the assistance been responsive to the needs and expectations of the target users groups for assistance?
- What are the stakeholder perceptions of the achievements and limitations of Norwegian assistance?
- How important the long-term character of the Norwegian engagement (the time period of engagement) has been in bringing about the changes in the health status of beneficiaries?
- To what extent have the improvements made at the user and the systemic levels prior to the onset of the HIV and AIDS epidemic contributed to the capacity of the Botswana Health Systems to handle the epidemic
- What has been the impact of the HIV and AIDS epidemic on the time path of the results of Norwegian assistance?
- Which lessons can be outlined regarding targeting of assistance and the capacity development of the health care system in general?

The evaluation shall cover all Norwegian assistance to Botswana, both through bilateral and the multilateral channels. The time period for the analysis will be from 1975 to the present.

It is expected, that the evaluation will analyse the *political, social and institutional contexts* in which the Norwegian programs operated. In particular, the evaluation will document the *performance of Norad/MFA, the Norwegian implementing institutions and their counterparts in the partner country*, where it is considered a decisive factor in determination of the outcomes and impacts identified in this study.

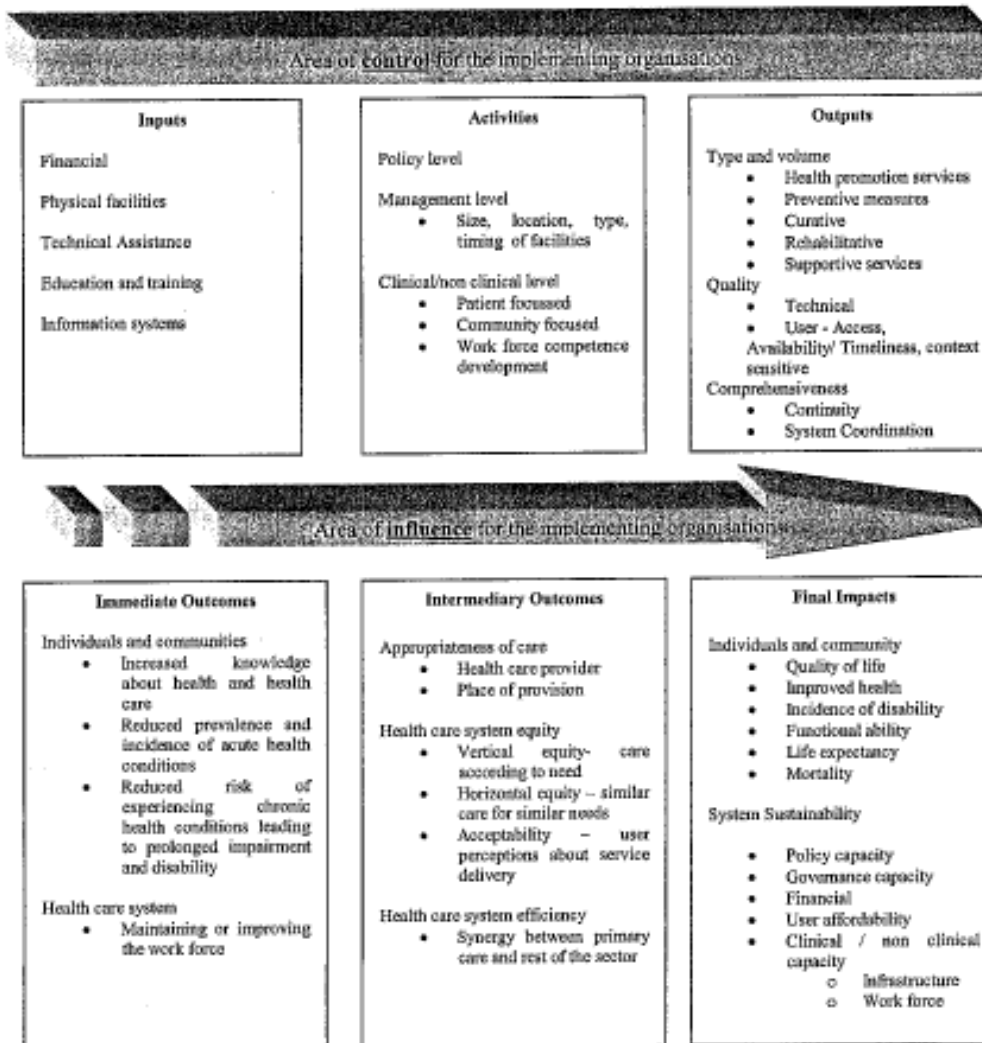
Evaluation shall be conducted in accordance with the prevailing DAC OECD Evaluation Quality Standards and use criteria of - relevance, effectiveness, efficiency and sustainability as defined in the DAC guidelines.

METHODOLOGICAL COMMENTS

Norwegian assistance to the health sector in Botswana has been a subject of evaluation in a number of earlier reports and studies. The evaluation will avoid duplication of work, and the discussion of the previous evaluations will be limited to a brief comparative overview of the main findings of the earlier studies. This evaluation is expected to complement the previous work and shall focus on *short-term outcomes, intermediary outcomes and final impacts* of the Norwegian assistance. The consultant will reconstruct the *intervention logic* for the

Norwegian health assistance in consultations with the Norwegian MFA/Norad and the Ministry of Health in Botswana. A prototype of a logical framework is illustrated in figure 1.

Figure 1: Logical framework for Health Sector Interventions – A prototype



Needless to say, the control of the implementing partners in the results-chain decreases as one goes down the results chain. This is mainly due to the increasing role of the contextual factors in determining the outcomes and impacts. However the long-term nature of assistance opens up opportunities for learning through feed-backs.

Some of the loops in this context include: horizontal feed-backs between the providers and the users of the health services, between the clinical and the non-clinical services, and the vertical feedbacks between the operations (local) and the system level. Feed-backs provide opportunities for performance gains through increase in adaptability of the health services to user needs and context, and improvements in quality of governance and policy making at the

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local and the system levels. The consultants will document the horizontal and the vertical interactions in measures supported by Norwegian assistance and elaborate where they are considered as decisive factors in determination of the outcomes and impacts identified in this study.

An important methodological decision is related to the choice of metric – What is measured? There is no single indicator for measuring outcomes and impacts of the health sector cooperation programs. The consultant will define suitable *indicators* for tracking and attributing the progress in relevant outcomes and impacts of Norwegian assistance to the health sector. Where composite indices are developed to give a “big-picture”, it is important that the indicators are justified keeping in view the multiple nature of the interventions.¹

A mixed method (qualitative and quantitative) approach is envisaged for this evaluation. The evaluation team will outline a well formed research strategy and propose an appropriate methodology to ensure an objective, transparent and impartial assessment of the issues to be analysed in this evaluation. The evaluation team will make use of secondary and primary data which will be analysed using suitably defined qualitative and quantitative results indicators. Primary data will be collected using empirical methods such as questionnaire surveys, interviews, focus groups, and case studies. A *field-study* will be an important part of this assignment. Plans for the field study will be finalised in consultation with the client during the inception phase of the evaluation.

Evaluation Team

The evaluation team is expected to cover following competencies

Team leader	Team Members
<p>Academic: Higher degree</p> <p>Knowledge and experience with:</p> <ul style="list-style-type: none"> • Evaluation principles, methods and standards in general • Leading multi disciplinary evaluations • Development Cooperation 	<p>Academic: Minimum Bachelor’s level</p> <p>Knowledge of evaluation principles, methods and standards in general</p> <p><u>Team composition meeting</u> following requirements:</p> <ul style="list-style-type: none"> • Academic qualifications in health sciences, social sciences, statistical analysis • Country/regional experience from Botswana/ Southern Africa • Senior level local consultant with extensive experience of the Batswana society and health system • An appropriate gender balance keeping in view the subject matter of the evaluation.

¹ For an overview of the important issues see Nardo M., M. Saiasana, A. Saltelli, S. Tarantola, A. Hoffman, and E. Giovannini, (2005), “Handbook on constructing composite indicators: Methodology and user Guide”, OECD Statistics Working Paper, STD/DOC(2005)3 available on [http://www.oilis.oecd.org/oilis/2005doc.nsf/LinkTo/std-doc\(2005\)3](http://www.oilis.oecd.org/oilis/2005doc.nsf/LinkTo/std-doc(2005)3)

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The proposed team must cover following language skills:

- Team leader:
 - English – Written, reading and spoken
- At least one member of the team:
 - Norwegian/Swedish/Danish – Reading and spoken
 - Setswana- Reading and spoken

Tendering firm

The tendering firm is expected to have experience with delivering multi-disciplinary evaluations contracted preferably through competitive procurement process during last three years.

Budget and Deliverables

The project is **budgeted** with a maximum input of **40 consultant weeks²**. The budget estimate includes the time allocated to the local team members and the time to be used during the field-visits and the seminars, including compensation for travel time used in intercontinental travel (maximum 7 hrs. travel time per intercontinental journey).

The **deliverables** in the consultancy consist of the following outputs:

- **Inception Report** not exceeding 15 pages shall be prepared and discussed with the reference group before final approval by EVAL.
- One work-in-progress reporting **seminar**.
- **Draft Final Report** for preliminary approval by EVAL for circulation to the stakeholders. The stakeholders shall provide feedback that will include comments on structure, facts, content, and conclusions.
- **Final Draft Evaluation Report**.
- **Seminar for dissemination** of the final report. Direct travel-cost related to dissemination in the case countries if any, will be covered separately on need basis, and are not included in the budget.

All presentations and reports (to be prepared in accordance with EVAL's guidelines given in *Annex A-3 Guidelines for Reports* of this document) are to be submitted in electronic form in accordance with the deadlines set in the time-schedule specified under *Section 2 Administrative Conditions in Part 1 Tender specification* of this document. EVAL retains the sole rights with respect to all **distribution, dissemination and publication** of the deliverables.

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CHRONOLOGY: NORWAY – BOTSWANA COOPERATION

APPENDIX:

1970-1996: NOK 306 mil.
1970 – 1988: Infrastructure Development
Activities:

- Hospital upgrading
- Integrated mental and dental care
- Central Medical Store
- Training
- Health Research
- Health services integration into area poverty programs
- Technical Assistance

1989-1993: Consolidation of infrastructure projects

1993-96 Completion of infrastructure projects

1996–2001: NOK 60 mil. Health Sector Agreement

Activities	Partner BOT	Partner NOR
Coordination	Planning unit, MoH	DiS
Decentralisation research Equity study Health Financing Reproductive health	Health Research Unit, MoH	DiS
AIDS	AIDS/STD unit MoH	Helseidir.
Prevention	MoH	Helseidir.
Quality management	MLGLH	Rogaland fylkeslege
Primary health care	Health statistics unit	SSB
Health information systems	Health Research Unit, MoH	Dept. of community medicine, UiO
Health system research	MoE	UiB, UiTØ
Medical education Educate 30 doctors	CCE, Francistown, University	Medical anthropology, UiO
Community Aids education		

1996
 Evaluation Board

1998
 Mid-term review

1996–2001: NOK45 mil. Human Resource Assistance Program

Activities	Partner BOT	Partner NOR
Coordination	MoH	Haukeland University Hospital
Supply of Norwegian medical personnel	MoH	Haukeland University Hospital
Training Midwifery Pharmacy Lab tech.	AIDS/STD unit MoH	Haukeland University Hospital
Improve ARV therapy prog.	MoH	Haukeland University Hospital

2007
 Mid-term review

1994
 Evaluation

Annex 4. Sub-study Findings

The Government of Norway has provided development assistance to the health sector in Botswana ever since 1972. Over this lengthy period, the assistance has changed to reflect both the changes in Botswana generally and to the Botswana health sector in particular. Early Norwegian support focussed on the development of Botswana's physical health infrastructure with the subsequent addition of technical assistance to enable a focus on service delivery and institutional strengthening. This continued until the 1990s when Norwegian support changed to focus on developing institutional links between Norwegian and Botswana organisations and, from 2004, to provide human resources to strengthen Botswana's capacity to combat the HIV/AIDS epidemic.

In parallel to this external support, Botswana has made truly enormous strides from the immediate post-Independence State when it was characterised as a Least Developed Country, with very poor health status indicators and very limited health infrastructure to the situation today as an Upper Middle Income Country⁶ with a wide network of health infrastructure and a health service that is considered amongst the best in Sub-Saharan Africa.

The Evaluation Department of NORAD contracted HERA to undertake an evaluation of the Norwegian support to the health sector in Botswana over the period 1975 to the present day. The TOR for the evaluation (detailed in Annex 3) indicate that the main purposes of the evaluation were to:

1. Document the outcomes and impacts of Norwegian health sector assistance both for the *users of health services* and for the *health care system* at large in Botswana.
2. Outline relevant lessons for design and implementation of future result-oriented health sector programs keeping in view the changing environment for health sector assistance programs in partner countries.

The evaluation took place between February – April 2011 with an inception visit to Botswana in February (see Inception report of 3 March 2011) and the substantive evaluation taking place in March and April.

4.1 Study to analyse Norway's support programme to Botswana

This section provides an analysis of the Norwegian contribution to the Botswana health sector from 1975 to the present day. It is based on a variety of documents, most significantly:

- Programme or project agreements and Programme closing reports from the NORAD archive in Oslo. Not all of the key documents were located.
- Project reports from the NORAD archive in Oslo and from the MOH in Gaborone.
- Programme or project evaluation reports of individual projects.

The documentary evidence was supplemented by the recollections of GoB officials, both currently active and now retired as well as a number of Norwegians who participated in various stages of the support.

⁶ As defined in World Bank <http://databank.worldbank.org>

The Evaluation team defined two distinct phases on Norwegian cooperation with the health sector in Botswana. **Phase 1 running from 1972 until 1996** constituted around 80% of total Norwegian contributions to Botswana. The Norwegian inputs, during this first phase, can be characterised as having taken a programme approach that provided sector wide support. The focus of the support shifted over the years, addressing the changing priority needs of Botswana as the health sector developed. There was an initial concentration of the development on the development of a basic rural health care infrastructure. This was followed by support for the development of health systems at both district and central levels and, at an even later stage, support to the hospital sector during this phase. Also in this period, two other projects, addressing similar issues as the main Norwegian support, provided support to the health sector: the Family Health Project (Co-financed together with the World Bank) and the Remote Areas Development Programme (RADP).

Phase 2, 1996-2012, saw a distinctly different form of collaboration that commenced in 1996, although it was funded under a pre-existing project (number BOT015). This was the change to Institutional Collaboration, encouraging the collaboration between Norwegian and Botswana organisations. After two no-cost extensions, this ended in 2005, although one component, medical doctor training in Norway was continued under a new project number (BOT2202). A final programme of collaboration, to assist with the provision of health human resources in order to help Botswana roll out its new ART programme, was implemented between 2006 and 2009 (BOT2201).

Table 1 and Table 2 provide an overview of the health focussed programmes and projects agreed and implemented by Norway and Botswana between 1972 and the present day. The value of each is presented as Norwegian Krona at the time of implementation. A summary of each programme or project providing information on their respective objectives, running dates and value is presented in more detail in section 4.5.

Table 1 - Names, dates and value of Norwegian assistance to the Botswana Health Sector from 1972 to the present day - Phase 1: 1972-1996

Project	Date of Agreement	Amount NOK
BOT 003 Development of Basic Health Services (NOK 44 Million)		
Agreement phase 1	10/12/1975	9,000,000
Addendum	4/10/1976	21,000,000
Addendum	27/10/1977	0
Agreement phase 2	20/08/1980	10,000,000
Addendum	30/11/1983	4,000,000
BOT 008 Development of the Dental Health Services (NOK 3.1 Million)		
Agreement	13/06/1980	3,100,000
BOT 009 Improvement at Health Centres and Hospitals; Development of the Rural Health Services (NOK 39 Million)		
Agreement	24/10/1978	26,000,000
Exchange of letters	20/08/1980	13,000,000
BOT 041 Evaluation of the Health Status in Botswana (study) (NOK 2.545 Million)		
Agreement	?	2,545,000
BOT 014 Assistance within the field of health services (NOK 43 Million)		
Agreement	12/06/1984	43,000,000
BOT 015 Development and Further Improvement of Health Services (NOK 189.933 Million)		
Agreement	18/03/1985	80,000,000
Addendum	4/11/1988	60,000,000
Addendum 1	4/11/1988	10,533,000
Addendum 2	30/10/1992	15,900,000
Addendum 3	14/06/1993	13,000,000
Addendum 4	2/08/1994	5,000,000
Addendum 5	7/08/1995	5,500,000
NORAD Contribution to the Remote Area Development Programme (NOK 5.49 Million)		
Agreement	6/09/1988	3,600,000
Addendum	3/12/1991	1,710,000
Addendum	15/07/1993	180,000
NORAD Contribution to the WB Family Health Project	1984	47,520,000
Technical Assistance 1972-1984 (not included in agreements)		30,000,000
Total		404,588,000

Sources: See section 4.5.

The table above reflects the direct Norwegian support to the Government of Botswana health sector. It also includes the Family Health Project that was jointly funded by the Norwegian Government and the World Bank in the health sector. The Norwegian contribution was in the form of a grant while the World Bank contribution was a loan. All but one of the programmes identified were directly in support of the health sector. The one exception, the Remote Area Development Programme (RADP) was a broad community development programme providing a variety of inputs to different sectors. An evaluation of the RADP estimated that 9% of total expenditure was spent within the health sector.

Table 2 - Names, dates and value of Norwegian assistance to the Botswana Health Sector from 1972 to the present day - Phase 2: 1996-2013

Project	Date of Agreement	Amount NOK
BOT 015 Development and Further Improvement of Health Services (NOK 60 Million)		
Agreement	21/02/1996	60,000,000
Addendum	10/02/2000	0
BOT 2202 Assistance to the Education of Batswana Students in Norway (NOK 30 million)		
Agreement (related to agreement 21/2/1996 Inst. Coop.)	15/07/2003	10,000,000
Agreement (Agreed Project Summary)	15/07/2003	20,000,000
Addendum to agreement signed 21/02/1996 (Inst. Coop.)	9/09/2003	0
BOT 2201 Human Resources to the MOH (NOK 45 million)		
Agreement (not related to any other agreement)	8/12/2004	45,000,000
Total		135,000,000

The focus of Norwegian expenditure over the Phase 1 period is shown in Table 3.

Table 3 - Norwegian Health Sector Expenditure Phase 1, by area of expenditure

	NOK million	%	% (TA included)
Basic Health Services	44.0	17%	11%
Health Centres	46.0	17%	12%
Family Health Project (WB)	47.5	18%	12%
RADP	5.5	2%	1%
District Health Teams	10.0	4%	3%
Dental services	14.0	5%	4%
Hospitals	57.0	21%	14%
Pharmaceutical Sector	25.0	9%	6%
Health Status Study	2.5	1%	1%
Others	15.0	6%	4%
Total	266.5	100%	
TA	130.0		33%
Total including TA	396.5		100%

Excluding TA, which cannot be easily allocated to a particular area of expenditure, it can be seen that 58% of total Norwegian expenditure during Phase 1 was allocated to the development of basic primary services and the district level systems needed for their support⁷.

⁷ Primary services expenditures were assumed to include Basic Health Services, Health Centres, District Health Teams, RADP and the Family Health Project (where Norwegian funds were directed towards this level of care).

o *Evaluation of Norwegian Contributions to the Botswana Health Sector*

In view of the programmatic approach taken by Norway, at least for the first phase of their support (1972 – 1996), the evaluation has reviewed the progress made by the health sector as a whole in Botswana over the 35 years and assessed the contribution made by Norway to help Botswana in this progress. The Norwegian contributions are evaluated according to their contribution to the nine building blocks for health systems as defined in the Ouagadougou Declaration (WHO 2008). The evaluation team’s assessment of progress made towards the achievement of indicators defined in the Post-hoc log frame (Annex 1) proposed in the inception report is also included. We have used the four DAC criteria of Relevance, Effectiveness, Efficiency and Sustainability as the criteria for the evaluation. There are some difficulties with this approach particular in respect to assessing the efficiency of the inputs, particularly for activities that took place many years ago.

In addition the Evaluation Team did not feel that this evaluation approach was entirely appropriate for the Institutional Collaboration phase of the support, Phase 2. While the individual components of the agreement had their own objectives and outputs, the overall agreement was aimed towards developing a new form of relationship between the now much richer Botswana and Norway, one where the previous donor – recipient relationship was no longer appropriate. No definition of what would have been a successful outcome for this phase of collaboration was made. While a considerable number of achievements were recorded at the project/component level within this collaboration, there has been no on-going collaboration between the Botswana and Norwegian organisations involved after the end of the financial support and so overall the Institutional Collaboration programme cannot be said to have achieved its rather amorphous objectives.

2.1.1 Leadership & Governance

Building Block: Leadership & Governance	
Strengthened government leadership and governance for the health sector.	
Indicator	Evaluation conclusion
1.1 Norwegian support in line with National Development Plans	Almost all Norwegian support can find its origin in one or more of the National Development Plans.
1.2 Government institutions and systems utilised for planning and implementation of the Norwegian assistance (planning, financing, financial reporting and auditing)	Infrastructure development plans supported by Norway based on NDP priorities. Most Norwegian TA employed on existing MOH Public Service positions. Botswana systems used for financial management, procurement and auditing of Norwegian funds transferred to Botswana.
1.3 Strengthened health policy and legislation in several areas (pharmaceuticals, dental health, mentally and physically disabled)	National policies and legislation developed to govern the pharmaceutical sector. National Oral Health Plan 1983 – 2000 developed. Several Health Manpower Plans developed. Support to decision on starting a medical school at UoB National policy for care of people with disability – 1996

Norway supported developments in Leadership and Governance in the health sector in Botswana through BOT003, 008, 014, 015 and 2201 (1972-2007). During this period Norway provided Technical Assistants in key positions within the Ministry of Health, the Ministry of Local Government and within Regional (subsequently district) health teams. In these roles the TA provided leadership and were instrumental in initiating policy development, planning and management systems both at district level and for the health services as a whole. In the Institutional Cooperation phase of BOT015, one component specifically addressed team building of DHTs to improve leadership. Most recently, BOT2201 (Human Resources for ART) assisted the MOH to develop policy at the more micro-level, the development of policy for ART roll out training for example.

Relevance

In the 1970s and 1980s, there were few trained Batswana with the skills to oversee the rapid expansion of health services that took place over this period. Norwegian doctors, coming from a decentralised health system that catered for a scattered population and focussed on a primary care approach, were well suited to play a leadership role in the development of the Botswana health services. The continued shortages of experienced health human resources meant international experience for the development of a response to new developments, such as HIV/AIDS when that occurred, was highly relevant.

Effectiveness

Batswana stakeholders indicated that the Norwegian contribution was instrumental in supporting the introduction of Primary Health Care to Botswana, prior to the Alma Ata Declaration on PHC in 1978. Norwegian TA at both Regional and Central level, firstly in the MOH and later in the MoLG helped develop the policies and systems for the rapid expansion from what had been a small, hospital-focussed health service at independence to one that by 1986 had enabled 85% of the population to have reasonable access to PHC services. The Norwegian TA were widely seen as effective in their roles, at both central and district levels, in introducing systems and procedures for the planning and management of health services. Their interpersonal skills were seen as being good, being able to work with the health workers they supervised, the District council officials they worked with as well as officials from the MOH.

Some concerns were expressed in a 1997 review where it was reported that ‘The status of the district health services in 1997 is worse than expected and it does not correlate with the resource input from the Norwegian side. The responsibility for this is primarily with the MOH, but NORAD truly has played a passive role as a driving force for district health services in the last 10 years of the cooperation. Particularly, a critical period was the transfer of operational responsibility from the MOH to the MoLG in 1988, where NORAD could have had a stronger role. However, it is more to be regarded as “opportunity lost” since with the new sector agreement this is a responsibility of Botswana’ (Olsen 1999).

Also it was considered that the GoB ‘PHC strategy has not been implemented as the top priority in accordance with NDPs. The present development of hospital services is becoming a real threat to PHC due to expansive manpower plans but scarcity of available Human Resources’.

Sustainability

It is reported that management systems and procedures introduced by Norwegian TA at central and district levels remain at the core of those in use today. Many of the procedures and protocols developed with the assistance of the more recent TA in support of ART role out are also still in use (e.g. Neonatal treatment protocols⁸).

2.1.2 Health Services Delivery

Building Block 2: Health Services Delivery	
Increased access to PHC services, particularly in rural areas. <ul style="list-style-type: none"> • Rural health posts /health stations • Health Centres • Hospitals • Office accommodation • Staff Housing • Dental Clinics • Training institutions • Central and regional Medical stores • Central & regional maintenance workshops • Radios for rural clinics • Vehicles for clinics, RHTs, Dental Mental & maintenance services 	
Indicator	Evaluation conclusion
% of citizens living within 15km, 8km and 5 km of a health facility.	84 % of the population living within 5 km radius from the nearest health facility, 11 % of the population living within 5-8 km radius, which results in 95 % of the population living within the 8 km radius of the nearest health facility.
No. of hospital Beds/population	Decrease in the number of hospital beds per 1000 population by 2006: 1974 3.2 beds per 1000 population 1994 2.3 beds per 1000 population 2006 2.4 beds per 1000 population
General outpatient attendances per capita	Increase in the number of general outpatient: 1974 0.87 general outpatient attendances per capita 1994 1.77 general outpatient attendances per capita 2006 2.09 general outpatient attendances per capita
Inpatient discharges per 1,000 population	Increase in the number of inpatient: 1982 74 inpatient discharges / 1000 population 1994 86 inpatient discharges / 1000 population 2006 98 inpatient discharges / 1000 population
Norwegian supported constructions in current use and in good condition	No national survey data of infrastructure constructed with support of Norway exists, but a field visit of a sample of facilities showed that most were still in use as health facilities today. Some had been further developed and a small number were in use for some related public service activity.

Norway supported Health Services Delivery in Botswana through BOT003, 008, 014, 015, 2201, Norwegian Volunteers and WB Family Health Project through two major activities, the construction of health infrastructure⁹ (1975-1996) to increase access, particularly for rural populations, to health care services and the provision of health workers to provide health services (1975-1996, 2004-2007). The more recent phase of TA (2004-2007) was in response to the AIDS epidemic, more particularly to assist in the role of ARV therapy (ART). This

⁸ Personal communication.

⁹ See also Section 4.3.3. Infrastructure Sub-Study Findings.

required an increase in health workers with a variety of skills (doctors and lab technicians to manage ART, midwives for PMTCT, Pharmacy Technicians to manage the ARVs) to assist this task. In addition, BOT008 focussed on the establishment of a national dental health service which was continued as part of the broader BOT014.

A comprehensive district health development approach was taken, supporting the development of basic health facilities, Health Centres, and later Hospitals, and District Health Teams. Central systems for Drug supplies, human resources planning and dental care were also addressed.

The Institutional Collaboration phase of BOT015 from 1996 contained a Quality Management Project, implemented through an agreement between the MOH and the Norwegian Board of Health (NDOH) with the intention of addressing issues of quality of care and management within health care and health support facilities. Implementation was through the establishment of a Performance Improvement Unit within the MOH which, with the assistance of the NDOH, developed quality performance criteria, trained health workers in audit techniques and supported a series of health facility audits.

○ *Capital inputs*

Relevance

A priority for the Government of Botswana at independence was the expansion of access to health services for a widely dispersed population. The National Development Plans of the period called for an extensive expansion of Health Posts, Clinics and Health Centres to enable access to modern health services within a reasonable distance of people's homes.

Effectiveness

The programme to expand PHC access was highly successful with, it was estimated, 85% of the population living within a radius of 15km of a health facility by 1989. Appraisals or reviews of the Norwegian contribution, carried out in 1977 (Skogland 1977) and 1986 (Per Granburg 1988), indicated general satisfaction with the progress of the construction support although concerns were expressed about the provision for the future maintenance of the facilities constructed. It was considered that 'Norway has provided a meaningful support to the construction and improvement of health institutions within the framework of Botswana's development plans: LG 20, Construction of Health Posts and Clinics. NORAD had chosen to support the western districts which are more remote and marginal. Another important project was LG 49, District Health Teams. NORAD provided support to build up the Botswana district health services with facilities, equipment, houses for the staff, vehicles and communication equipment' and 'The Norwegian support to infrastructure has been extensive and it has had a decisive importance for the development of district health services' (Per Granburg 1988).

A NORAD review (Fjelland 1990) in 1990 considered that the PHC referral system was working well with the necessary components – staff, facilities, vehicles and telephones/radios – largely in place and functioning.

Efficiency

The capital programme was implemented using the Government of Botswana (GoB) project implementation system with funds granted to the GoB Ministry of Finance and Development Planning (MFDP) for management using standard government financial systems. Construction and other equipment (medical equipment, office and domestic furniture, radios

and vehicles) were procured using international open competitive tendering, the most efficient mechanism for procurement. It was noted at the time that there was limited construction capacity in Botswana in the early years and that the advent of diamonds resulted in a construction boom that is likely to have increased prices for both raw materials and labour costs (NORAD Archive 1981). Delays in implementation were reported (Per Granberg 1988) as a result of a lack of management capacity at district councils, the bodies responsible for managing implementation of the rural health construction programme as well as because of a lack of construction capacity, particularly in the more remote areas.

The later infrastructure development programmes in support of hospitals also experienced delays, probably due to a lack of capacity to design and commission more sophisticated hospital (Fjelland 1990).

Sustainability

No national study has been undertaken to assess whether the health infrastructure supported by Norway is still in use and in good condition. The evaluation team reviewed a small sample of such facilities in Tutume (see section 2.3.3). If the facilities viewed in Tutume are representative of the country as a whole, it would suggest that the buildings, constructed with the support of Norway, are still largely in use, mostly still as health clinics or similar with a small number given over to related activities, having been replaced by a more modern building.

○ *Human Resources for Health inputs*

Thirty-three percent of NORAD expenditure during Phase 1 was on the provision of Technical Assistance (TA) and at one stage there were seventeen Norwegian personnel working for the Ministry of Health. Between 1985 and 1990 Norway provided 99 person years of TA to the health sector (Fjelland 1990). The TA filled “staffing gaps” within the MOH establishment. GoB policy (Rakner 1996) was for expatriate TA not to have counterparts and so there was little formal skills transfer to Botswana counterparts.

A second phase of TA support took place under BOT2201 when 14 professionals with skills related to HIV/AIDS were contracted to the MOH for 3 years, (see section 2.5 for details).

Relevance

The expansion of health services highlighted the shortage of trained health workers to provide services in the expanding PHC network. The PHC network was a nurse-led service supported by regionally (later district) based Public Health Doctors to provide support and clinical back-up to the nurses. Norwegian TA provided this support with, for example in 1987, six of the 16 DMO posts filled by Norwegians (Per Granberg 1988).

The objective of the later TA (2004-2007) support was originally in support of ART roll out but this was modified mid-programme to include trauma care and anaesthesia in addition to ART roll out and increase training capacity for related professions (Lab Technology and Pharmacy) at the Institute of Health Sciences (IHS). This seemed to reflect the skills available in the TA provided rather than addressing the original objective of the support.

Effectiveness

The skills gap, due to a lack of Botswana doctors to undertake the role, was very effectively filled, starting in 1973, by dedicated and hard working professionals who worked in many

remote locations to provide health services, as indicated by Botswana stakeholders who had worked with them.

The more recent TA in support of the ART role was seen as effective in supporting the roll out of ART, the training of laboratory workers and pharmacy technicians as well as improving anaesthesia techniques and trauma care (Otsweleng 2010). It is suggested that an opportunity was missed in that TA trainers were not significantly involved in the revision of the curricula, which took place during the period of support, for Laboratory and Pharmacy Technicians, to take account of HIV/AIDS.

Efficiency

The efficiency of the great volume of TA provided by Norway can best be justified by arguing that without such investments, the other greater investments in infrastructure would have been wasted. The numbers of qualified Botswana human health resources that was quite evident in the 1970s and 1980s was totally inadequate to manage and implement the expanding health network. Without these inputs the health services are unlikely to have operated as well as they did.

A similar argument can be made for the second wave of TA, in support of the roll out of ART. In order to fulfil the greatly expanded responsibilities of the health sector to implement the very extensive ART programme needed by a significant proportion of the population, additional human resources were necessary.

Almost all Norwegian TA seems to have been recruited onto GoB Public Services positions with an international top-up paid either by Norwegian Assistance (for the first phase of TA) or Haukeland University Hospital (HUH) for the later phase. The most recent dual contracting procedure with HUH apparently led to some problems due to a lack of clarity over some contractual issues.

For the 2004-2007 TA there was no competitive selection process to choose what organisation was to supply the TA and so NORAD may not have received the best value for money. Job descriptions were developed by the MOH and the recruitment process organised by HUH. This was open only to Norwegians and those familiar with Norwegian health system thus limiting the pool of available candidates.

Sustainability

The role undertaken by the TA provided for district health services and at central level in the period (1975-1996) continues to this day, doubtless adjusted to reflect changed circumstances but still being carried out using systems and procedures first developed by the TA.

It was foreseen throughout the first phase that Botswana doctors would replace the expatriates as leaders of the DHT, but this goal has never been achieved. In 1988 there was no Botswana doctor in any of the 22 posts as district doctors (Per Fagoli 1988). Today there are still very few, if any Botswana doctors working as DMO.

o Oral Health Services

Relevance

NDP 5 (1979-1985) prioritised the need to develop a community dental health programme to address what was seen as the potential for a significant increase in oral and dental morbidity.

This concern was based on an oral health survey conducted during NDP 4 (1976-1981) (Per Fagoli 1988). Norwegian assistance resulted in the design of a community oral health programme that included the development of a curriculum for the training of a new cadre of Dental Therapists, the construction of training facilities at the HIS, the provision of teachers for the new dental therapy course and the construction and equipping of a number of dental clinics at strategic hospitals around Botswana.

Effectiveness

The Norwegian support was instrumental to the development of an Oral Health Service in Botswana. The support assisted in the development of a National Oral Health Plan that has been implemented through a comprehensive series of inputs that include programme design, infrastructure and manpower development. A NORAD document reports that ‘The Norwegian support has been central for the development of public dental services in Botswana’ (Olsen 1999).

Sustainability

The Oral Health Service in Botswana continues to operate with regular graduation of new Therapists. The service reaches out with dental clinics in all the major hospitals in Botswana and a plan to expand to all district hospitals. A mobile dental service is provided through four mobile dental clinics and an emphasis for prevention through a school and community dental health programmes. This is one of the very few comprehensive oral health programmes known to the evaluation team in Africa.

○ *Quality Management*

Relevance

The achievement of near universal access to health services brought about a change in focus for health planners; to address issues of service quality in government health services. This had been recognised in NDP 6 (1985-1991) and, following criticism in the MTR, again in NDP 7 (1991-1997). Some of the research (see Section 2.1.9: Health Research below) identified weaknesses in health services delivery as perceived by both clients and health workers.

Effectiveness

The specific objectives of the partnership (Moeti 1998) were (1) to produce a national strategy for quality development in health care, (2) to train a core group of health personnel (3) to set up a quality audit capability in the MOH and MOLG health departments and other health institutions (4) establish information systems to enable audit findings to be disseminated & used (5) establish a system for monitoring public opinion on health services.

A Performance Improvement Unit was established and, with the assistance from the Norwegian partners, a national strategy for quality development in health care was incorporated into the Corporate Strategic Plan for Health. Quality guidelines were developed, auditors trained and a series of audits undertaken at health facilities and other units by the trained auditors. A very high proportion of the planned audits were carried out. The auditors worked on secondment for short periods to undertake the audits. A quality audit inspection system was established.

Sustainability

It would appear that various aspects of the quality programme have been sustained. The GoB has however subsequently introduced public sector wide performance improvement initiatives which, while not health sector specific, appear to have taken precedence over the MOH internally developed procedures. In response to this latter initiative the MOH has established an Health Inspectorate with the remit to introduce the Performance Improvement System.

One particular weakness in the original design of the programme can be noted. The auditors trained by the programme carried out their audits in addition to their substantive duties. As the individual officers trained in audit processes have advanced in their careers or moved on to jobs that do not allow them to take time undertake extra duties, so the cohort of auditors able to undertake audits has diminished in size, such that a continual renewal of trained auditors would have been required.

There were considerable differences of opinion amongst Botswana respondents in relation to the utility of the quality audits. One group considered that the process was useful and resulted in useful recommendations that the health units would be able implement. Another group felt that most managers were already aware of quality failings and so the audit findings did not tell them anything much new. They were however prevented from addressing the criticisms by a lack of autonomy in their health facility.

2.1.3 Human Resources for Health

Building Block 3: Human Resources for Health			
Increased availability of key human resources for health			
Indicator	Evaluation conclusion		
Doctor/population	1980: 1.2/10,000 population 2006: 3.3/10,000 population		
Nurse/population	1980: 11.4/10,000 population 2006: 28.8/10,000 population		
Others (dental therapist/maintenance technician/lab/pharmaceutical technician)		1978	2006
	D. Therapists	7	42
	Lab. Technicians	16	142
	Pharmacists	12	60
% of Botswana medical officers vs. Foreign medical officers	1988: 86% Foreign 2006: 90% Foreign		
TA contributed positively to capacity building and institutional strengthening	Yes		
Training assistance contributed positively to capacity building and institutional strengthening	In-country: yes Training of medical doctors in Norway: less positive		

Norway supported training for dental therapists through BOT008 and 015, Midwives, Laboratory and Pharmacy Technicians through BOT 2201. International training of medical doctors was supported through BOT 2202 while a variety of individual international training programmes were supported through various other Norwegian projects.

o *Dental Therapists*

Relevance

Dental Health was included as a priority in both NDP 4 and NDP 5. Both referred to concern about the increasing incidence of oral diseases in Botswana and the development of a National Oral Health Service became a priority.

The fund allocation to the Dental Health Project absorbed 4% of the total NORAD budget support in Phase 1 during the period 1970 to 1988.

Effectiveness

Norwegian assistance supported the development of Botswana National Dental Health Plan and the subsequent implementation of this plan (See Health Services Delivery above). This included the development of a Dental Therapists training unit. Support was provided to build the necessary infrastructure, develop an appropriate curriculum and to provide teaching support. The Dental Therapy training programme has been graduating students more or less continuously since then.

Sustainability

The programme for Dental Therapy training has been in place since its commencement in 1983. There are currently 81 Dental Therapists employed in the health sector (79 by MOH and 2 by MLG) (MOH 2008), Compared to the 9 Dental Health Therapists employed in 1987 this represents a healthy increase in numbers. Botswana dentists and dental therapists have delivered the dental therapy teaching programme since the departure of the Norwegian TA.

The Dental Therapy programme trains and produces an average of eight graduates each year. This production rate is illustrated in the table below where it can be seen that the production of this cadre remained constant from 1997 to 2010.

Table 4 - Graduates from various health training programmes 1997-2010

Programme	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
General Nursing	245	242	244	242	316	312	346	332	355	309	321	300	357	349
GN upgrade	212	208	187	164	165	150	28	0	0	0	0	0	0	0
Midwifery	69	39	57	103	85	88	152	172	0	167	189	0	202	0
Pharmacy	7	12	12	13	14	12	13	10	17	11	17	13	15	18
Health Education	11	12	12	11	0	0	0	15	10	9	14	11	12	14
Dental Therapy	8	6	6	7	6	5	7	6	7	6	8	7	8	7
Med. Lab. Technology	16	15	14	10	10	13	12	7	18	17	11	17	19	29

Source: Ministry of Health, Institute of Health Sciences, Local Training Unit.

o *Training of Midwives, Pharmacy and Laboratory Technologists*

The programme BOT2201, focussed on strengthening HRH to enable Botswana to roll out its ART programme, through the recruitment of Norwegian lecturers in Midwifery, Laboratory and Pharmaceutical training in order to strengthen teaching programmes in these areas.

✓ [Midwifery Training](#)

Relevance

A shortage of midwives, coupled with the high maternal and infant mortality rates associated with HIV/ AIDS, resulted in a request from the MOH for assistance with Midwifery teaching.

Effectiveness

Norwegian support was provided in the form of technical support for curriculum development to include HIV/AIDS related topics and the provision of one¹⁰ Midwifery Lecturer. The duration of the teaching programme changed as a result of the curriculum changes, however the average number of midwifery graduates produced per year has increased slightly since the arrival of the TA (Table 4 above).

Efficiency

Originally three Midwife tutors were recruited, however only one stayed for a significant period of time in Botswana. It is not clear why the two others dropped out early.

Sustainability

The Midwifery training programme is still being offered with graduate numbers maintained.

The MOH is experiencing difficulties in attracting nurse tutors since the introduction of a 30% overtime allowance for all nurses at the health facilities. As tutors do not qualify for this allowance, nurses prefer to work in clinics.

✓ [Medical Laboratory Technicians training](#)

Relevance

A shortage of Laboratory Technicians, coupled with the increased laboratory activities as a result of the ART programme, were the factors that led to a request from the MOH for assistance with their teaching.

Effectiveness

Norway provided support with the provision of a lecturer who taught on the programme at the Institute of Health Sciences. The output of Lab Technology graduates has increased somewhat since 2006 (Table 4).

Sustainability

The Laboratory Technology Training programme is still being offered with graduate numbers maintained.

✓ [Pharmacy Technician training](#)

Relevance

A shortage of Pharmacy Technicians, coupled with an increased level of their activities as a result of the ART programme, were the factors that led to a request from the MOH for assistance with their teaching.

Effectiveness

Norway provided support with the provision of a lecturer who taught on the Pharmacy programme at the Institute of Health Sciences. The output of Pharmacy Technology graduates has increased somewhat since 2006 (Table 4).

¹⁰ Apparently three were recruited but two did not remain for long in the positions.

Sustainability

The Pharmacy Technician Training programme is still being offered with graduate numbers maintained.

○ *Training of Medical Doctors in Norway 1995 to 2012*

Starting under BOT015 but later split into a separate project (BOT2201), Norway provided support for the training of Botswana students at Norwegian medical training institutions. Norway and Botswana were responsible for co-funding this programme which was implemented at the Universities of Bergen and Tromsø Medical Schools. Prior to embarking on medical training in Norway, the students signed an agreement with the Government of Botswana in which they undertook to return to Botswana upon successful completion of their studies. This agreement has so far not proved an effective mechanism to induce the graduates to return to work in Botswana.

Relevance

Successive NDPs and Health Manpower Plans have highlighted the shortage of Botswana medical doctors in the country. Agreements between Norway and Botswana had consistently called for the replacement of Norwegian doctors, particularly DMOs, with Botswana doctors but this had proved impossible to implement.

In 1989 an international team funded by Norwegian assistance undertook an evaluation of the University of Botswana and recommended the establishment of several health related courses to be undertaken at the University, including medical education. A subsequent feasibility study was carried out by the University of Botswana and the Botswana Ministry of Education concluded by recommending the establishment of a Medical School at the UoB. In anticipation of this development, it was considered appropriate that Botswanan students should be trained at Norwegian Universities to, it was hoped, provide suitable graduates to take over the responsibility for teaching at the new school of medicine in due course.

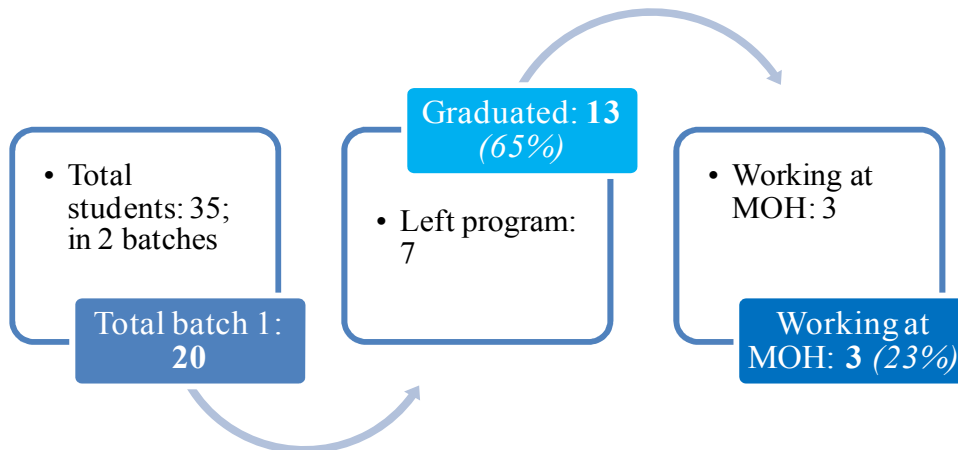
It had been anticipated that an Internship scheme would be established in Botswana to facilitate the return of the successful graduates. This has not been developed.

Apparently there was consideration given to alternative mechanisms for achieving the same objectives e.g. the options of supporting the development of a medical school in Botswana or regional based training in Anglophone countries were considered for the training of doctors, but the Norwegian training option was supported, possibly as a result of the Norwegian policy emphasis on promoting institutional cooperation with Norwegian organisations.

Effectiveness

Initially the programme catered for 50 Botswana medical doctors to be trained in Norway, but a shortage of suitably qualified applicants resulted in this being reduced to 35. Thirty-five medical students have been accepted for medical studies in Norway. Of these 35 students, 7 have left the programme, fifteen are still studying and 13 have graduated. Out of the 13 graduates, only 3 are working for the Ministry of Health. It is not known where the remaining ten successful graduates are working.

Graph 1- Batch 1 of Botswana medical students in Norway



Source: Ministry of Education, April 2010.

The remaining 15 students are still studying and most of them will graduate in the period 2011 to 2014. To date the programme has not been very effective in increasing the number of Botswana doctors working in the MOH.

Efficiency

By comparison with Medical doctor training programmes in any Anglophone country, this programme is not efficient as there is a need for an additional year for language training prior to embarking on the medical training proper. This apparently has acted as a barrier to potential applicants.

✓ [BOT015 Community Home-Based Care programme](#)

Sixty volunteers were trained in counselling under the Community Home Based Care (CHBC) programme in Botswana at district level as part of the training earmarked for Community-based AIDS education.

✓ [BOT2201 Trauma Care training](#)

The Haukeland University Hospital provided training in the BEST (Better and Systematic Trauma Care) programme. 1,000 health care workers were trained in BEST at 27 different hospitals. To ensure sustainability, 81 local facilitators were provided with ‘Train the Trainer’ instructor training.

✓ [BOT015 Integrated Management of Childhood Illness \(IMCI\)](#)

It is reported that the Norwegian Paediatricians who worked for six-week periods in Botswana hospitals provided training in IMCI and raised awareness of international standards, practices and programmes at the health facilities where they were posted.

✓ [Post-graduate training](#)

Post-graduate training was supported by Norway for a number of Botswana Pharmacists, Dentists, Dental Therapists, Community Rehabilitation Officers, Orthopaedic Technicians and Hospital Technicians in a variety of fields, including Public Health and Health Research methods.

2.1.4 Health Finance

Building Block 4: Health Financing	
Health Financing Options considered	
Indicator	Evaluation conclusion
National Health Accounts developed.	National Health Accounts for 2000, 2001, 2002 completed in 2008. Further NHA exercise currently underway.

This section looks at the role Norwegian assistance played in helping Botswana to consider financing issues in the health sector. This was not a major part of Norwegian support and was limited to the Institutional Collaboration phase of BOT015 from 1996. One of the components of this phase was an institutional agreement between the Health Research Unit of the MOH and DiS to collaborate over decentralisation research. Three priority areas of research had originally been identified (Sebina 1993) as a health financing study, equity studies related to health services distribution and also equity in reproductive health. The capacity of the HRU was to be strengthened through collaboration with experienced researchers from DiS.

Outputs are reported to have included:

- Equity in distribution of resources study¹¹
- Revenue from user fees⁶
- Ability and willingness to pay⁶
- The user fees model⁶
- An evaluation of the revenue collection system for user fees (Kulumani 1999)
- National Health Accounts (HRU 2008)
- Medical Aid Schemes in Botswana (HRU 2010)

One further study was reported to have been undertaken in the annual reports, but it is not clear if it was completed.

- Equity in Reproductive health study.

One staff member was supported to undertake a Masters' Programme in Health Planning and Financing as well courses in National Health Accounts (NHA) methodologies. This ultimately resulted in the preparation of Botswana's first NHA.

Relevance

Health Sector Reform was introduced as a strategy in NDP 8 (1997-2003). This included a demand for the cost effective use of resources and increased cost recovery. The research projects addressed the need of the MOH to have more information about health financing in Botswana. The need for a set of NHA was again identified in NDP 9 (2003-2009) while NDP 10 (2010-2016) suggests that an increased demand for health services, coupled with the increasing complexity of health care problems has overstretched the services available reinforcing the need for health sector reform.

¹¹ Not seen by Evaluation team but reported in the MTR- Moeti et al (1998) or in subsequent project reports – Otsweleng, R.S. (2003 and 2004).

Effectiveness

The research was effective in producing a number of research reports that generated information that was potentially useful for decision makers. This included the NHA. It is not clear whether the MOH has used this information to inform future policy or plans.

Sustainability

The utility of the NHA process has been recognised and is currently (March 2011) being repeated. It was not apparent to the Evaluation Team whether any use had been made of the information made available either from the NHA, or other finance focussed research, on health sector policy.

The official trained in health financing is no longer working in the MOH and his current occupation does not use his health financing training.

A number of officials who worked alongside their Norwegian counterparts are still working within the HRU while others are now employed by the University of Botswana where they may be involved in research work that utilises skills gained while working alongside their Norwegian counterparts.

2.1.5 Health Information

Building Block 5: Health Information	
Reliable health statistics available <ul style="list-style-type: none"> • HIS designed and functioning. • National Health Status Evaluation undertaken. 	
Indicator	Evaluation conclusion
5.1 Improved quality and reliability of the HIS	ICD10 introduced. New reporting forms developed.
5.2 Health information use for decision making.	A set of health sector indicators covering health problems and health services indicators developed and in use.

Norway supported the development of the Botswana Health Information System during the Institutional Collaboration phase of BOT015 from 1996. A contract was agreed between Statistics Norway and the Health Statistics Unit of the Botswana MOH. The reason stated for the collaboration (Moeti et al 1998) was to try to improve data collection for the HIS (timeliness, completeness, coordination) and analysis and feedback of available information. The MTR lists ten objectives with indicators that had been proposed for the collaboration but the 2003 Annual Report (Otsweleng 2004) reports on only two, those related to building capacity within the HSU and publication and dissemination.

Relevance

Strengthening the health information system have been priorities for the MOH as indicated in NDPs 6, 7 and 10 each calling for improved data collection and utilisation. The collaboration apparently built on the recommendations of an assessment of the Health Information System undertaken by the MOH in 1997 (Otsweleng in 2004).

Effectiveness

The achievements of the collaboration appear to have been supporting the MOH to move to the use of ICD10, a more up to date system for the classification of disease than had been in use previously, and the development of an agreed list of Health Indicators, introduced for use by the MOH (Beleme 2000). The reporting forms used by health institutions were re-designed to enable the change to ICD10. In addition, the reported outputs (Otsweleng 2004) include one officer successfully undertaking a two years training programme in Health Information Technology in the USA, one successfully completed a four month epidemiology course in Kenya (Otsweleng 2005) and the staff of the HSU were trained in the use of ICD10.

It would seem that some of the initial objectives of the collaboration were not addressed, in particular the lack of analysis, and hence utility, of what appears to be a very good data collection system.

Sustainability

The new reporting forms were successfully introduced and the Health Statistics Unit continues to produce comprehensive Annual Health Statistics that include the agreed health sector indicators.

2.1.6 Health Technologies

Building Block 6: Health Technologies	
<p>Stronger healthcare technology systems in relation to drugs and pharmaceutical supplies and medical equipment management.</p> <ul style="list-style-type: none"> • CMS strengthened • Biomedical Engineering maintenance system established 	
Indicator	Evaluation conclusion
6.1 Improved procurement and distribution system for drugs and medical supplies	No performance indicators for medical supply system routinely collected. Reports of shortages of drugs in facilities within last year.
6.2 Reliable system for Quality control of drugs operating regularly	Quality Control Laboratory operational.
6.3 Budget is allocated for maintenance of equipment and infrastructure	No separate budget for maintenance was identified at either facility or central level.
6.4 Infrastructure maintenance systems are operating in health facilities	No performance indicators for infrastructure maintenance systems. Field visits would suggest problems in infrastructure maintenance for MOH facilities. District Council maintenance appeared effective for PHC facilities.
6.5 Equipment maintenance system operating	No performance indicators for equipment maintenance systems. Field visits would suggest problems in equipment maintenance for MOH facilities.

Two health technologies in particular were supported by Norway – support for pharmaceutical services in Botswana and the establishment of Biomedical Engineering Maintenance Service (BEMS) to manage medical equipment. Both health technologies received comprehensive support, including planning, infrastructure development, human resources development and the provision of TA to manage the services over a number of years, through BOT009, 014 and 015. There was also a component for training of Pharmacy

Technicians included in BOT2201 (see above). As indicated above, reviews¹² of the Norwegian contribution to infrastructure development expressed concerns about the provision for the future maintenance of the facilities constructed.

Relevance

The expansion of the rural health and hospital services brought about an increase in utilisation of health services and an expansion in the pharmaceutical requirements both in volume and, over time, sophistication. A similar increase was experienced in the amount and sophistication of medical equipment being utilised in the health facilities. These factors were recognised in NDP 6 where one of the priorities was to focus on improvements in Technical Support Services with an increase in storage capacity at the Central Medical Store and the improved management of pharmaceuticals at both central and hospital levels. Systems were needed to manage this increased activity, in the first case to ensure the necessary drugs, vaccines and medical supplies were available for the expanded health network and secondly to protect the country's investment in medical equipment by introducing planned maintenance and repair services to keep equipment running for its useful life.

Effectiveness

Norwegian support was successful in planning and implementing the development of a functioning pharmaceutical supply system based at the Central Medical Store (CMS) as well as medical equipment maintenance at BEMS. A NORAD Review (Fjelland et al 1990) reported that the maintenance and repair of basic technical equipment were well taken care of and that the provision of drugs to health facilities had been improved. No more recent evaluation reports have been seen to indicate the effectiveness of the systems developed. The MOH does not monitor any indicators that track either system.

Sustainability

The medical supply system based on the CMS in Gaborone and the medical equipment management programme, based on BEMS in Princess Marina Hospital and in Francistown, still operate. The MOH does not collect any routine data on the medical supply systems (e.g. reporting of stock outs or monitoring tracer drugs) or the state of medical equipment in the country (e.g. % of medical equipment not functioning) and so objective information about the sustainability of the two systems is lacking. Anecdotal evidence collected through the field visits and key stakeholder interviews would suggest that the medical supply system has worked well, although there are suggestions of a recent deterioration¹³. The MOH has responded to criticisms of the medical supply system by employing consultants to manage the CMS. Evidence from the Evaluation Finance Study would suggest that MOH expenditure on drugs decreased from 1995 to 2005 (from 20% to 5% of MOH recurrent expenditure) before increasing again to 15% during the second half of NDP 9. Actual expenditure on essential medicines in current BWP per capita dramatically increased from 1991 to 2003 and more sharply from 2003 to 2009; but in USD terms, the expenditure remained around USD 10 per head until 2003 but had doubled to USD 20 by 2009. (see Section 4.2: Finance Sub-Study).

BEMS, by contrast appears to be struggling to function with medical equipment maintenance being one of the main problems experienced by the health facilities visited.

¹² Per Granberg & J.J.Parkinson (1988).

¹³ A Botswana newspaper, The Midweek Sun of March 30 2011, reported the Assistant Minister of Health as informing the Botswana Parliament that the shortage of drugs across the country was a longstanding problem that was expected to be resolved by the end of the 2012/3 financial year.

2.1.7 Community Ownership and Participation

Building Block 7: Community Ownership and Participation	
Increased community participation in health services management in Remote Areas.	
Indicator	Evaluation conclusion
7.1 Strengthened participation of communities in improving their health.	No evidence of strengthened participation. Evaluation field visit found mixed results, some health facilities with functioning Village Health Committees, others without. Generally there are systems for participation but they lack clear guidelines to define roles and responsibilities.
7.2 Functioning village health committees in remote areas	No evidence of functioning village health committees in remote areas identified. Lack of support from other stakeholders to mobilise and support community participation.

There was no direct Norwegian support in the area of Community Ownership and Participation in relation to PHC services, although, as this is a key element of PHC, it seems likely that the support to the development of PHC provided by the TA at Local Government level would have made some efforts to involve communities in health systems. The community study reported that, despite language difficulties, the Norwegian DMOs played an active role in encouraging the formation of VHCs, encouraging links between health workers and their communities.

Norway did support a number of community participation projects during the Institutional Collaboration phase of BOT015 from 1996. Collaboration between the Universities of Botswana and Oslo to implement the Community Based AIDS Education Project in Francistown was established in 1993, incorporated into BOT015 in 1996 and completed in 2001. A second collaboration, AIDS Prevention, between the Norwegian Board of Health and the AIDS/STD Unit of the MOH was established to address (1) Male involvement in combating HIV and (2) Youth through community involvement activities¹⁴.

Relevance

While PHC, with community involvement as an integral component, has featured as a priority in all the NDPs, no specific mention of community involvement as a GOB priority was identified. Preventing HIV infections clearly requires very significant community involvement and is a major component of the National HIV/AIDS Strategic Framework 2003 – 2009 (NACA 2003).

Effectiveness

Weak community participation was a theme repeated in various DMO reports in the late 1970s and 80s¹⁵. A NORAD Review (Fjelland et al 1990) reported that ‘despite the importance of community involvement in PHC, most Village Health Committees are dormant’. Similar findings were reported more recently in a RADP review (Botswana Institute for Development Policy Analysis 2003), with community organisations and

¹⁴ A third component, strengthening epidemiological capacity within the unit, was not implemented.

¹⁵ NORAD Archive (1979, 1980, 1989).

leadership amongst Remote Area dwellers being perceived as weak. The NORAD Review reported that the membership of the Village Health Facilities was largely female. The evaluation team field visit findings in respect of community participation in health was mixed with some evidence of active health committees associated with some health facilities, but not all (see section 2.4)

The Community based AIDS Project (Moeti et al 1998) worked with Commercial Sex Workers (CSW), truck drivers and out of school youth. It trained and used 30 Peer Educators to make over 400,000 contacts with individual or at nearly 17,000 public meetings. Over one million condoms were distributed by the project.

The AIDS Prevention programme²⁹ similarly targeted out of school youth, but around Maun rather than Francistown, using Peer Educators while the Male Involvement component was innovative in introducing concepts and techniques to approach men with messages about male responsibilities for HIV transmission. Norwegian TA was seconded to the HIV/Sexually Transmitted Diseases Unit in order to support this. The annual reports (Otsweleng et al 2002, 2003, 2005) seen for this programme do not clearly indicate the achievements of this activity and no final report of activities for this programme was seen. Informants indicated that the Male Involvement component was particularly successful in introducing this subject into the policy arena of the MOH and NACA, although it would seem that financial management problems within an NGO supporting implementation resulted in reduced implementation (Otsweleng 2005).

Sustainability

The Community based AIDS Project continued on for a further seven or eight years after the Norwegian funding finished. Alternative funding was provided, possibly by SADC, to enable it to be extended until 2008¹⁶.

The intention of the AIDS Prevention programme targeting youth had been to institutionalise activities within District Governments, (Social and Community Development, Council Health Department and School Health service), however the latest report indicates that programme activities had been integrated into the IEC programme of the ASU.

The Male Involvement policy area has been institutionalised within NACA and it is understood that a number of people trained by the programme are working with NGOs focussed on male involvement.

¹⁶ Personal Communication Ms. Pedzisani Motlhabane.

2.1.8 Partnerships for Health Development

Building Block 8: Partnerships for Health Development	
Increased partnership between Norwegian and Botswana institutions.	
Indicator	Evaluation conclusion
Continuing Institutional links between institutions in Botswana and institutions in Norway.	No evidence found of on-going links between institutions in Norway and Botswana

Norway supported the development of partnerships between Norwegian and Botswana institutions during the Institutional Collaboration phase of BOT015 from 1996. The purpose of the partnerships appeared to be twofold, to develop various aspects of the health system through partnerships focussed on achieving specific results related to the collaboration, but also to initiate inter-country partnerships that would continue beyond the period of supported activities. The programme consisted of eight separate partnership arrangements, one project for each technical area included in the programme and these are discussed above as they relate to their specific objectives (HIS, Health Research etc.). The expectation of on-going relationships that would be developed between the Norwegian and Botswana project partners is discussed here.

Relevance

The Programme was designed to bring together various earlier Norwegian supported activities with some new ones added. It is not clear how the final composition of the programme was decided upon. The implementation mechanism, the fostering of institutional links between Norwegian and Botswana organisations, seems likely to have been dictated by the new Norwegian policy that moved away from a project approach to focus on institutional development. Views amongst Botswana stakeholders involved in the design process varied, some accepting the view that Botswana's level of development, in the mid-90s required a different sort of approach to the relationship between the two countries while others would have preferred a continuation of previous implementation mechanisms.

Stakeholders involved in the design process felt that the overall design was idealistic, over designed and did not take account of the weak institutions that were going to have to manage the complex bureaucratic processes.

Effectiveness

While there was some limited broad overview of what was hoped to be achieved at the inception of the programme and detailed annual work plans with output targets were developed for each of the component projects. There were no indicators developed to measure institutional collaboration. Design of the annual work plans appears to have been largely led by the Norwegian institutions due to weak institutional capacity in Botswana.

A mid-term review (Moeti 1998) noted the slow progress on implementation and recommended the programme be extended, at no additional cost for a further three years. The MTR also recommended that some elements of the collaboration be stopped.

Efficiency

Norwegian institutions which participated in the collaboration were largely self-selected as there was a limited pool of organisations in Norway with the appropriate skills sought for the partnership. Often key personnel in the Norwegian organisation had some previous association with Botswana and had retained an interest in the country. Most of the Botswana counterpart institutions selected for the collaboration were elements of the MOH, also self-selected with individuals who had a particular interest in the collaboration, but these were institutionally weak with high turnover of staff.

Complex funding mechanisms were initially used with Norwegian funds, based on agreed annual work plans, transferred to GoB which paid for services provided by Norwegian institutions. The complex bureaucracy of this process contributed to delays in implementation particularly in the beginning. Short cuts were needed in order to get implementation going. The process was later changed with funds retained in NORAD but requiring GoB to approve expenditures.

The overall design of the programme contained many elements of a Sector Wide Approach, with Botswana having responsibility for driving the process, accounting for activities and reporting. Staff turnover in both Botswana and Norway and institutional weaknesses, particularly in some of the implementation units in the MOH led to delays.

Regular annual and bi-annual reviews to monitor progress and agree annual work plans were attended by all representatives from all collaborating institutions. This was viewed by participants as cumbersome, expensive and not very effective.

While the initial agreement anticipated a significant Botswana contribution to funding the project, no mechanism to demonstrate the value of the GoB contribution, which included the part time inputs of numerous counterpart staff from within the MOH, was developed, although it is clear that Botswana did contribute significantly to the programme costs.

Sustainability

While the individual component projects have had some sustained effects, other than the training of Botswana doctors (which continues to be part funded by Norway under a separate project), there has been no formal ongoing institutional collaboration between the partner organisations involved in the collaboration beyond the life of the programme.

2.1.9 Increased capacity to undertake health and health systems research

Building Block 9: Research for Health	
Increased capacity to undertake health and health systems research.	
Indicator	Evaluation conclusion
9.1 Research outputs	Numerous research outputs, as publications by MOH and in international peer reviewed journals reported.
9.2 Evidence of utilisation of relevant research results for decision making	No evidence found

Norway supported the development of increased capacity in health and health systems research in two programmes. BOT401 (1983-1988) supported a National Health Status Evaluation and the Institutional Collaboration phase of BOT015 from 1996 supported health research. There were two contracts within this latter programme related to research; decentralisation research (contract between MOH and DiS) and health systems research (contract between MOH and University of Oslo). Different documents provide different objectives for each of these two more recent research programmes. The MTR¹⁷ indicated that their general objectives were:

- Decentralisation Research: To assist in improving the organisation, management and quality of Botswana's health system.
- Health Systems Research: The promotion of the use of research as a tool for performance improvement among health workers in Botswana and raise the capability of workers to conduct sound research whose results are valid and tangible.

Much, but not all, of the decentralisation research covered health financing issues (see Section 2.1.4 Finance Sub-study). The other area covered by the decentralisation research programme was research into patient satisfaction with health services, including hospitals and home based care. This latter research was undertaken through a collaborative effort involving the Health Research Unit (HRU), DiS and Molepolole Hospital. The focus of the health systems research component was said to be on strengthening the research skills of members of DHTs and supporting them to undertake small scale research projects, although some of the eventual output seems to go beyond simple health systems research.

Relevance

NDPs 9 and 10 both called for an increase in health research. A 1990 review (Fjelland 1990) indicated that PHC Research should be given a higher priority.

Effectiveness

The output of BOT401 was a major report series (Owuor-Omondi 1989) that detailed findings from a large sample community survey giving information on health status, health and health seeking behaviour, community involvement, water and sanitation.

In addition to several reports on financing issues (reported in Section 2.1.4 above) The decentralisation research prepared a series of reports on patient satisfaction with health services and from this a Client Satisfaction Study Manual was prepared to assist other health units to undertake such studies using a consistent methodology.

The health systems research programme trained a number of DHT members from four sub-districts and supported them to undertake some research¹⁸. The 2002 Annual Report (Otsweleng 2003) indicates that the research is focussed on three components with the overall title of Utilisation of Services by vulnerable groups:

- Adolescent Reproductive Health among Basarwa
- Concepts of Health, Healing and Illness among Basarwa
- Living Conditions of Basarwa.

¹⁷ Moeti et al (1998) also indicated that there was variation in the stated objectives for each type of research in the various source documents.

¹⁸ It is not clear from the MTR (Moeti 1998) what topics were covered in this research.

The 2003 Annual Report¹⁹ provides information on four study areas as well as dissemination activities and the establishment of a Research database. The research areas were

- Drug utilisation study.
- Patient Expectations and experiences
- Utilisation of health services by vulnerable groups.
- Improving public health control of sexually transmitted diseases in developing countries.

Two research reports were published in international journals in 2003 and a further two had been submitted for publication in 2004.

Sustainability

Project reports consistently indicated that one constraint of both research contracts was the lack of human resources capacity within the HRU of the MOH. The programme helped develop the research skills of a number of HRU staff and while these trained individuals have moved on to other jobs, the skills are retained in the country. Other HRU staff members remain in the unit and will have benefitted from working with experienced Norwegian Researchers. In addition, doubtless some of the DHT members trained in research techniques are still working in the health sector and may be using the research skills gained through the programme.

The evaluation team was not able to locate copies of all the research outputs from any central database.

¹⁹ Otsweleng, R.S. (2004). Unfortunately the second page of the Health Systems Research Report of this document is missing.

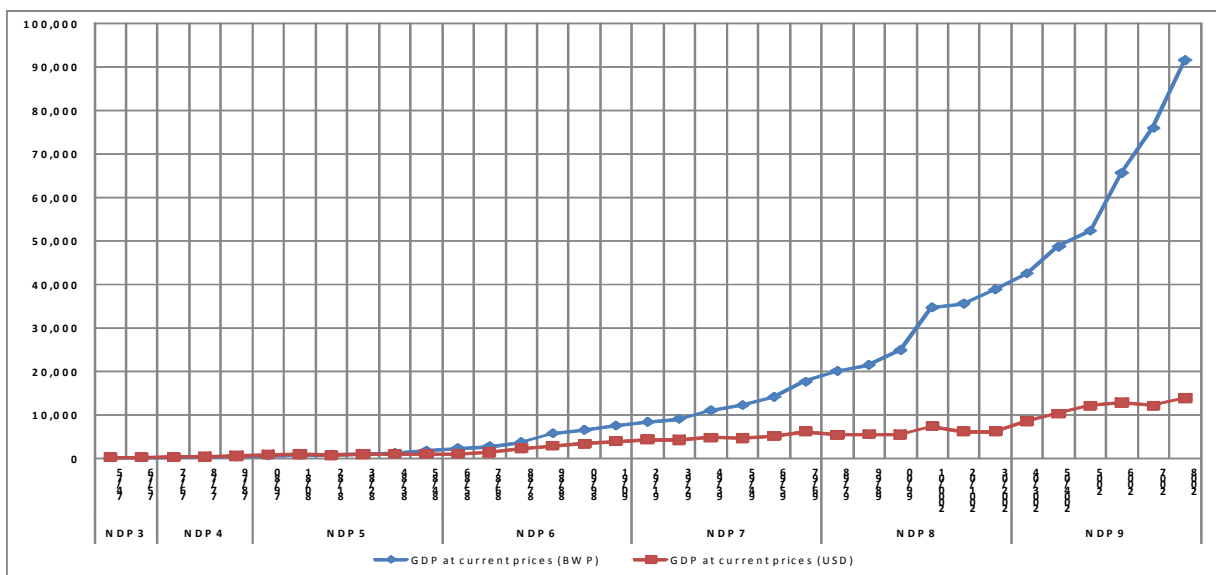
4.2 Finance Sub-study 2²⁰

4.2.1 National Health Accounts

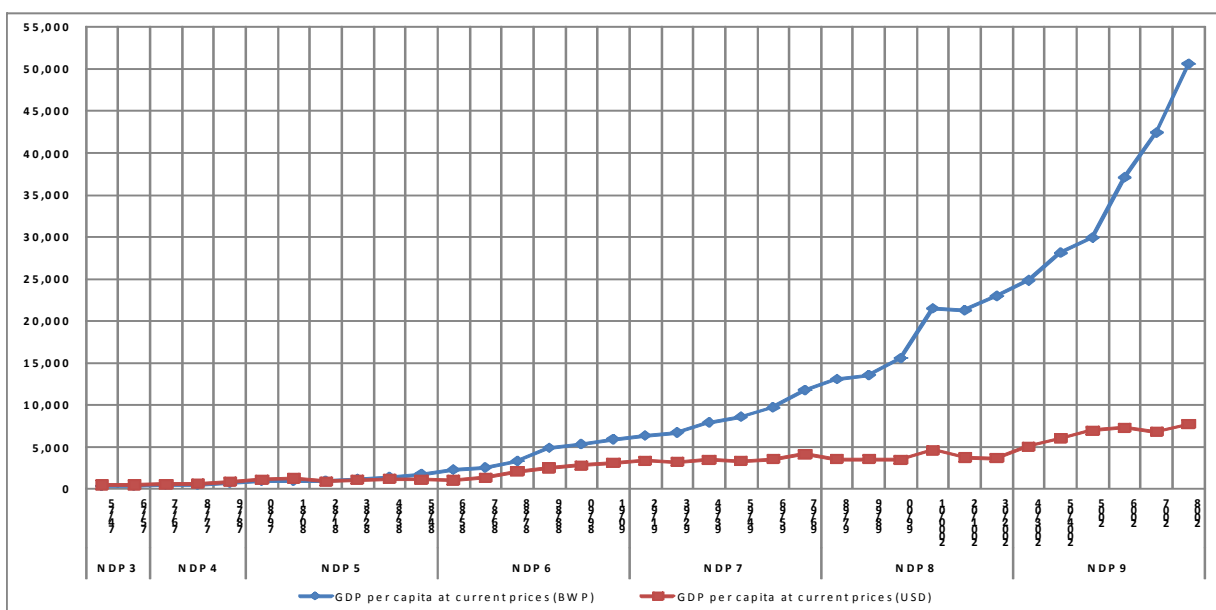
Since Independence in 1966, Botswana has moved from a least developed country to an upper middle-income status. Driven largely by revenues from mining, but also by private sector investment, the Botswana economy has grown extremely fast: from 1966 to 2008, real GDP growth averaged 8.7 % per year. GDP increased from USD 332 million in 1974 to USD 14 billion in 2008 or, in terms of GDP per head, from USD 498 to USD 7,710 (current prices at exchange rate) (

Graph 2 and Graph 3).

Graph 2 - Botswana, GDP at Current Prices (BWP and USD million)



Graph 3 - Botswana, GDP per Capita at Current Prices (BWP and USD)

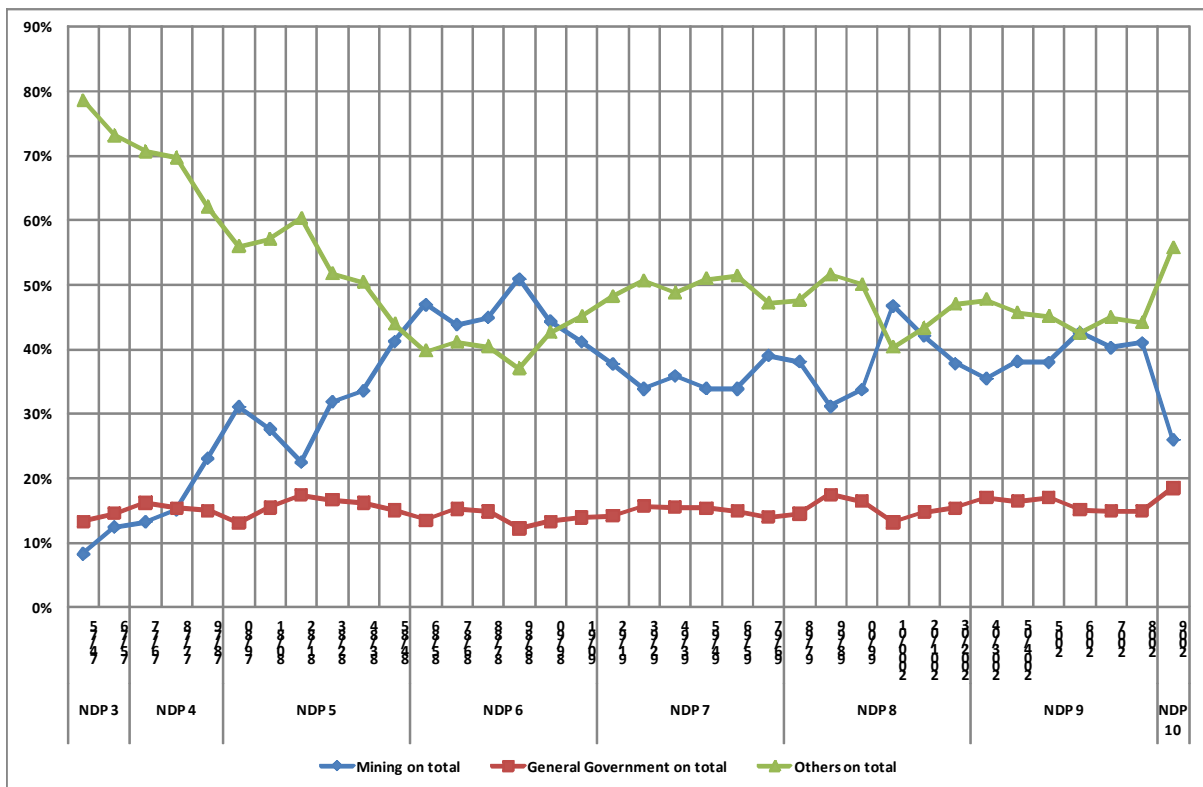


²⁰ See Annex 1 for the sources used for this section.

Although the natural advantage of mineral resources has been converted into the basis for a more diversified economy²¹, the mining sector continues to represent around 40% of GDP (Graph 4).

Government revenue, especially from diamond mining, has been used to build infrastructure (including health infrastructure) and to provide education and training. Botswana is a rare example of a country that has escaped the ‘natural resource curse’ (*Dutch disease*²²), despite its abundant diamond resources. Political stability, mature democratic processes, good policies and strong institutions have underpinned effective economic management for over four decades (World Bank 2009).

Graph 4 - Botswana, Share on total GDP: Mining Sector, Government and Others (%)



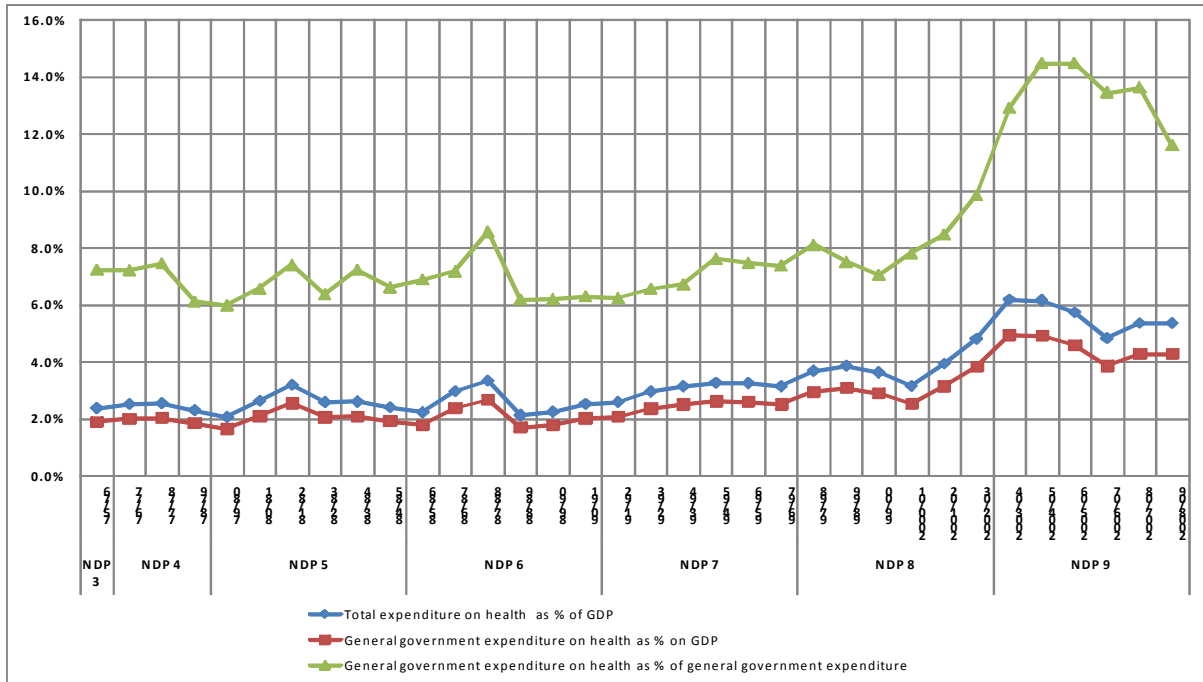
Government expenditure on health as a share of GDP was around 2% between 1974 and 1991, and then started to increase to reach the peak of 4.5% in the period 2003-2005. The government expenditure on health as a share of total government budget oscillated between 6 and 8% until 2000 when it increased to 14.5 % in 2005/06 (Graph 5). Government expenditure on health per capita increased from USD 10 to USD 330 (current prices at exchange rate) between 1975 and 2009, with a sharp increase that started in 2001 (Graph 6). Those increases that started in the late 90s reflect not only the important investments realised in the health sector (and the subsequent recurrent costs), but also the increasing burden of HIV/AIDS. Botswana has, over time, developed an effective public health system. The advent of HIV/AIDS has increased the burden on, and demand for, health care services. Management of supplies, facilities maintenance and service delivery were compromised as resources and attention were diverted to the immediate needs arising from the impact of HIV/AIDS (MoFDP - NDP 10 2009).

²¹ Botswana has become significantly less dependent on imports.

²² Dutch disease, called the resource curse or the “curse of oil”, is the damaging effect on an economy as a result of the exploitation and export of natural resources.

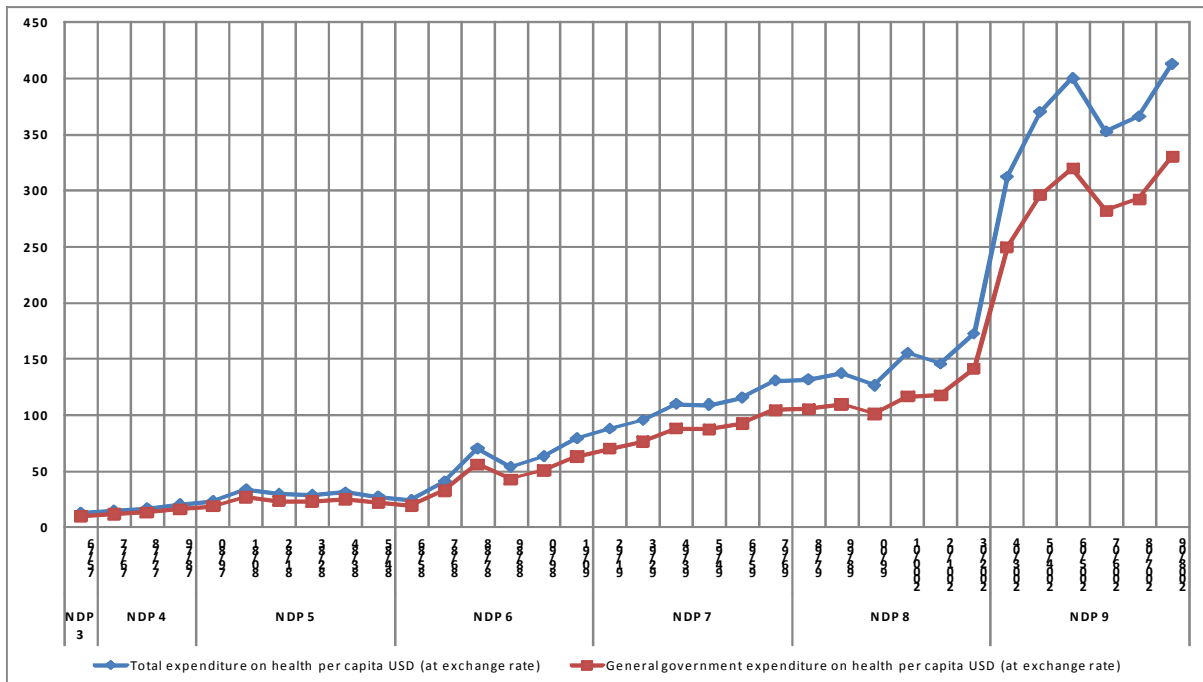
Despite those fairly high rates of expenditure on health, according to the World Bank, Botswana performs poorly in a number of areas like prevalence of undernourishment, maternal mortality ratios and life expectancy - although the latter is a function of high HIV/AIDS prevalence (WB, 2009).

Graph 5 - Botswana, Expenditure on Health as % of GDP and Government Expenditure on Health as % of total Government Expenditure



Note: Government expenditure on health: MOH, MOLG and NACA (other ministries, parastatals and public medical schemes are not included). Private health expenditure as % of total health expenditure: 25% in 2000, 19% in 2001, 18% in 2002 (NHA Study); 20% for all other years (assumption).

Graph 6 - Botswana, Expenditure on Health per Capita (USD at exchange rate)

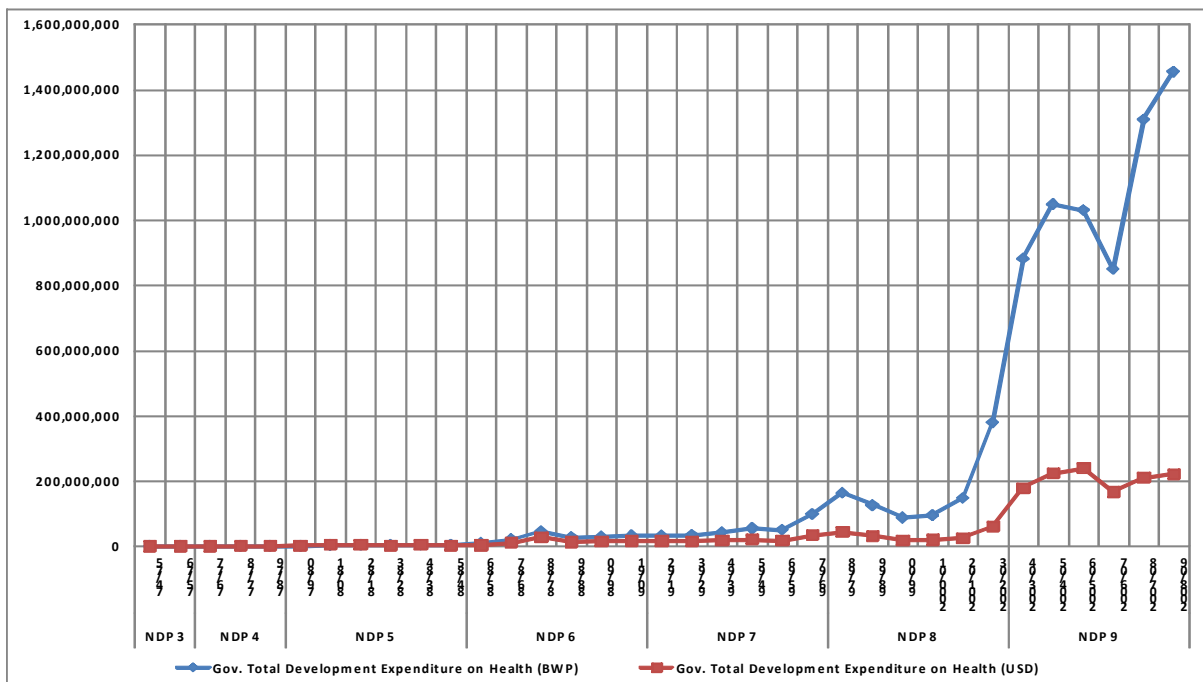


4.2.2 Development Fund Expenditure on Health

Successive National Development Plans have aimed at guiding the development of Botswana’s economy and drawing up programmes of public expenditure on recurrent and development projects, based on projected revenue resources of the Government.

Throughout the different National Development Plans (NDPs) there has been continuous investment in health care infrastructure and services. From 1974 until 2009, government health expenditure from the development budget (MOH, MOLG and NACA²³ development plans) increased from BWP 32.7 million to BWP 11.5 billion (respectively USD 39.3 million and USD 1.7 billion) or, in terms of expenditure per head, from BWP 1.8 to BWP 803.5 (respectively USD 2.1 and USD 122.5) (Graph 7 and Graph 8).

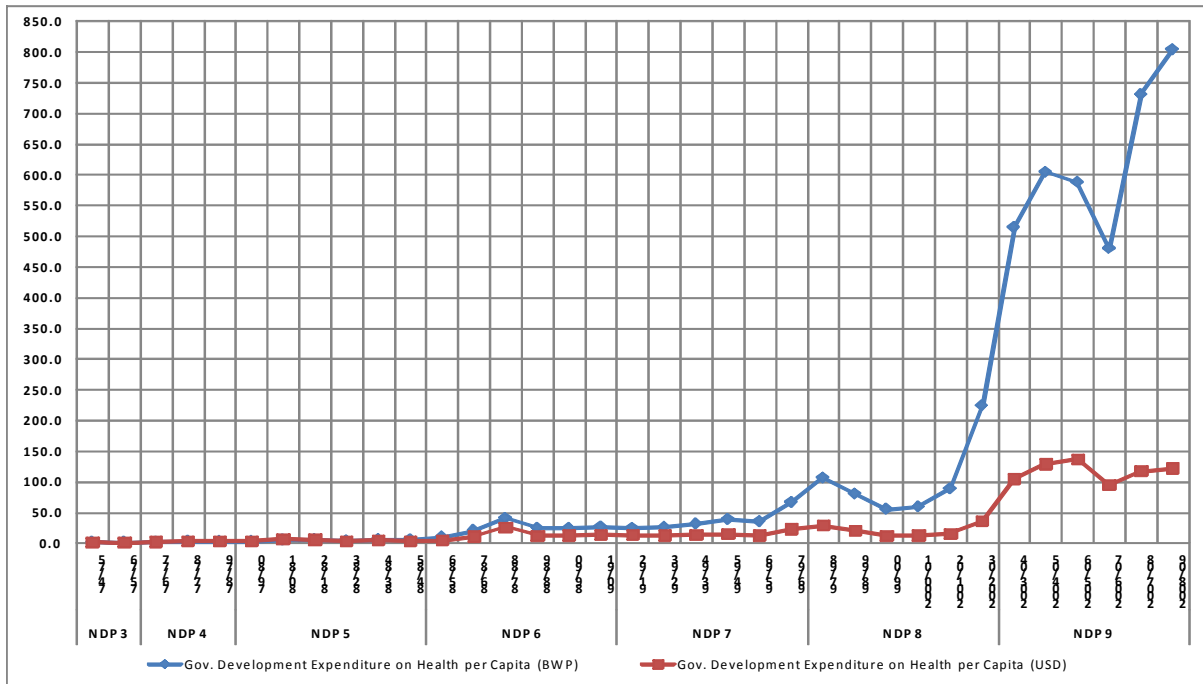
Graph 7 - Botswana, Government Development Expenditure on Health (BWP and USD)



Note: MOLG: estimate for the two last years of NDP 5 to NDP 9 and actual expenditure for all other years; NACA: idem for NDP 8 and 9; MOH: actual expenditure.

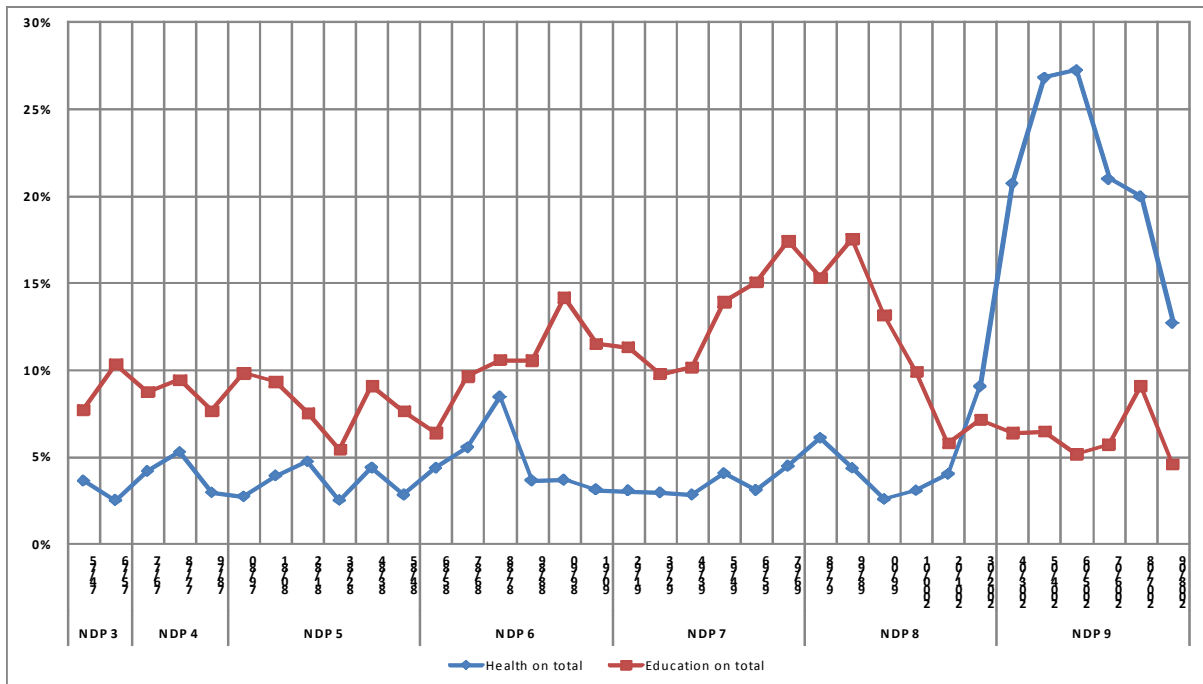
²³ Although most of NACA expenditures cannot be considered *stricto sensu* as development expenditure (ARTs should be considered as recurrent expenditure), they are anyway accounted in the development fund).

Graph 8 - Botswana, Government Development Expenditure on Health per Capita (BWP and USD)



The phenomenal increase during the second half of NDP 9 reflects the cost of coping with the HIV/AIDS epidemic (mainly ARTs). During NDP 9, development expenditure on health increased from less than 5% of total government development expenditure for the previous plan period to more than 20% (Graph 9).

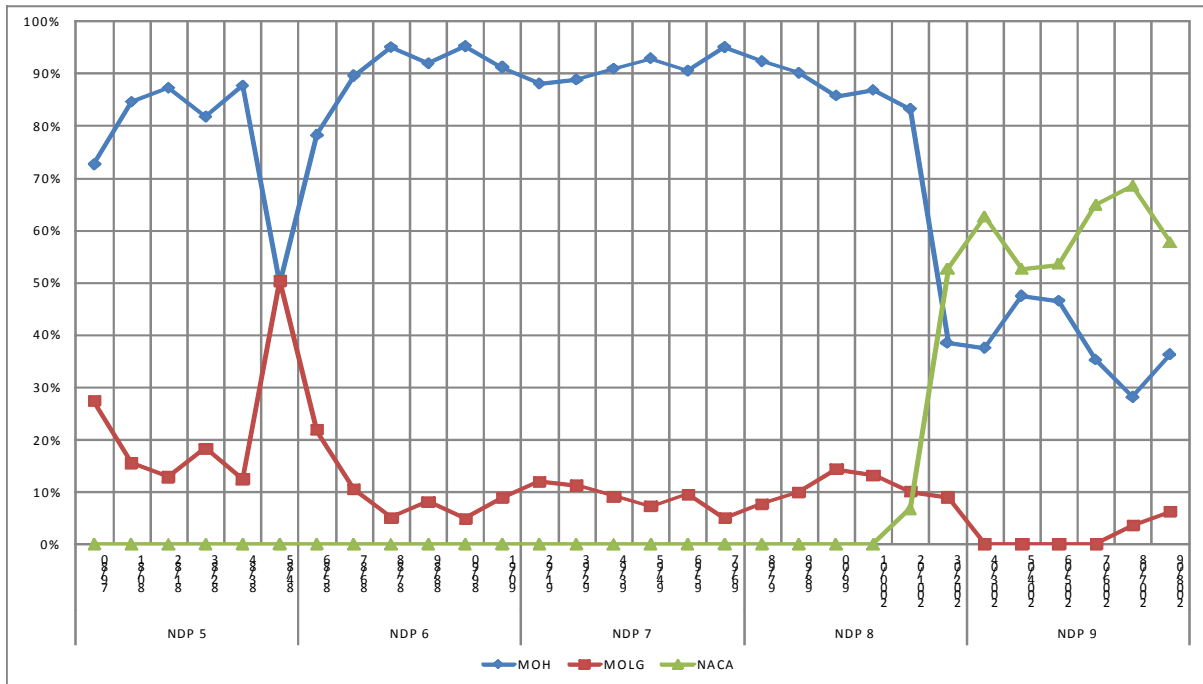
Graph 9 - Botswana, Development Expenditure: Health and Education on Total Development Expenditure (%)



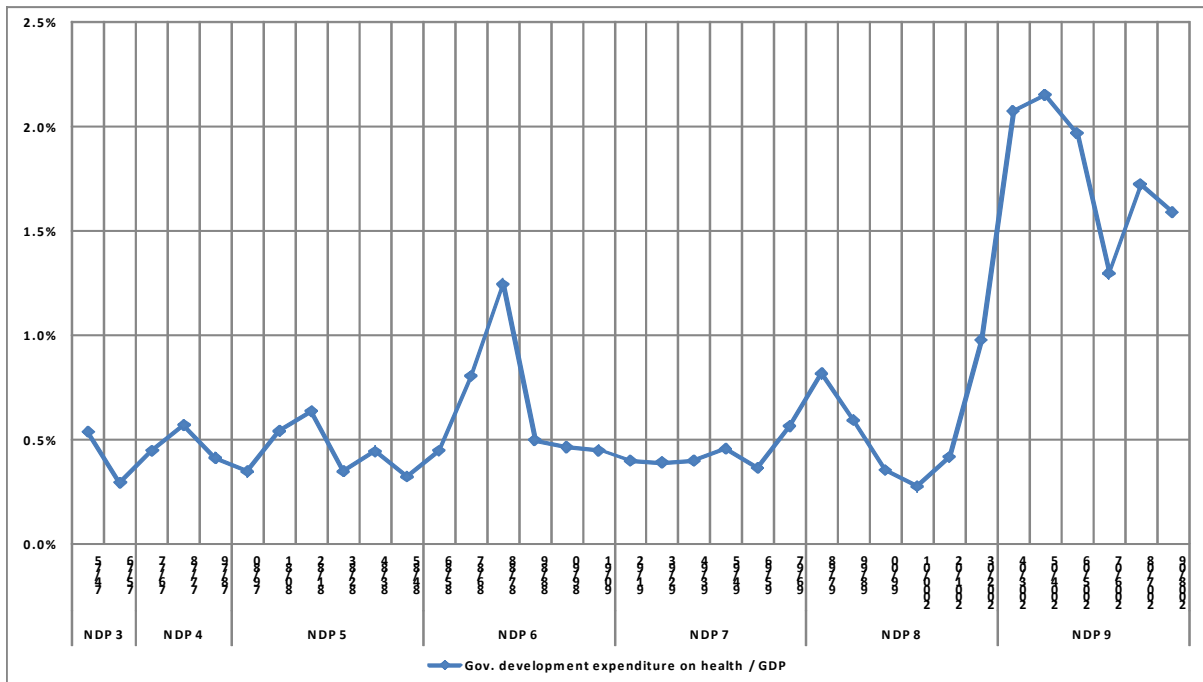
Between 1986 and 2000, MOH represented 90% of total development expenditure on health (MOLG: 10%); but since 2003 NACA has represented more than 50% of total development

expenditure on health (Graph 10). Government development expenditure on health represented around 0.5% of GDP till the end of NDP 8, then more than 1.5% of GDP during NDP 9 (reflecting again the cost of coping with the HIV/AIDS epidemic, ART was introduced in late 2001 (Graph 11).

Graph 10 - Botswana, Government Development Expenditure on health: MOH, MOLG and NACA on Total (%)

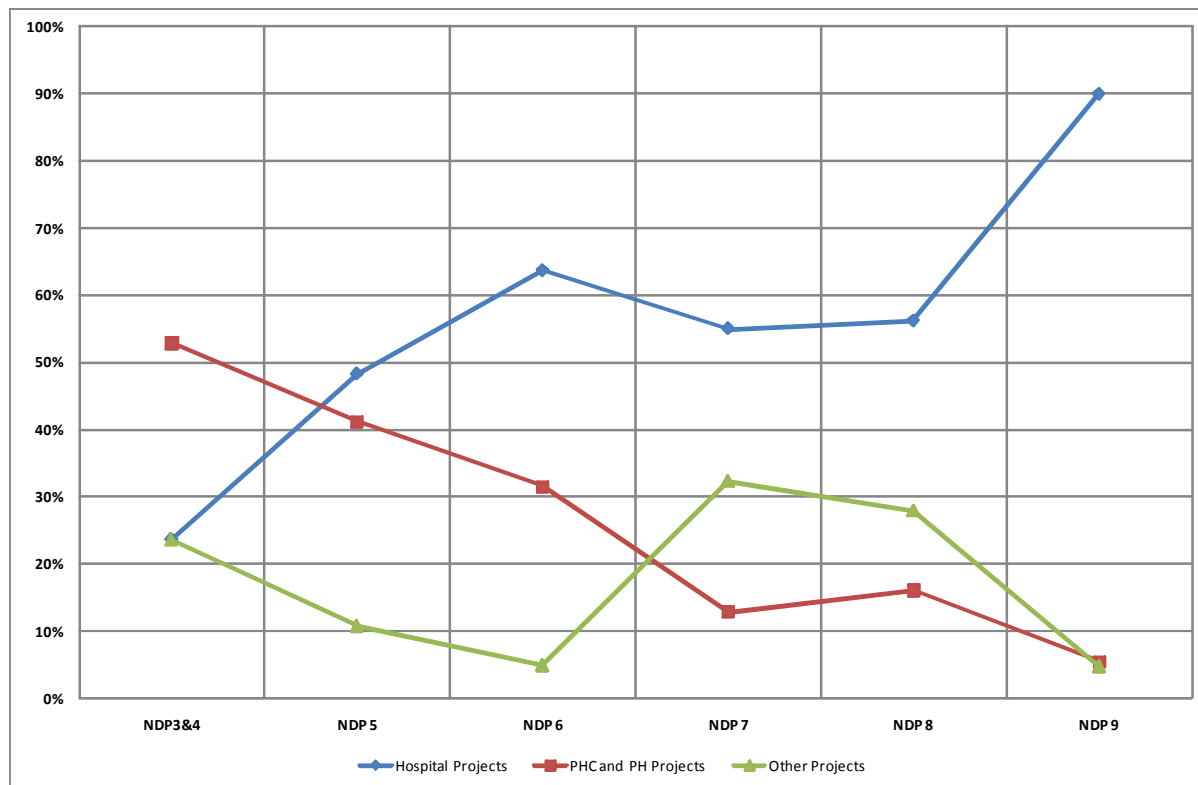


Graph 11 - Botswana, Government Development Expenditure on Health as % of GDP



The analysis of development expenditure by level of care (Graph 12) shows that the share of investment in the hospital sector on total health development expenditure (MOH and MOLG) has increased from 25% to 90% from NDP 3&4 (1973-1981) to NDP 9 (2003-2009).

Graph 12 - Botswana, MOH and MOLG: Development Expenditure on Health per level of care (%)



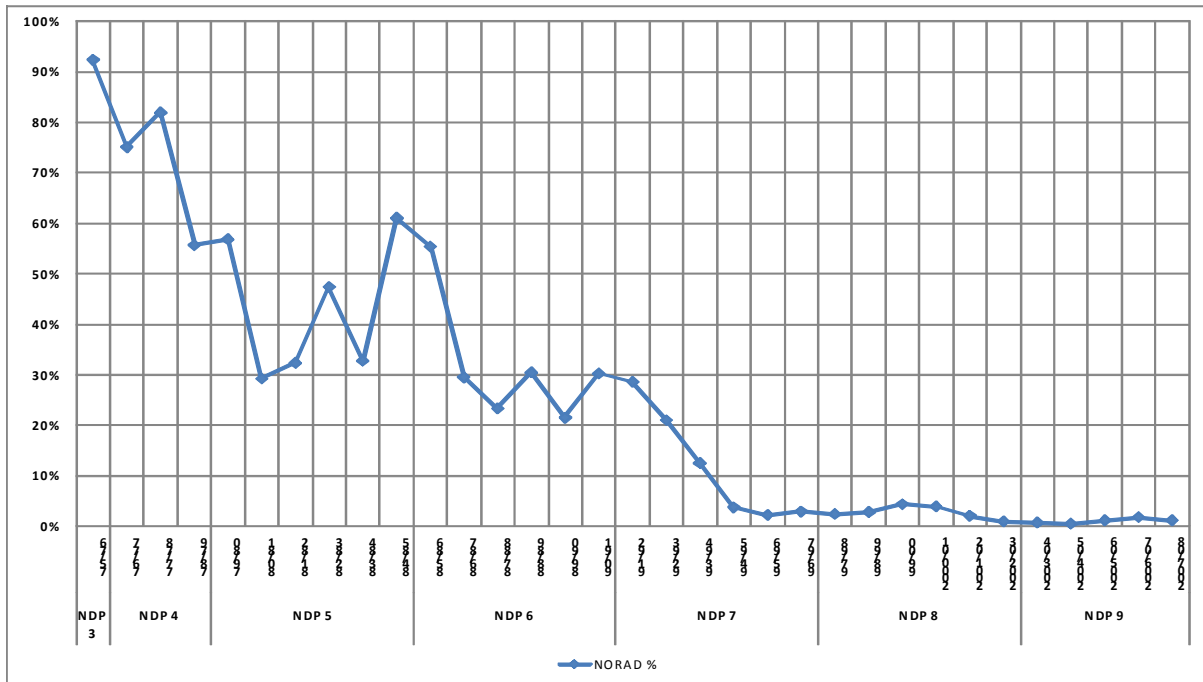
Note: Categories defined as:

- Hospitals all MOH projects related to hospitals
- PHC and PH
 - All MOLG related health projects
 - MOH: Projects related to Health Centres, Regional/District Health teams, and different programmes (Occupational Health, Dental Health Services, Health Education, MCH/FP, Nutrition, Rehabilitation, Mental Health, Prevention of Blindness, other Family Health Programmes, Rural Health Facilities, Preventive Programmes, Maternal and Family Health, PHC programmes)
- Others: Medical Research and Evaluation, NHI, CMS, Control of Communicable Diseases, Computerisation of MOH, IHS, MOH Fleet, Improvements to TSS.

Assumptions for NDP 3 & 4 (Years 1973 to 1978/1979): Hospitals=half of MOH development expenditure; PHC=total MOLG development expenditure; Others=half of MOH development expenditure.

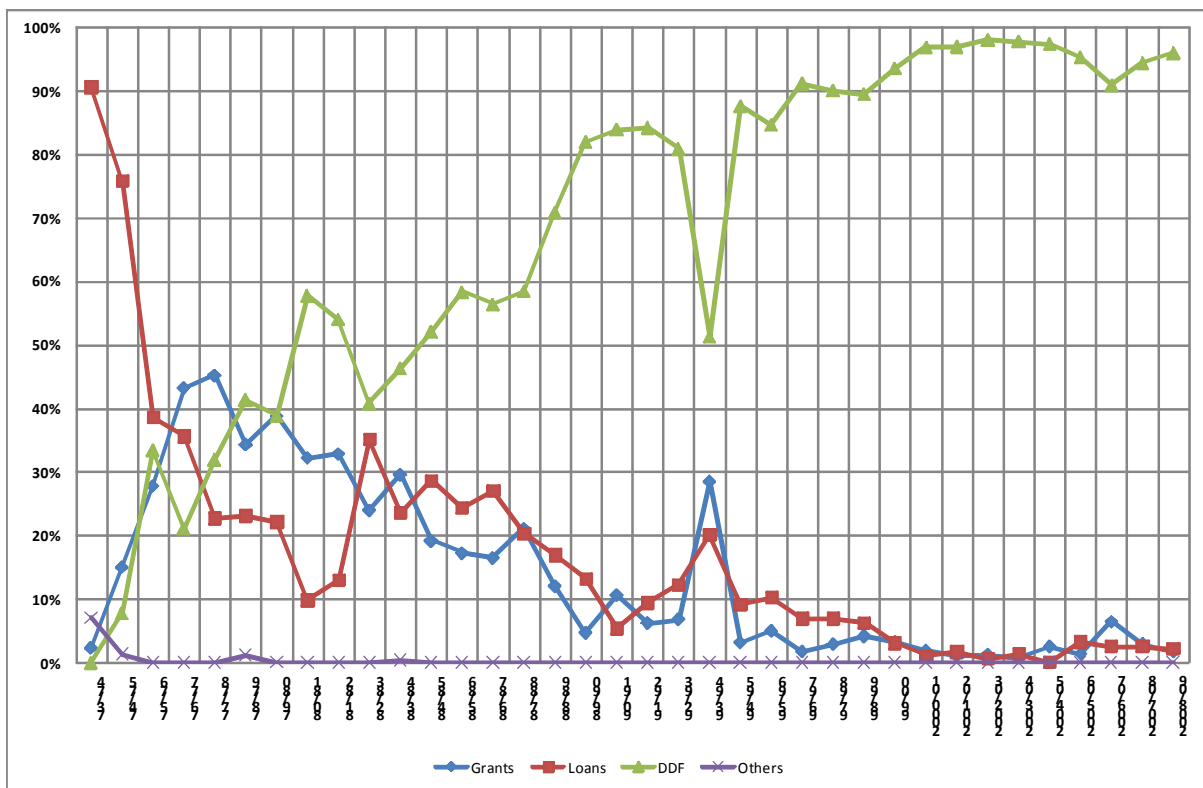
Norway has been the most important external partner and was an important contributor to the development of the sector during the years 1972-1995. Norwegian aid represented more than 90% of total development expenditure on health in 1975 and was still above 30% in 1991 (Graph 13). The Domestic Development Fund (DDF) became progressively the main source of finance for development expenditure: 10% in 1974, 40 % in 1978, 60% in 85, and >90% for the years 1996-2009 (Graph 14).

Graph 13 - Botswana, NORAD Aid (Health) on Total Development Expenditure on Health (%)



Note: From 1973 till 1983, the cost of technical assistance provided by Norway was not included in the agreements.

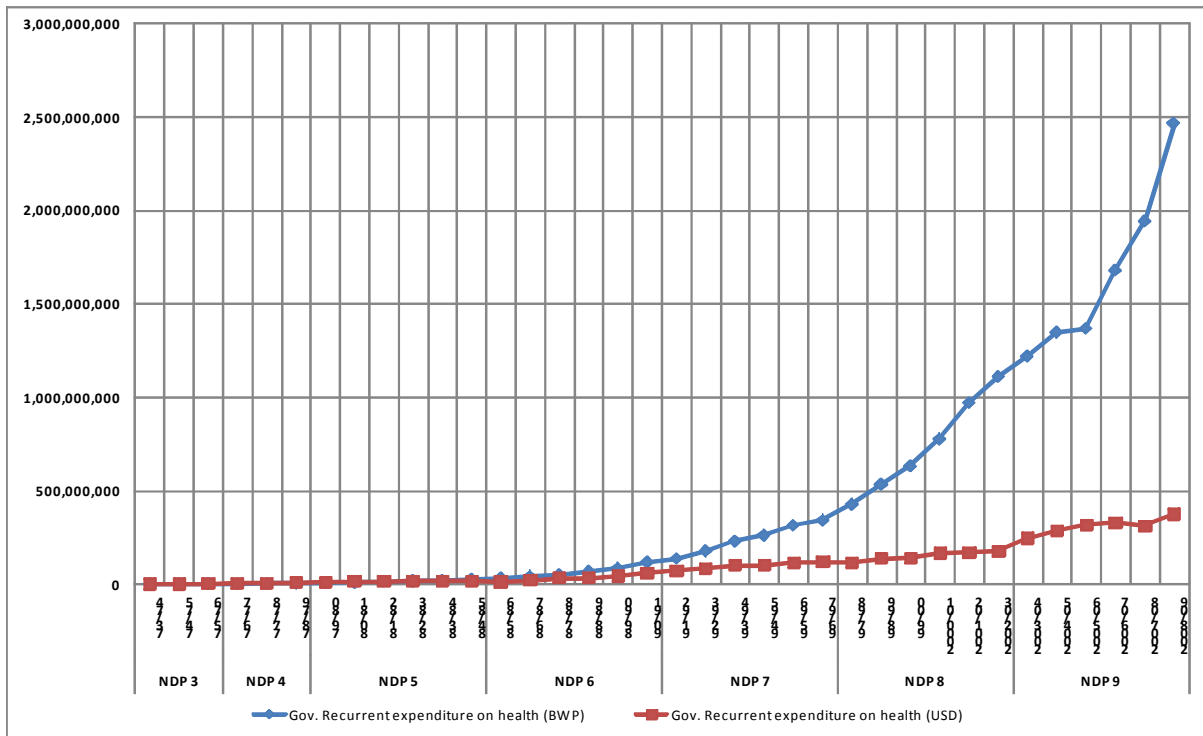
Graph 14 - Development Fund Revenue source: Grants, Loans, Domestic Development Fund and Others (% of total).



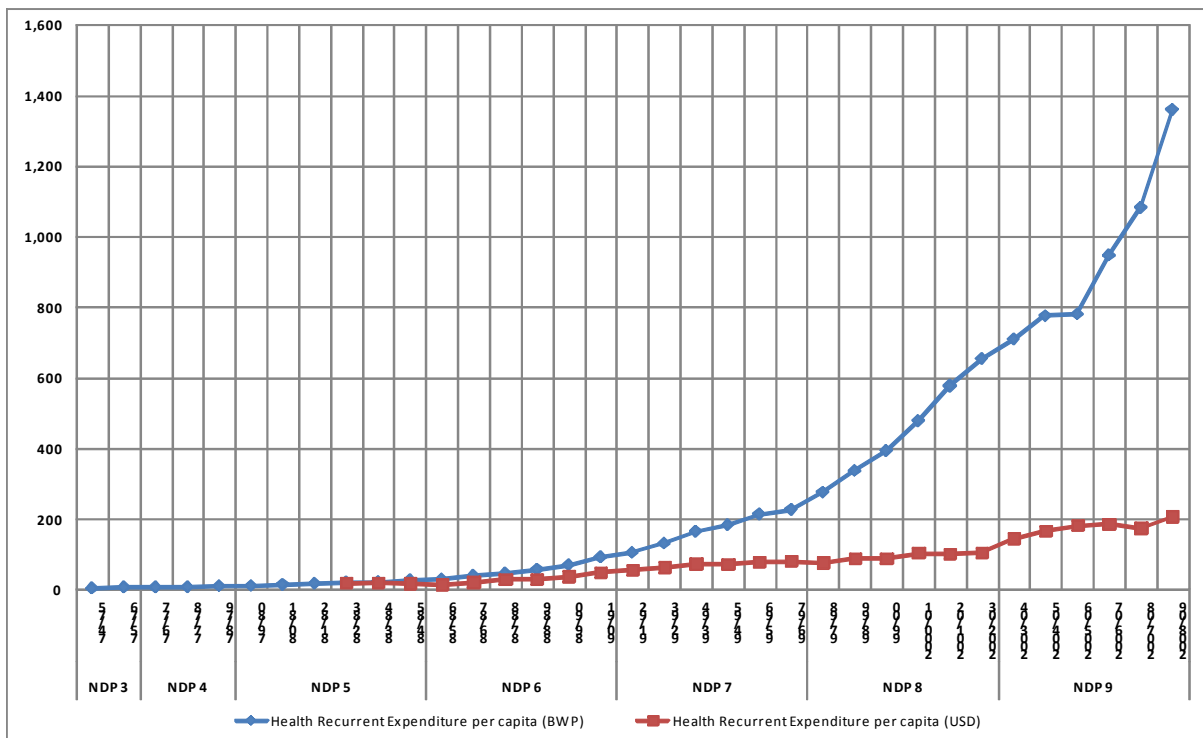
4.2.3 Recurrent Expenditure

Between 1974 and 2009 Government recurrent health expenditure (MOH, MOLG and NACA) increased from BWP 2.1 million to BWP 2.46 billion (USD 3.2 million to USD 357.8 million) or, in terms of expenditure per head, from BWP 3.4 to BWP 1,361 (USD 5 to USD 207 per capita) (Graph 15 and Graph 16).

Graph 15 - Botswana, Recurrent Health Expenditure (BWP and USD)

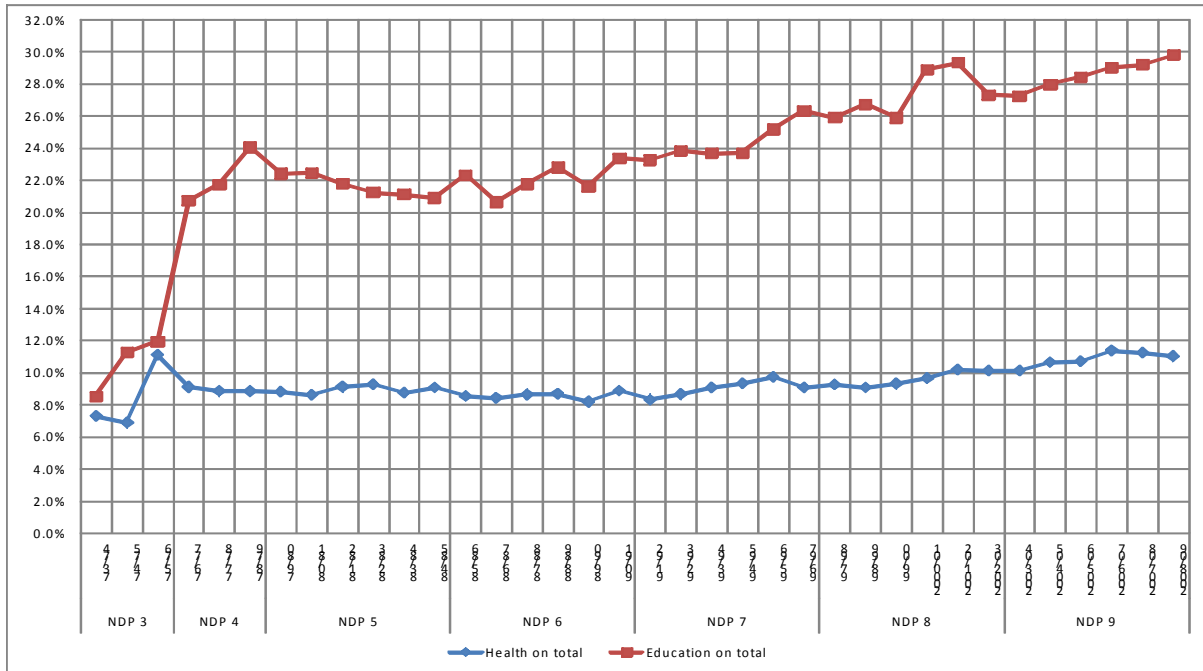


Graph 16 - Botswana, Recurrent Health Expenditure per Capita (BWP and USD)



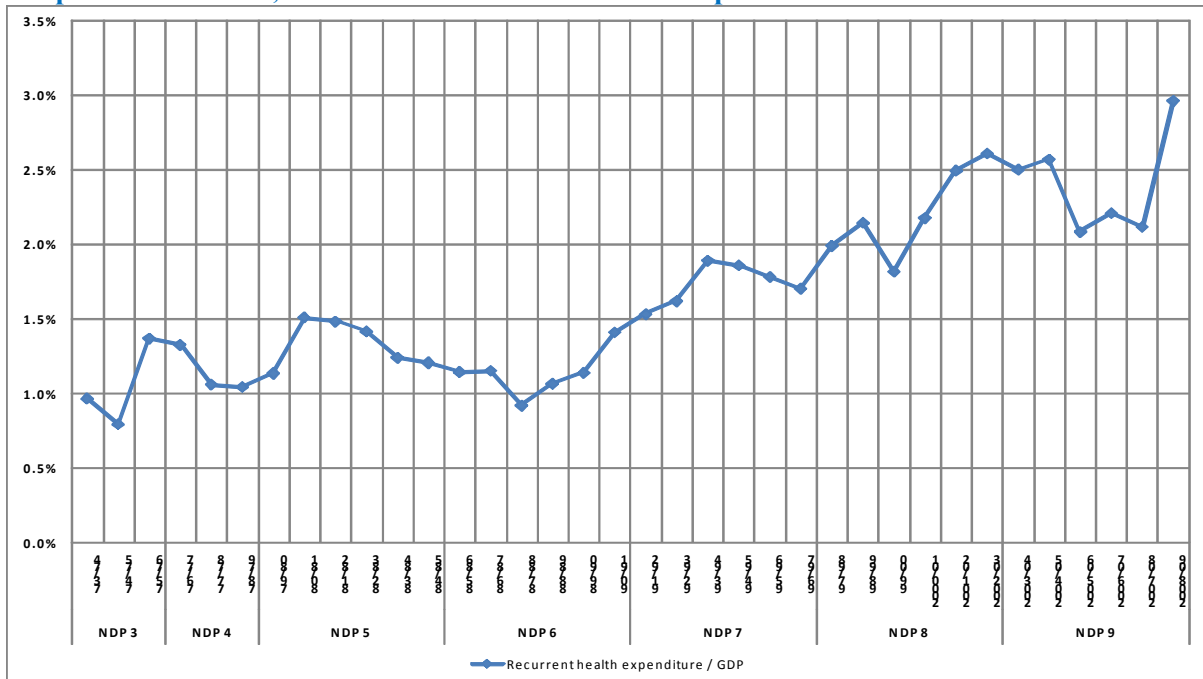
During the period 1974-2001, recurrent health expenditure remained between 8% and 10% of total Government recurrent expenditure but started to increase above 10% after 2001 (Graph 17). Recurrent health expenditure as a % of GDP followed the same trend: 1 - 1.5% until 1987; between 1.5 and 2% from 1991 to 1999; and between 2% and 3% beyond 1999 (Graph 18). By comparison, the proportion allocated to education has been consistently above 20%, above 25% since 1994/5.

Graph 17 - Botswana, Recurrent Expenditure: Health and Education on Total (%)



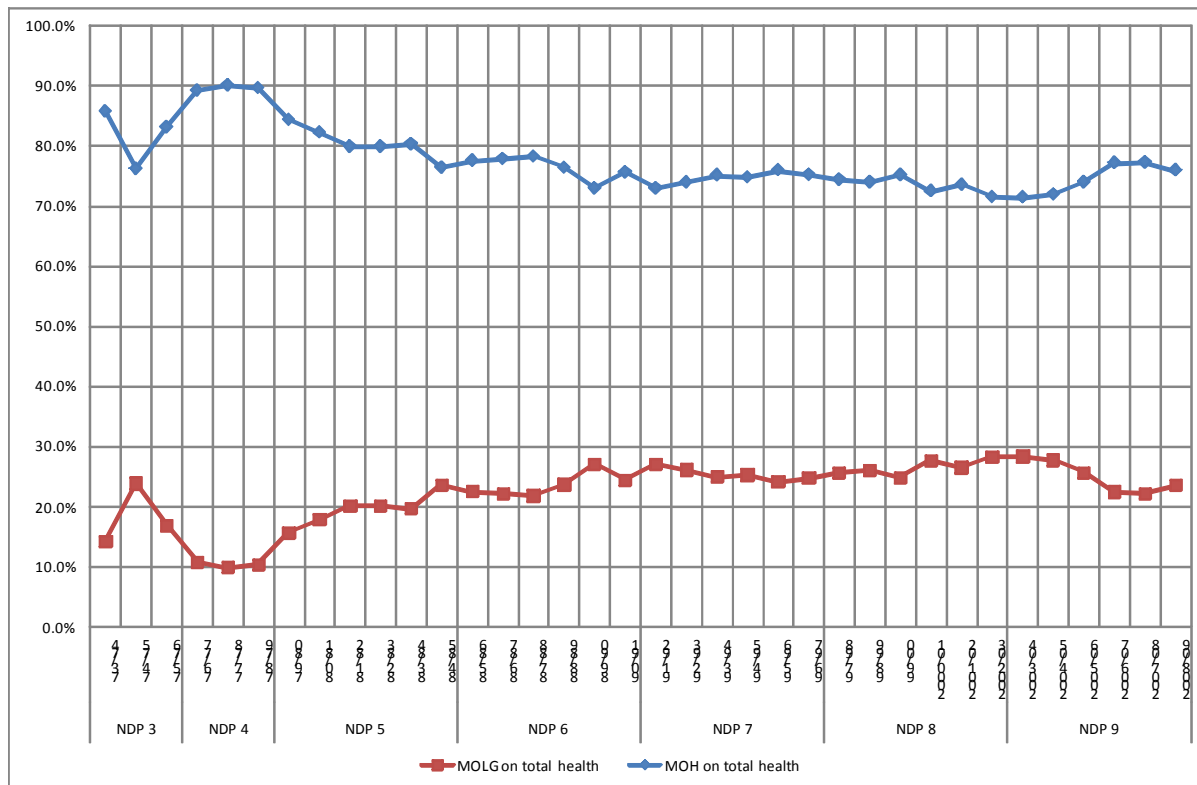
Note: data are actual recurrent expenditure collected from Estimates of Expenditure from the Consolidated Fund; Appropriation in Revenues and Statutory Expenditure (public debt, pensions, gratuities and compensations, salaries and allowances- specified officers, Overseas service aid scheme, miscellaneous) were not taken into account in the total expenditure.

Graph 18 - Botswana, Government Recurrent Health Expenditure as % of GDP



The share of MOLG on total recurrent expenditure steadily increased from 10% to almost 30% in 2002, before decreasing to 22%. This probably reflects an increase in MOH share of expenditure as a result of earlier investments in the hospital sector (Graph 19).

Graph 19 - Botswana, Government Recurrent Health Expenditure: MOH and MOLG on Total (%)

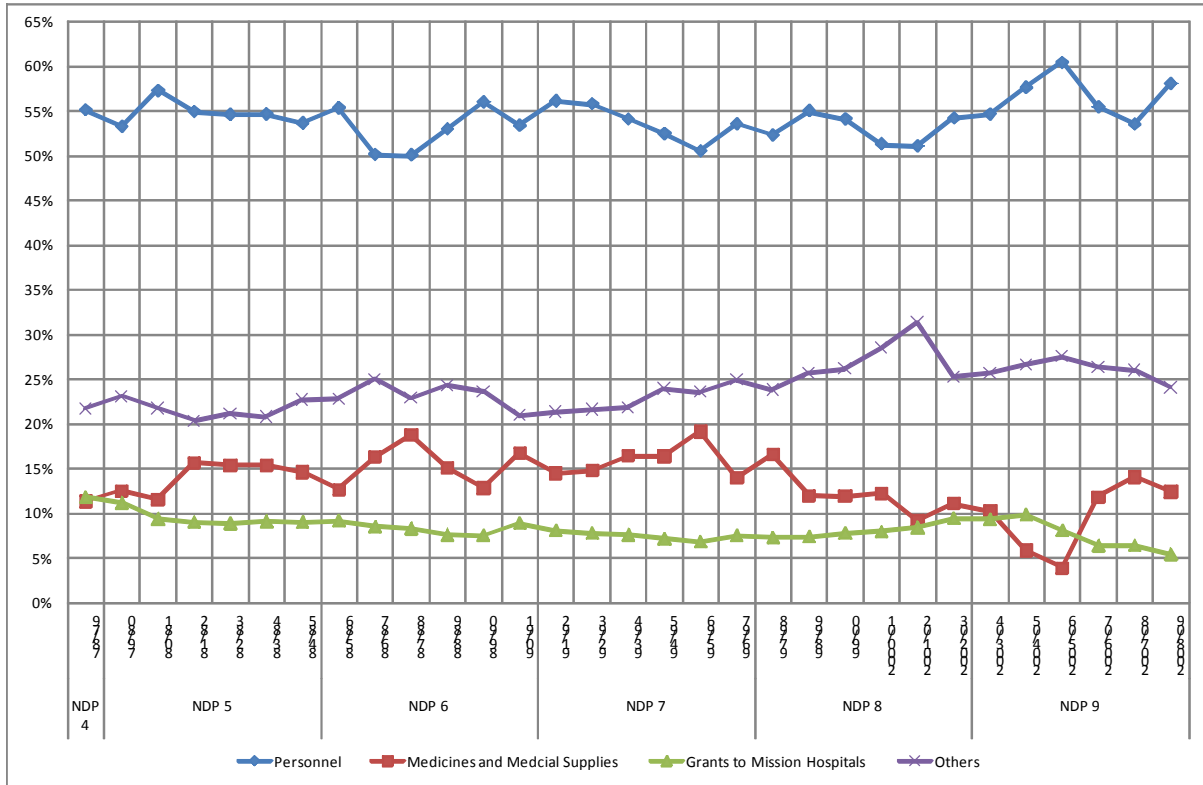


Salaries and allowances average around 55% of MOH recurrent expenditure, while the proportion of expenditure on essential medicines and supplies markedly decreased²⁴ between 1995 and 2005 (from 20% to 5% of MOH recurrent expenditure) before increasing again to 15% from 2005/6 (Graph 20). Actual expenditure on essential medicines in current BWP per capita (Graph 21) dramatically increased from 1991 to 2003 and from 2003 to 2009; but the conversion into USD shows that the expenditure remained around USD 10 per head until the dramatic increase to USD 20 during the second half of NDP 9.

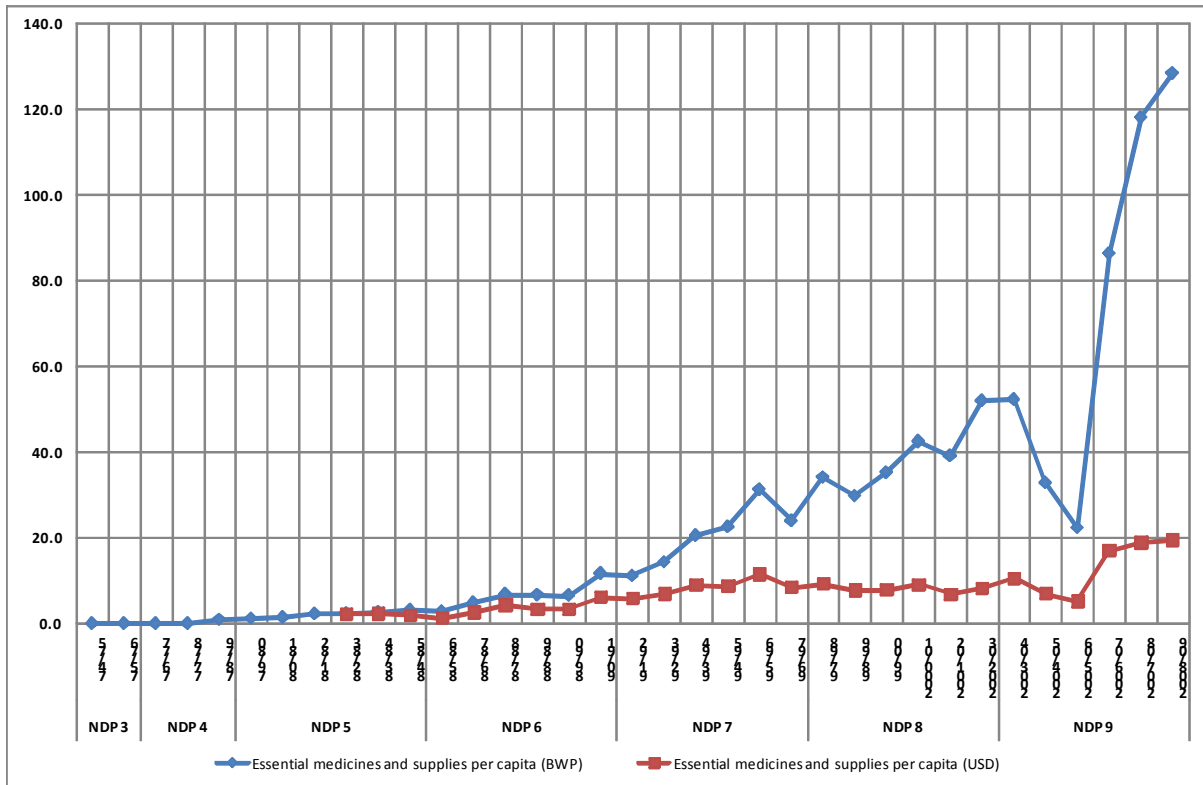
Grants from MOH to Mission Hospitals also decreased sharply, as a proportion of total expenditure, during NDP 9: from 10 to 5% (of MOH recurrent expenditure): this might be the consequence of the “cession” of one Mission Hospital to the MOH.

²⁴ Actual expenditure on essential medicines did not fall, only that a smaller proportion of MOH expenditure was spent on medicines within a situation in which overall expenditure was rising.

Graph 20 - Botswana, MOH Recurrent Expenditure: Personnel, Medicines, Grants to Mission Hospitals and Others on Total (%)

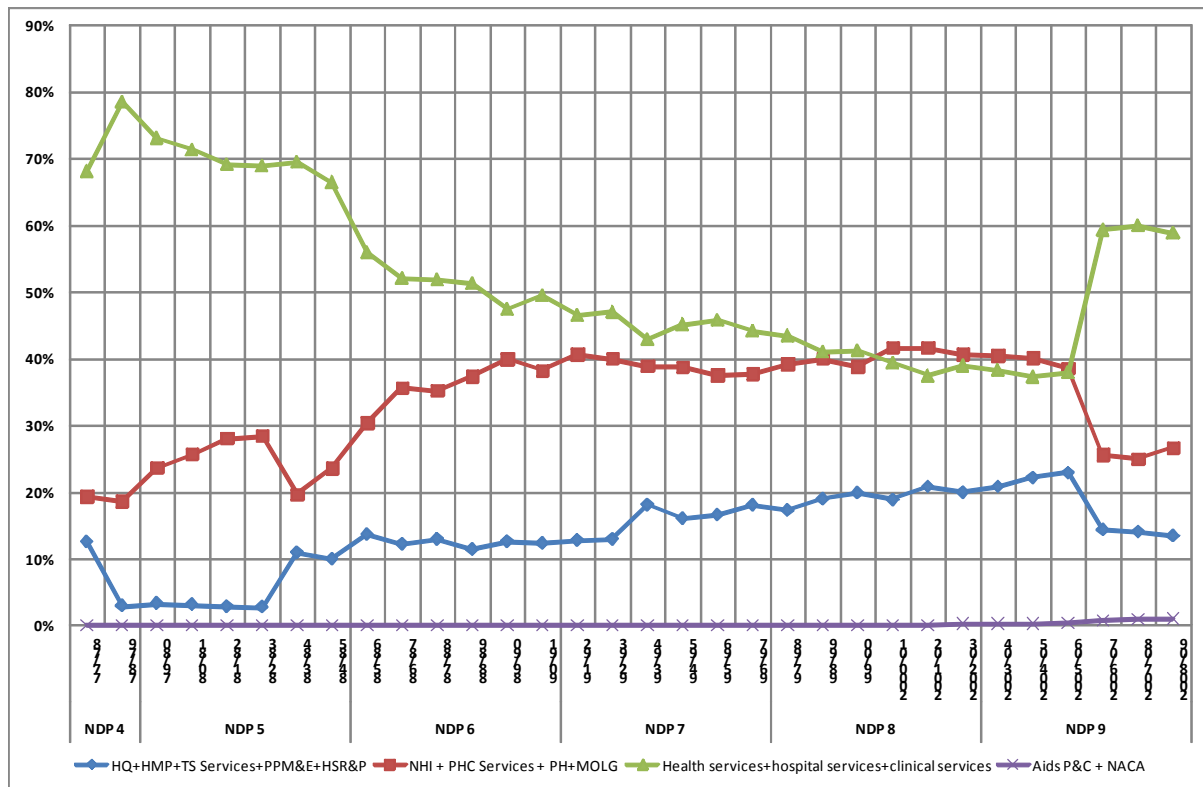


Graph 21 - Botswana, MOH Expenditure on Medicines and Supplies per Capita (BWP and USD)



The analysis of recurrent expenditure by level of care (Graph 22) shows that the share of total recurrent expenditure on MOH Headquarters steadily increased from less than 5% in 1982 to more than 20% in 2005, while hospital and primary care represent around 40% each. There is significant change in 2005 which saw a dramatic increase in MOH hospitals expenditure (up to 60%) and corresponding fall in MOH primary level expenditure (to below 40%). It would seem that these dramatic changes are due to a reorganisation of the MOH that took effect in 2005/2006, rather than some real change in spending patterns.

Graph 22 - Botswana, Recurrent Health Expenditure by Level of Care (%)



Note:

MOH departments:

- 74/75 till 82/83: Headquarters; National Health Institute, Health Services
- 83/84 till 05/06: Headquarters, Health Manpower, Hospital Services, PHC Services, TS Services
- Beyond 05/06: Headquarters, Policy Planning Monitoring and Evaluation, Health Sector Relations and Partnership, Clinical Services, Public Health, Aids Prevention and Care

Groups:

- Headquarters: Health headquarters (minus grants to mission hospitals and fees to specialists); Health Manpower; TS Services (minus medicines); Policy, planning, monitoring and evaluation; Health sector relations and partnership (minus grants to mission hospitals)
- PHC and PH: NHI; PHC services, Public Health (+20% of medicines under TSS); MOLG
- Clinical services: Health services; Hospital services (+grants to missions hospitals + fees to specialists); Clinical Services (+ 80% of medicines under TSS)
- HIV/AIDS: Aids prevention and care; NACA

4.3 Health Systems Sub-study 3

4.3.1 Health Policy Review

At Independence in 1966, the Government of Botswana inherited a largely curative, hospital-based health care delivery system. However, the preparation of a National Health Plan (MOH 1968) for the period 1968 -1973 defined a shift away from the existing health care delivery system to one that contained the principles and elements of what would become known as Primary Health Care (PHC), some years ahead of the WHO Alma Ata Declaration. The Alma Ata Conference gave considerable impetus and direction to the process and subsequently Botswana adopted PHC as the main focus for further development of its health services. The emphasis on primary health care as a cornerstone for health delivery system has been reaffirmed in all successive National Development Plans (NDPs)²⁵.

Shortly after Independence the Government of Botswana articulated a policy of securing access to health services for all its population. This was translated into an intensive programme for new construction an upgrading of health infrastructure in (NDP 3) which continued in NDP 4 and NDP5.

NDP 3: 1973-1978, Main development guidelines

“The development of health services by the Central Government over the past decade has concentrated on the hospitals, and relatively little has been done to establish rural clinics.”

“The major consideration in the next five years will be to ensure that rural health services are improved and increased. That will require the construction of clinics and health posts in all settled communities of over 500 persons, and in many communities of fewer persons.”

“Staff will be trained and appointed specially for work in rural areas.”

NDP: 4, 1976-1981

“The long-term aim of the Ministry of Health is to provide comprehensive health service to the people throughout the whole country. To do this curative and preventive aspect of health services must be integrated and aimed particularly at the community or village level.”

One of the main priorities is:
 “the strengthening of primary health services equitably distributed for all people, but with emphasis on the rural and peri-urban areas”

Just prior to Independence, the Local Government (District Councils) Act of 1965²⁶ provided for the establishment of District Councils and Townships with responsibility for Public Health and Sanitation, being narrowly defined and excluding clinical services.

²⁵ Ministry of Finance and Development Planning: NDP 4 (1976-1981); 5 (1979-1985); 6 (1985-1991); 7 (1991-1997); 8 (1997/8-2002/3); 9 (2003/4-2008/9); 10 (2009-2016).

²⁶ Laws of Botswana, Volume V, Cap 40.01.

In 1973, the primary health care services were officially decentralised, with the responsibility for the management of health clinics and health posts delegated to district councils, in addition to their existing responsibilities for environmental sanitation. This was in conformity with the Medical Department Memorandum of 1969 (Botswana Medical Department 1969) setting out responsibilities in the field of health.

In 1974 responsibility for health matters in the Government of Botswana, previously the responsibility of a Ministry of Home Affairs and Health, was given to the newly established Ministry of Health.

The focus, within the health sector, of NDP 4 (1976-81) and NDP 5 (1979-85) was the strengthening of basic health services to achieve equitable access to health care services for all, with an emphasis on the rural and peri-urban populations. A target was set to have 85% of the population living within a 15 km radius of a health facility. This target was achieved by 1989 and a new target of 85% of the population living within an 8 km radius of a health facility was established. This higher target was almost achieved by NDP 7 (1991-1997). This period coincided with the period of support for infrastructure development by Norway.

Health Posts and clinics were staffed by Family Welfare Educators (FWE) (trained primarily to provide prevention messages but also simple curative care) and enrolled nurses. Recognising the need to provide some clinical support to these front line health workers, Regional Medical Officers were employed in 1974 with the dual role of providing clinical support to the health clinics and posts and to head district health teams, consisting of the district matron and environmental health officers. Each Regional Health Officer covered several districts and was employed by the MOH and seconded to the districts in a region.

In 1984, following an organisational review of the Ministry of Health and an increase in the availability of medical officers, individual District Health Teams were to be formed with a District Medical Officer posted to each district and town council. The DMO remained an MOH employee seconded to the council. This development was emphasised in NDP 6 (1985-1991) when the focus of PHC became the strengthening of local government capacity to operate the existing health network and to improve quality through an increase in the number of enrolled nurses working at these facilities.

The 1995 Health Policy stated clearly the minimum services to be provided by the Councils:

- i) Health promotion and avoidance of ill-health (health education, environmental sanitation, disease prevention, care of vulnerable groups, rehabilitation of the disabled, maintenance of special disease control;
- ii) Health care curative services, encompassing diagnosis, treatment and referral;
- iii) Community health services (data collection and epidemiology, evaluation and monitoring, promotion of community development;
- iv) Family health care services (counselling, ANC, midwifery, PNC, growth monitoring, paediatric treatment, immunisation, infant and child care, nutrition surveillance and guidance, school health).

This decentralised responsibility for health services continued for the next twenty years until the policy was reversed in 2009. Responsibility for the management of health clinics and posts reverted to the MOH with effect from 2010.

Botswana, along with the other SADC Countries, is a signatory to the Bamako Initiative (BI). However it did not implement the main principals of the Initiative. In Botswana drugs are entirely subsidised by the Government and the country's economic strength and effective delivery systems has enabled peripheral clinics to have good access to medicines, thus the implementation of BI was not felt to be appropriate for Botswana.

Following the 1993 World Development Report, the Government accepted the concept of a Botswana Basic Package of Health Care and defined this for all levels (NDP 8) from household and mobile stops through to referral hospital.

Following the attainment of targets to increase access to health care services, the emphasis of subsequent NDPs shifted. While there was some continued limited expansion to the PHC network, attention turned to improving quality through addressing perceived problems in the referral network in health centres and hospitals. In NDP 6 (1985-1991) a number of health clinics were to be upgraded to health centres and also Princess Marina Hospital in Gaborone was to be upgraded. In NDP 7 (1991-1997) three Primary Hospitals (formerly designated as Health Centres) were to be upgraded and in NDP 8 (1997/8-2002/3) secondary and tertiary services were to be strengthened. The construction of a number of new hospitals was started during NDP 8 and completed in NDP 9 (2003/4-2008/9). Neurosurgery and Oncology services were introduced to the tertiary hospitals during NDP 8.

The need to increase human resources for health has been a constant issue throughout all NDPs. A number of the NDPs produce detailed training targets for many of the health worker cadres and several detailed Manpower Plans have been produced. The HRH situation becomes more complex in later NDPs with issues such as the retention of trained health workers in the public sector and the failure of students to return following training becoming prominent. Support for the expansion of the Institute of Health Sciences, which trains a number of health cadres to diploma level (e.g. Dental Therapists, Pharmacy and Laboratory Technicians) was planned for (e.g. NDP 8). However the availability of HRH appears to have been a constant constraining feature for the development of health services in Botswana.

The nursing profession has undergone a process of upgrading since independence with a general move to increasing qualifications. Enrolled nurses were upgraded to General Nurses through a training programme that was completed in 2003 while the University of Botswana introduced a degree course for registered nurses in 1996. A Masters course for nurses was subsequently introduced in 1999. The IHS continues to train Registered Nurses.

The training of medical doctors has been undertaken entirely outside of Botswana until relatively recently. NDP 7 (1991-1997) included the formation of a medical school at the University of Botswana, with the construction of teaching hospital included in NDP 9 (2003/4-2008/9). The medical school is now a reality with the first intake of students in 2009.

The Government of Botswana is the major provider of health services in the country. In 1985 medical missionary hospitals, which had provided a high proportion of health care prior to independence, continued to operate three hospitals and six clinics. The mission sector now operates just two hospitals. These operate as one component of the publicly managed system providing services on behalf of the government in some areas. They continue to receive a significant subvention to pay for their services but are independently managed.

Three private sector mines provide hospital services, two providing services to their catchment communities, not just employees and their families, as part of their civic responsibilities programmes. The private for profit sector has also grown in importance since Independence. A law on the establishment of private nursing homes and hospitals was introduced in 1989 while NDP 8 (1997/8-2002/3) called for greater involvement of the private sector in health care delivery. A public-private partnership for the delivery of radiography services was recorded in NDP 9 (2003/4-2008/9). NDP 10 (2009-2016) anticipates a review of medical practice and licensing requirements.

Clients at public sector health facilities (including mission facilities) pay a small registration charge to attend for care. Cost recovery constitutes around 0.5% of total government health expenditure, a proportion that has been falling over the years. NDP 8 recognised concerns about the sustainability of current health financing mechanisms and sought to introduce concepts of efficiency and cost-effectiveness into the public health sector. The costs of the major ART programme for AIDS have added to government concerns about sustainability. NDP 10 notes that the increased demand for services and the increased complexity of the disease problems facing the Botswana population today has overstretched services increasing the need to find alternative financing mechanisms. This concern is highlighted in the NDP 10 statement that ‘more emphasis will be put on the fact that the bulk of health status of the nation resides outside the Ministry of Health. The Ministry will design leverage projects that aim at fostering individual self-worthiness and ensure that individuals take more responsibility for their health. If people can pay more attention to their health, adopt health styles and increase their capacity to make informed decisions, this can greatly reduce the cost of health care. There will, therefore, be ‘less emphasis on high cost hospitals infrastructure’.

HIV and AIDS is the most important public health challenge for Botswana, and currently the biggest threat to the country’s development. The first case was diagnosed in 1985 and since then the prevalence has rapidly increased. In 1986 the MOH initiated programmes to ensure blood safety and the use of disposable needles in the country. An interim Short Term Plan of action against HIV/AIDS was developed to cover the years 1987-1989, followed by a Medium Term Plan for AIDS 1989-1993 (NACA 1997). HIV/AIDS was considered significant enough to feature in NDP 7 (1991-1997). As with most countries, it was initially considered a health problem and the response was coordinated by the MOH. However by 2001, the need for a broader multi-sectoral approach was recognised and the National AIDS Council (NAC) was established to coordinate this. NAC is chaired by the State President and the Secretariat of the Council (the National AIDS Coordinating Agency-NACA) reports directly to the Office of the President. In addition there is a Parliamentary Select Committee on HIV and AIDS as well as District Multi-sectoral AIDS Committees at the implementation level, reflecting the seriousness of the threat HIV posed to the nation. NACA prepared a National HIV/AIDS Strategic Framework to run from 2003-2009. A PMTCT programme was established in 1999 and an ART programme in 2001.

The Botswana Government signed up to the Millennium Declaration in 2000 and established its own Goals (MDGs), reporting on progress towards achievement in 2004 (Botswana Government 2004).

A Botswana Health Partnership Forum was established by the Minister of Health in July 2003 to provide an approach to coordinate donor inputs and partners for the fight against HIV/AIDS. This partnership has been successful in obtaining donor funding from both (PEPFAR)/USAID and from Round 2 of the GFATM.

4.3.2 Health Services Systems Delivery Assessment

The assessment of the Health Services Systems Delivery in Botswana is primarily based on data collected through review of documentation including health statistics data, a field visit to health facilities in Tutume Sub-district and semi-structured interviews with key informants both from Botswana and from Norway. Statistics on service provision are taken primarily from the Medical Statistics/Health Statistics annual reports from the period 1974- 2006 published by the MOH/CSO. Particular emphasis has been given to the analysis of the provision of primary health care services in the period 1975-1996 where the most significant financial and technical support from Norway took place. (See Annex 1 for details of methodology)

4.3.2.1 The health services delivery system in Botswana

Before 2009²⁷ the provision of health care at the different levels of the health system in Botswana was the responsibility of both the MOH and the MOLG (MOH 1995). The MOH was responsible for running primary hospitals (formerly called health centres), district hospitals (called general hospitals in the annual statistics reports) and referral hospitals. The MOLG, through the District Councils, managed the clinics, health posts and mobile stops. The MOH is responsible for setting national policies and for health personnel training. A Joint Primary Health Care Coordinating Committee has coordinated the two Ministries' activities since 1984. Botswana has a six-tiered health care delivery system: mobile stops, health posts, clinics (with or without maternity), primary hospitals, district hospitals and referral hospitals (Table 5) distributed in 24 health districts.

Table 5 - Botswana, Health Facilities, 2006

Level	Number	General staffing characteristics
Mobile Stops	860	Outreach services provided by registered nurses/midwives and health education assistants. It is not a permanent building.
Health posts	342	Staffed by registered nurses and midwives, family welfare educators/health education assistants, ambulance available for referrals. A doctor from the mother facility (clinic or primary hospital) will come regularly to provide general consultations (i.e. once a week). Ambulance is available for referrals.
Clinics	263	Staffed by registered nurses and midwives, sometimes doctors. Those with maternity provide normal birth delivery services. Ambulance or transport available for referrals.
Primary Hospitals	17	Staffed by nurses, midwives, medical officers as well as laboratory, pharmacy, X-ray staff. Ambulance or transport available for referrals.
District Hospitals	14	Staffed by nurses, midwives, medical officers as well as laboratory, pharmacy, X-ray staff. Sometimes medical specialist available or a specialist will come to provide specialised services on regular basis. Ambulance or transport available for referrals.
Referral Hospitals	3	Staffed by nurses, midwives, medical officers (general and specialists) as well as laboratory, pharmacy, X-ray staff. Specialised services available.

Source: Health Statistics Report 2006, CSO. Interviews with key informants and field visit to health facilities.

The Government of Botswana is the main provider of health services. Other providers include faith-based organisations (i.e. Mission Hospitals), NGOs, CSOs and private providers. Three

²⁷ In 2009, the MOH took over responsibility for the management of the primary level facilities that had previously been responsibility of the MOLG. This reform is currently being implemented.

mining hospitals also serve as district hospitals and provide services to the public in the mining communities (WB 2010). Two Church Hospitals meet the basic requirements of a district hospital and provide a package of PHC and district hospital services. Additionally, both the Church hospitals have their own specialised services that are specific to that institution. They are also important in the training of health professionals. For example, in 1998 the Balete Lutheran Hospital was providing distance learning for registered nurses and specialised services for ENT (ear, nose, throat), orthopaedic, paediatrics, obstetrics and gynaecology) (MOH 2002)²⁸.

Health services are accessible in both urban and rural areas. Eighty four per cent of the population live within a 5 km radius of the nearest health facility and a further 11% live between 5 and 8 km. This means that a total of 95% of the population live within an 8 km radius of the nearest health facility. There are urban and rural differences (Table 6). For example, North East, Southern and Kgalagadi South have 100 % of their inhabitants living within 5 km of a health facility, while parts of Serowe, Bobirwa, Mahalapye and Gomare have all their inhabitants living within 8 km. By contrast Kweneng West has only 5% and South East 14% of their populations living within 5 km²⁹.

Table 6 - Botswana, Proportion of the population with access to primary health care services within 15, 8 and 5 km from a health facility, by urban and rural residence, as of April 2007

	Proportion of population living between 8 and 15 km of a health facility	Proportion of population between 5 and 8 km radius from a health facility	Proportion of population within 5 km radius from a health facility
Urban	n.a.	4	96
Rural	11	17	72
Total population	5	11	84

Source: STATS BRIEF, Central Statistics Office, Gaborone, Botswana, August 2007, consulted at CSO website: <http://www.cso.gov.bw> on February 18, 2011.

Health services are virtually free at the public health facilities; people are required to pay a nominal charge of 5 Botswana Pula (USD 0.80) registration fee. Maternal and child health and family planning services are exempted from the nominal fee³⁰.

4.3.2.2 Primary health care facilities

The availability of primary health care services which are equitable, efficient, effective and affordable is an essential condition for sound health care system in any country. Primary health care services are provided in Botswana through an extensive network of 103 clinics with beds, 160 clinics without beds, 342 health posts and 860 mobile stops (Table 5). Due to the geographic characteristics of the country (large rural areas, low population density) these facilities play a key role in securing access to basic health services to the Botswana population.

²⁸ A Review of the Organisational structure of the MOH in Botswana, Status Report, April 2002.

²⁹ CSO, August 2007.

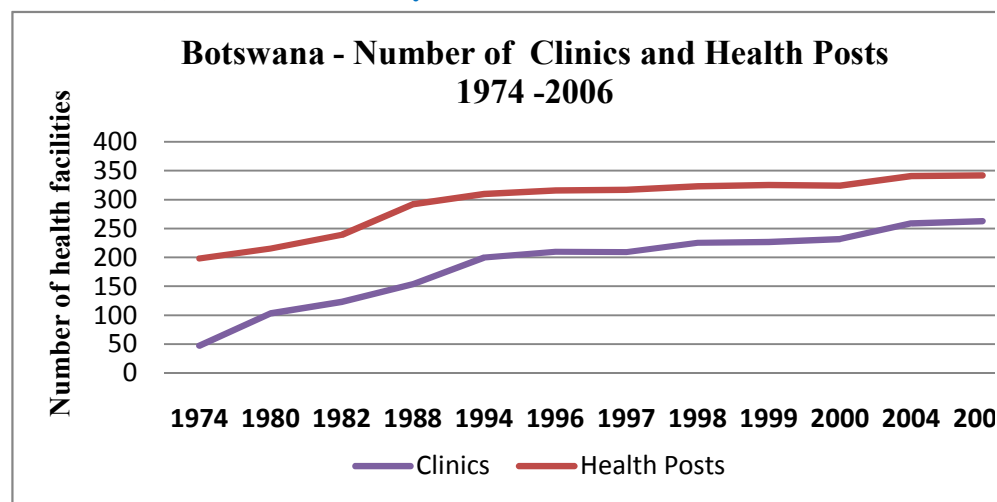
³⁰ During the field visit we were informed that no charges are being requested in some primary health care facilities.

Appraisal report from NORAD mission to Botswana 1972

“There are presently a total of roughly 150 smaller health institutions serving the rural areas. As with the hospitals these primary health care institutions also suffer from the problem of personnel and the problem of transportation. The standard of these institutions vary quite a lot. Some were rather new, some older and more primitive. The equipment varied both in quantity and quality. Some had no water installations and some lacked toilet or latrine facilities.... It is very difficult to give an evaluation of the drug distributions. On our trip we had some indications that the drug distribution system did not function too well”.

Over the period 1974-1994 the infrastructure for the provision of primary health care services in Botswana grew steadily. In this period, the number of health posts grew from 198 to 310 (57% increase) and the number of clinics more than quadrupled from 47 to 200 (Graph 23).

Graph 23 - Botswana, Number of Primary Health Care facilities, 1974-2006



Source: Medical Statistics, Health Statistics Reports, MOH, CSO.

o *Hospital facilities*

Hospital services are provided in Botswana through a network of primary, general and referral hospitals (Table 5 above). In the period 1974-1994 the number of referral and general hospitals increased by two and the number of primary hospitals almost doubled (from 7 to 13). The following table summarises the development in health infrastructure in Botswana in the period 1974-2006.

Table 7 - Botswana, Health Facilities, 1974-2006

Type of health facility	1974	1980	1982	1988	1994	2000	2004	2006
General / Referral hospitals	14	13	15	15	16	16	17	17
Health Centres / Primary Hospitals	7	7	7	10	13	17	17	17
Total Clinics	47	103	123	154	200	232	259	263
Clinics with maternity		32	37	60	71	86	102	103
Clinics without maternity		71	86	94	129	146	157	160
Health Posts	198	215	239	292	310	324	341	342
Total Health Facilities	266	339	384	471	539	589	634	639
Mobile Stops		341	389	623	701	712	528	860

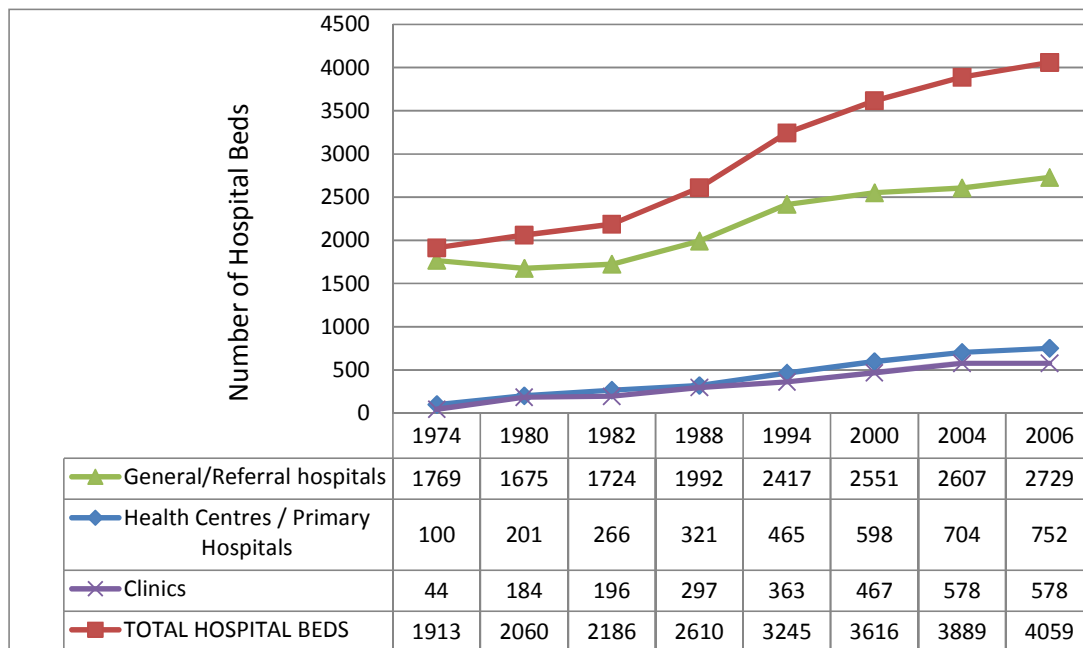
Source: Medical Statistics, Health Statistics Reports, MOH, CSO.

o *Hospital beds*

During the period 1974-1994 there was a 70% increase in the total number of hospital beds (from 1,913 beds to 3,245 by 1994). Within this total, the number of beds grew almost eight times in clinics, four and a half times in primary hospitals and by 70% in general/referral hospitals.

Over the period 1974-2006 the total number of beds more than doubled (Graph 24). In 2006, beds in referral/general hospitals made up 69 % of the total number of hospital beds, while primary hospital and clinic beds constituted 19% and 14% respectively, a very different composition from the one in 1974 where hospitals beds in general/referral hospitals represented 92% of the total number of beds in the country.

Graph 24 - Botswana, Hospital beds, 1974-2006



Source: Medical Statistics, Health Statistics Reports, MOH, CSO.

In 1974 the number of beds per 1,000 population was 3.2 which was somewhat higher than the average range identified for various other countries of 1.9-2.3³¹ (MOH 2008). In the following years the numbers of beds per 1,000 population has fluctuated between 2.2-2.5/1,000 population. There is an uneven distribution of hospital beds, resulting in over or under supply of beds in some areas, ranging for example from 0.66 in Gumare to 5.09 in Athlone Hospital (MOH 2008).

Table 8 - Botswana, Hospital beds per 1,000 population, 1974-2006

	1974	1980	1982	1988	1994	2000	2004	2006
BEDS / 1,000 population	3.2	2.5	2.2	2.2	2.3	2.2	2.3	2.4

Source: Team elaboration from data from Medical Statistics, Health Statistics Reports, MOH, CSO.

³¹ These ranges are averages for various different developing countries and can only be used for comparison purposes. Botswana needs to develop its own standards based among others on its epidemiological profile, accessibility, affordability and equity considerations.

○ *Services provided by each type of health facility*

The following table summarises the type of health services provided by each type of facility. An important change from the 70s has been the introduction of HIV related services.

Table 9 - Botswana, Services provided by each type of facility

Type of facility	Type of services
Mobile Stops	Limited primary health care services: child welfare clinics, health education, immunisation.
Health posts	PHC services: antenatal and postnatal care, family planning, child welfare, immunisations, school health, health education, first aid, treatment of common diseases, case finding and follow up (for example tuberculosis, chronic disease, HIV positive), outreach services through the mobile stops. HIV counselling and testing. Taking blood samples for laboratory. Visiting doctor available.
Clinic	PHC services: antenatal and postnatal care, family planning, child welfare, immunisations, school health, health education, first aid, treatment of common diseases, case finding and follow up (for example tuberculosis, chronic diseases), outreach services through the mobile stops. HIV counselling and testing. In some cases there is an Infectious Disease Control Centre in the same compound and the staff from the clinic provide HIV related services in these centres (ARV therapy, PMTCT, dispensing of ARV drugs). It can have a laboratory performing simple tests. It can have a doctor or visiting doctor available. Referral to Primary /General hospital. In Gaborone a Francistown, referral to the National Referral Hospitals. The clinics with maternity perform normal birth deliveries. Referral to the clinic with maternity or to the Primary / General Hospital
Health Centre/ Primary Hospital	Same as above plus general inpatient services, basic emergency obstetric services and sometimes also comprehensive emergency obstetric care, more comprehensive laboratory services, X-ray services. Referral to National Referral Hospitals
General Hospital / district hospital	Same as above plus sometimes specialised services available through own staff or visiting doctors. Comprehensive emergency obstetric care, more comprehensive laboratory services, X-ray services. Referral to National Referral Hospitals. HIV services (counselling, testing, ARV therapy, PMTCT)
Referral Hospital	Same as above plus specialised services. Comprehensive emergency obstetric care, more comprehensive laboratory services, X-ray services.

Source: Adapted from A Review of the Organisational structure of the MOH in Botswana, A Status Report, (2002). Interviews with key informants and field visit to health facilities.

○ *Availability of human resources*

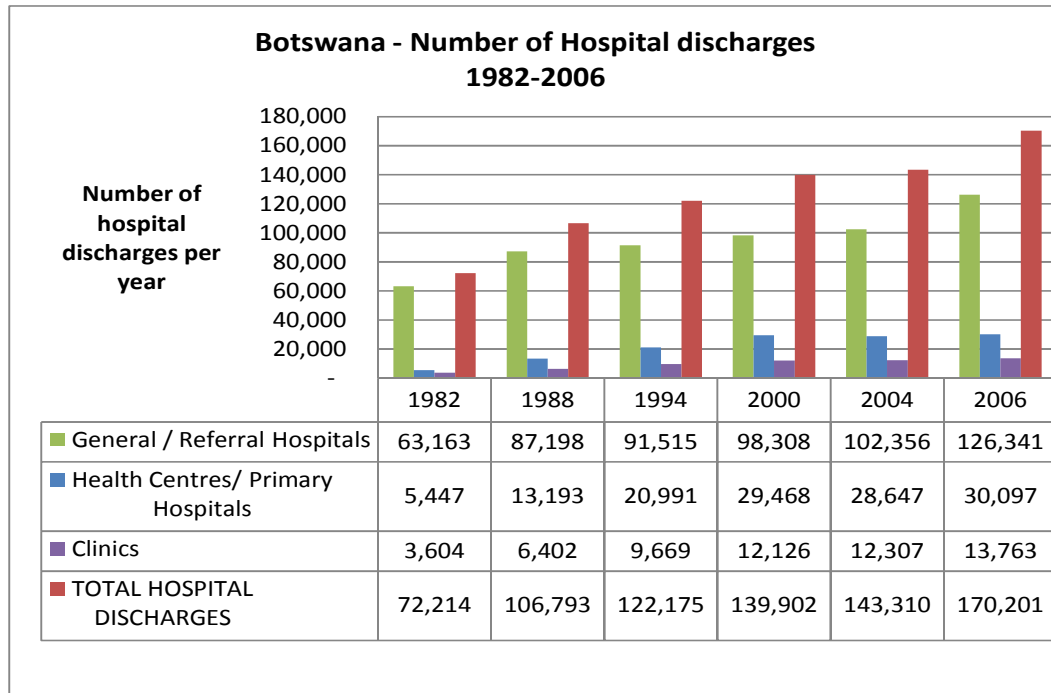
Since Independence, health human resources constraints, both in numbers and in skills, have been reported in the country. Botswana has relied on foreign health staff (from various countries including other African countries), particularly medical staff, to fill these gaps. More on human resources for health can be found in section 4.3.4).

4.3.2.3 Health services utilisation³²

○ Number of hospital discharges per type of facility

There has been an increase in the utilisation of hospital services as measured by the number of hospital discharges. This increased by 69% between 1982 and 1994 and by 136% between 1982 and 2006. This increase can be seen in all type of facilities (Graph 25).

Graph 25 - Botswana, Number of Hospital discharges, 1982-2006



Source: Medical Statistics, Health Statistics Reports, MOH, CSO.

The proportion of hospital discharges from each type of facility has been kept at approximately the same levels since the year 2000 (70-74% of hospitals discharges take place from general /referral hospitals, 17-20% from primary hospitals and approximately 8-10% from clinics).

The number of hospital discharges per 1,000 population increased from 1982 to 1998 (from 74 to 92 respectively) (Table 10). Then there was a decline and the number remained at approximately the same level (86-84/1,000 population) up until 2004 when the figure increased again.

Table 10 - Botswana, Hospital discharges per 1,000 population

	1982	1988	1994	2000	2004	2006
Hospital discharges / 1000 population	74	92	86	85	84	98

Source: team elaboration from data Medical Statistics, Health Statistics Reports, MOH, CSO.

³² The sources of information for this section were Medical Statistics/Health Statistics Reports from the period 1974-2006. There is some inconsistency in the data, particularly for Child Welfare Clinics for the years 1991, 2001 and 2004 (the data deviates significantly from the observed pattern) for which we could not find explanations. The same is true for other data for 2004. However the overall conclusions are not affected.

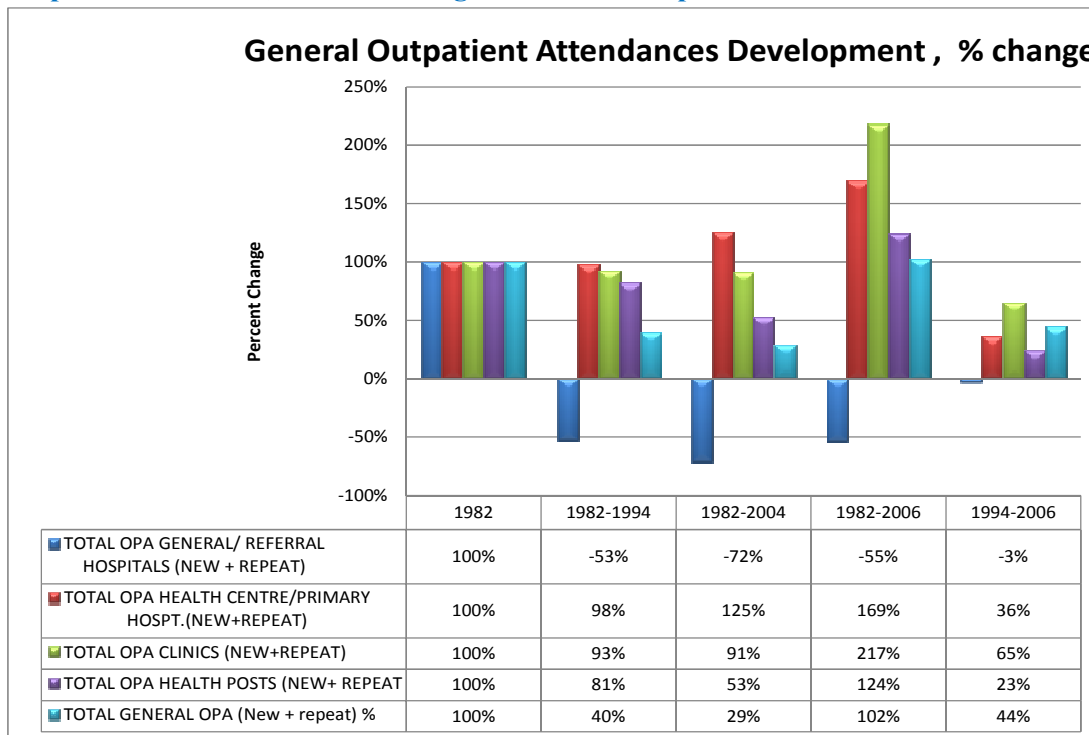
A study made of the utilisation and efficiency of 33 hospitals in Botswana (MOH 2008), revealed that about 69% of them fall outside of an acceptable range for average length of stay (5-7 days) and 82% fall outside of the optimal range for bed occupancy levels (75-85%). The study also pointed out differences in admission rates which could be a reflection of inequities in access to beds, quality of hospital services and differences in utilisation patterns of services. Utilisation and efficiency of hospital services can be affected by a number of factors such as shortage of staff, unavailability of equipment, inadequate management, ineffective referral system, care seeking behaviour and preferences of the population. It appears that the existing hospital bed capacity in the country could be used more efficiently.

o *Utilisation of outpatient services*

The number of general outpatient attendances increased by slightly over 100% in the period 1982-2006 (from 1.8 million to 3.6 million). This growth has been accompanied by a change in the proportion of services provided by each type of facility. Clinics and health posts continue to be the providers of the majority of outpatient attendances. In 1982 clinics and health posts were providing 41 and 19% respectively of the outpatient attendances, but by 2006, they were providing 64 and 21% of outpatient attendances respectively. The remaining outpatient attendances are provided by the hospitals.

There was a 53% decrease in the number of outpatient attendances provided by hospitals (general and referral) in 1994 compared to 1982. By contrast, in all other facilities there was an increase for this service. For Health Centres/Primary Hospitals OPD attendance grew by 93%, clinics by 93% and health posts by 81% between 1982 and 1994. This pattern has continued until recently as shown in the figure below.

Graph 26 - Botswana, Percent Change in General Outpatient Attendances, 1982-2006



Source: Team elaboration from data Medical Statistics, Health Statistics Reports, MOH, CSO.

The outpatient attendances per capita (not including injections/dressings) increased steadily in the period 1974 to 1988. Since 2000 the number of outpatient attendances per capita per

year has been around 2 (Table 11). This significant increase probably reflects a number of factors; increased access due to expansion of the health network in the earlier years, increased activity due to HIV/AIDS in the later years, being two contributing factors.

Table 11 - Botswana, Outpatient attendances per capita 1974 -2006

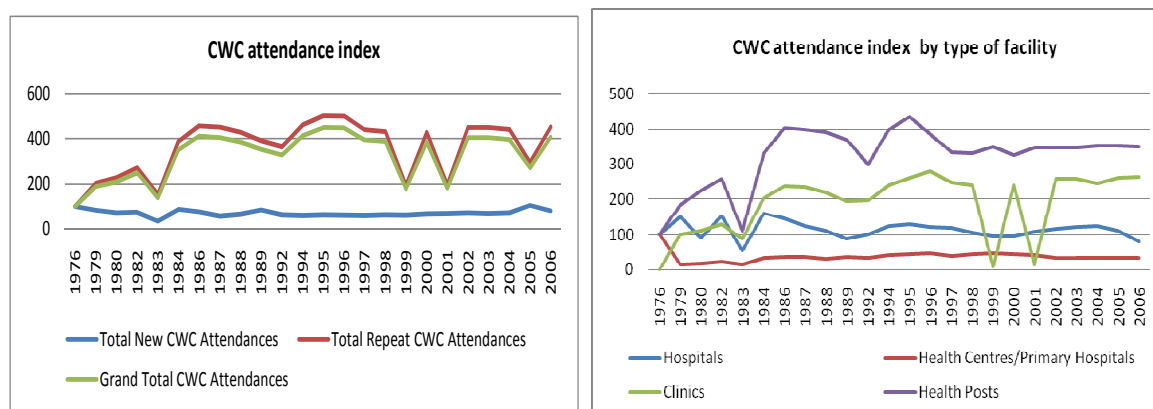
	1974	1978	1982	1988	1994	2000	2006
General OPA / capita (not including injections/dressings)	0.87	1.51	1.84	2.14	1.77	2.24	2.09

Source: Team elaboration from data Medical Statistics, Health Statistics Reports, MOH, CSO.

○ *Utilisation of child welfare clinics (CWC)*

The utilisation of child welfare clinics over the period 1976-2006 (Graph 27) shows that there was a massive shift in the provision of child welfare services from hospitals to clinics and health posts. The number of child welfare attendances provided by the various facilities grew almost 400% in this period from 427,000 to 1.7 million. This growth was accommodated by clinics and health posts, while the number of child welfare attendances provided by hospitals fell to 80% of their 1976 level. This development took place over the period 1970-1994 and it has since stabilised at the current level. In 2006, clinics and health posts were providing 94% of child welfare attendances, primary hospitals 4% and general/referral hospitals 2%. Despite increases in attendances at CWC, prevalence of malnutrition is still high for a country with the economic status of Botswana. This might be a reflection of other factors such as poverty, food insecurity in households and poor sanitation conditions contributing to increased ill health among children.

Graph 27 - Botswana, Child Welfare Clinic attendance index by type of facility and CWC attendance index³³



Source: Team elaboration, data from Medical Statistics, Health Statistics Reports, MOH, CSO.

○ *Utilisation of vaccination services by children*

Vaccination services are provided on routine basis in all health facilities in the country as well as at mobile stops. This certainly contributed to the achievement of the immunisation coverage rates of 90 % (or higher) for all vaccines amongst children under one year of age by the year 1988 (BFHS 1988); an achievement that has been maintained to the present (Table 12). During the evaluation field visit, well-functioning cold chain were observed in all

³³ The considerable falls reported in attendance at CWCs in shown in 1999 and 2001 seem likely to be as a result of some reporting change or error.

facilities but one. In this case the nurse has to collect and store vaccines every day at a neighbouring facility.

Table 12 - Botswana, Immunisation coverage for children under one year of age

Indicator	1988 BFHS II	1996 BFHS III	MICS 2000	2007 BFHS IV
BCG coverage	98.6	98.7	98.8	98.9
DPT three doses	94.0	95.3	98.0	95.9
Polio three doses	97.7	93.8	98.0	96.3
Measles	92.6	74.2	83.0	93.7

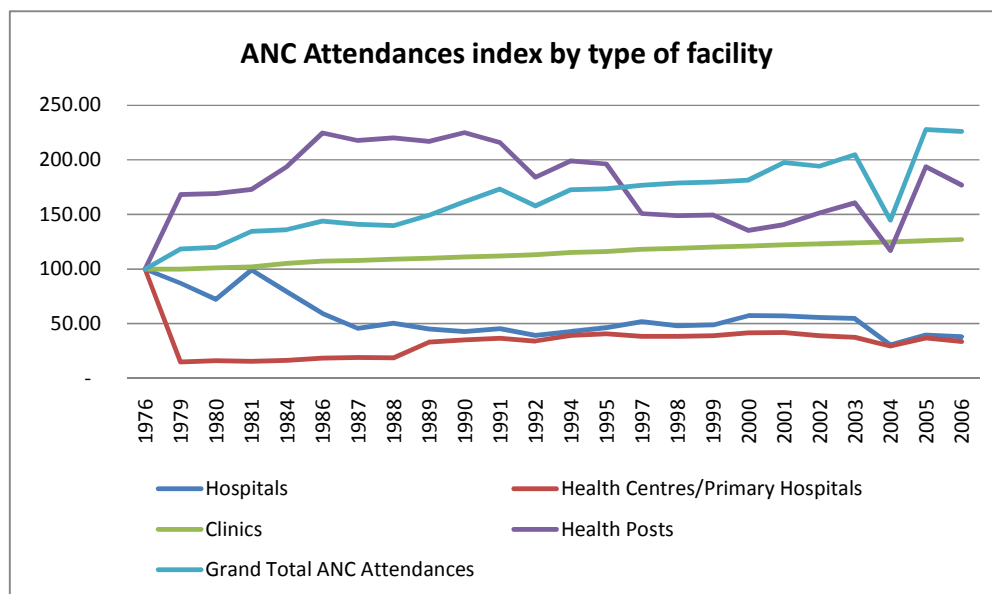
Source: EPI Coverage Survey 2007, MOH , 2007 Botswana Family Health Survey IV Report, CSO in collaboration with UNICEF, CSO, Republic of Botswana, November 2009.

○ *Utilisation of sexual and reproductive health care services*

✓ Ante-natal care services

Antenatal care services are provided to pregnant women through the primary health care network and outpatient departments in hospitals. The services are provided by nurses or nurse/midwives. The analysis of the antenatal care attendance index by type of facility for the period 1976-2006 (Graph 28) shows that overall ANC attendances has grown by 125% since 1976. The primary health care facilities (clinics and health posts) are the largest providers of antenatal care services. The provision of antenatal care services by health posts showed a rapid increase from 1979 to 1986 and then a decline in the period 1991-2003 but remains in 2006, at a level 75 % higher than in 1976. The provision of antenatal services by clinics shows a steady but slow growth of 27% from 1976. The level of antenatal care services provided by the hospitals and primary hospitals has gone down to a level below 40 % of what it was in 1976. In 2006, 86 % of the ANC attendances were provided by health posts and clinics.

Graph 28 - Botswana, Antenatal care attendances index by type of facility



Source: Team elaboration, data from Medical Statistics, Health Statistics Reports, MOH, CSO.

Pregnant women are utilising the prenatal care services. By 1998, 92 % of pregnant women in Botswana undertook at least one antenatal care attendance during their pregnancy. This coverage has been maintained to the present day (Table 13) (BFHS 2007).

Table 13 - Botswana, Antenatal care coverage, 1988-2007

Antenatal care	1988 BFHS II	1996 BFHS III	MICS 2000	2007 BFHS IV
Proportion of women aged 15-49 attended at least once during pregnancy by skilled person	92	94	97	94.1

Source: 2007 Botswana Family Health Survey IV Report, CSO in collaboration with UNICEF, CSO, Republic of Botswana, November 2009.

✓ Proportion of births supervised by qualified health worker

There was a steady increase in the proportion of births attended by skilled personnel, from 66% in 1984 to 94 % in 2007.

Table 14 - Botswana, Proportion of live births attended by skilled health personnel, 1984-2007

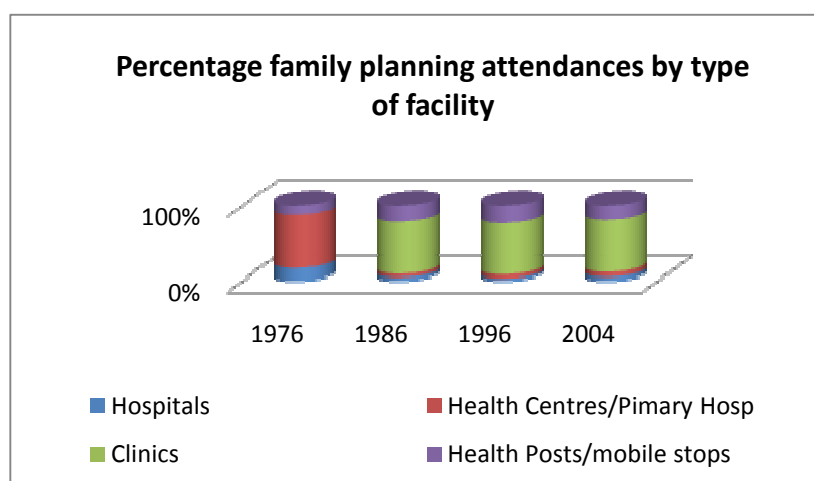
Child birth care	1984 BFHS I	1988 BFHS II	1996 BFHS III	MICS 2000	2007 BFHS IV
Proportion of births attended by skilled health personnel	66	78	87	95	94.6

Source: Taken from 2007 Botswana Family Health Survey IV Report, CSO in collaboration with UNICEF, CSO, Republic of Botswana, November 2009.

✓ Utilisation of family planning services

Many factors have contributed to a decline in the fertility rate (section 1.1.1) in Botswana; among them, the Botswana national family planning programme. Women are offered family planning services when they come to visit health facilities for maternal and child health services (antenatal care, postnatal care, immunisation, sexually transmitted infections). With the HIV epidemic in the 1990s, HIV/AIDS services were integrated into MCH and Family planning (WB 2010). There was a massive increase in the uptake of family planning services in the period 1976-2004, from 40 thousand family planning attendances provided in 1976 to approximately 1.1 million in 2004. Most of these services were provided by clinics and health posts. In 1976, health centres/primary hospitals were the main providers of family planning services (70% of all family planning attendances in that year). By 1986, a new pattern could be observed with clinics providing 68% of all family planning attendances and health posts 22% (Graph 29). This proportion has continued to the present day.

Graph 29 - Botswana, Percentage family planning attendances by type of facility



Source: Medical Statistics, Health Statistics Reports, MOH, CSO.

The pill was the preferred used contraceptive method until around mid-1990s when preference for the use of condoms appeared, and, by 2000, condoms were the preferred contraceptive method (Table 15). During the evaluation team visit to health facilities we were informed that currently the facilities are not offering contraceptive pills, however injectables are available.

Table 15 - Botswana, use of modern contraceptive methods 1984-2007, percent of all women aged 15-49 years

Contraceptive method	1984	1988	1996	2000	2007
Oral contraceptives	8.5	17.7	17.7	14.3	6.1
Intrauterine device	4.1	4.5	3.1	1.7	0.8
Injectables	1.1	3.2	5.7	8.1	6.8
Diaphragm/foam/jelly	0.1	0.0	0.0	0.1	0.6
Female condoms	0.0	0.0	0.0	0.5	-
Male condoms	1.0	1.3	11.3	15.5	41.6
Female sterilisation	1.2	2.2	2.4	1.2	2.1
Male sterilisation	0.0	0.1	0.0	0.2	0.1
Implants	0.0	0.0	0.0	0.4	-
Total	16.0	29.0	40.2	42.0	51.2

Source: Botswana Family Health Survey 1984, 1988, 1996, 2007 (for this year the age group is 12-49 years), Central Statistics Office, Botswana Ministry of Health, and UNICEF 2001. Taken from Fertility Decline in Botswana 1980-2006, A Case Study, The World Bank, May 2010.

Despite the population of Botswana doubling over the period, health services utilisation kept pace with population growth and indeed increased. The amount of activity at primary level increased proportionally more than at secondary care level.

4.3.2.4 HIV/AIDS services

HIV/AIDS is amongst the main development and health challenges facing the country. Botswana was experiencing improvements in health indicators until the advent of HIV/AIDS in the 90s. HIV/AIDS and associated conditions have reversed the progress made previously in reducing infant and child mortality and in increasing life expectancy at birth (see Main Report). Tuberculosis has re-emerged. The pandemic represents an additional burden on

society, families and the economy as it affects the productive segments of the population. The Government's efforts to fight the pandemic have required resources that could have otherwise been used for other development endeavours, to be diverted (see section 4.2.2, 4.2.3). A study by NACA (2008), projected that by 2009 there would be about 331,342 adults aged 15 years and above and 19,125 children between the ages 0-14 living with HIV in Botswana. Prevalence rates seem to have stabilised at 17.6 % in 2008 (NDP 10). The prevalence of HIV among pregnant women and the general population is discussed in the Main Report while the main policy developments related to HIV have been discussed in section 4.3.1 above.

○ *Preventive services*

The first case of HIV infection was diagnosed in 1985. HIV screening started in November 1986. Routine HIV testing in health facilities was introduced in 2004. HIV testing is also done through the Tebelopele Voluntary Counselling and Testing Centres (VCT Centres). The number of people tested in these centres rose from 73,551 in 2004 to 642,824 in 2008, while those tested in health facilities rose from 60,846 in 2004 to 626,441 in 2008. The 'Know your Status Campaign' spearheaded by the VCT strategy offered by NGOs has contributed significantly to increasing the proportion of population that has ever tested from 25.4 % in 2004 to 56.4 % in 2008 (NDP 10).

The Botswana Prevention of Mother to Child Transmission (PMTCT) programme was introduced in 1999 and by 2007, 89 % of HIV positive pregnant women took prophylaxis to reduce transmission to the unborn child, up from 37% in 2003. This has resulted in an estimated reduction in mother to child transmission rate to 4 % in 2008 (NDP 10).

There has also been an important decrease in HIV prevalence in donated blood and blood products from 9 % in 2001 to 2.1 % in 2007. The introduction of syndromic management of Sexually Transmitted Infections (STI) resulted in a significant reduction in STI prevalence. Syphilis prevalence has fallen from 4 % (2002) to 2.5 % in 2007 and genital ulcer disease cases by 50 % from 16,766 in 2004 to 8,541 in 2007 (NDP 10).

Other prevention efforts include information and education campaigns, increase in condom supply and distribution. New prevention strategies will be promoted during NDP 10 including safe male circumcision.

All these are important achievements. However, many misconceptions about HIV transmission still persist among the population (including the young population). Additionally, social stigma hinders all aspects of Botswana's HIV prevention programmes. Testing, disclosure, care and support for people living with HIV are advocated but impeded by fear of disclosure (NACA 2008).³⁴

○ *Treatment, care and support*

Botswana was the first country in Africa to introduce and roll out an anti-retroviral therapy (ART) programme on a large scale. ART therapy was introduced in late 2001. The programme named MASA (a Setswana word for "new dawn") was launched in 2004 to secure the provision of ART. The programme is now available in 30 hospitals and 130 satellite clinics in the country. The number of people on ART at the end of 2009 was 145,190 (estimated to account for 89 % of those with advanced HIV infection in need of ART, a substantial increase from the 63 % noted at the end of 2004) (NACA 2010).

³⁴ National Operational Plan for Scaling Up HIV Prevention in Botswana, 2008 – 2010, NACA, ACHAP, February 2008.

Tuberculosis is the most common opportunistic infection and major cause of mortality among HIV infected persons in Botswana. Studies show that 75% of tuberculosis patients are infected with HIV and about 40% of AIDS patients die of TB (NDP 10).

The Community Home- Based Care Programme (CHBC) was introduced in 1995 and more than 300 CBO/NGOs have been registered to contribute to its implementation. The number of patients on CBHC has declined substantially from about 12,000 in 2002 to 3,600 in 2009 (NDP 10).

The National Orphan Care Programme, led by the Ministry of Local Government provides care and support to orphans. Among others it includes the provision of free food baskets, free schooling, support with educational necessities and psychosocial counselling (NACA 2010).

o *Impact of HIV/AIDS on the health system*

The impact of the HIV/AIDS pandemic on the health system has not been formally studied. Other than the increase in direct costs (see Sections 4.2.2, 4.2.3), the major impact is felt at service delivery points. NDP 10 reports on routine data collected from 20 hospitals in 1998: on average 55% of admitted patients had HIV related conditions, up to 80% in some medical wards, and about 33 % of patients in paediatric wards. Occupancy rates of general wards were 97% and over 100 % for female and medical wards. The average length of stay was 9 days for AIDS patients and 5 for all patients. Hospitals expenses on drugs and other items have increased by about 40% (NDP 9).

Findings from the field visit to health facilities in Tutume

Staff from Tutume Primary Hospital said that approximately 70% of the patients admitted in the general ward had some HIV related condition

When Moseitse Health Post staff were asked how much of their time is used on HIV related services they responded that it was difficult to estimate, but they inquire about knowledge of HIV status to every patient that comes to the facility, and then had to offer counselling and testing if accepted, take blood samples, give follow-up to women on PMTCT, and make home visits to patients

In Nata and Maitengwe clinics, initiation, control and follow-up of ART takes place once a week. On this day, the doctor (the only one at the facility) is dedicated full time to HIV patients and nurses take over the outpatient general consultations at the clinic. If there is a need for the doctor he runs back and forth from the Infectious Disease Control Centre (IDCC) to the clinic's outpatient department. Additionally a nurse has to be full time at the IDCC centre on that day and other nursing staff take over her duties at the outpatient department or antenatal care services.

4.3.3 Health Infrastructure assessment

Norwegian support to the development of physical infrastructure for health was significant and long lasting. It focused on assisting four major segments of the Botswana health service: Assistance to the nationwide construction of a large number of rural health facilities and staff houses for health workers; the planning and construction of new facilities for the Central Medical Stores in Gaborone; the planning and construction of facilities for the Dental Therapist Training School in Gaborone and the construction of dental clinics in Maun, Lobatse, Tutume and Mahalapye; and the establishment of biomedical equipment workshops

at the two national referral hospitals, the Princess Marina National Referral Hospital in Gaborone and the Nyangagbwe Referral Hospital in Francistown, as well as support to smaller medical equipment workshops in a number of regions.

○ *Rural Health Facilities*

Within the framework of successive Government of Botswana's National Development Plans, Norwegian support for the development of physical infrastructure for health in the form of health posts, health clinics, with and without maternity units, upgrading of hospitals and clinics, and housing for health staff, began in 1972 and carried on for twenty years. This support for construction activities was phased out from the beginning of 1992. In addition, assistance was provided to the establishment of district health teams for which the infrastructure support focused on providing office space, office equipment, housing, vehicles, and communication equipment. Additional support for health infrastructure development was made available from Germany and Holland.

During this period of collaboration on infrastructure development, the needs were defined by the Botswana health authorities as laid out in successive NDPs which were appraised by Norwegian consultants. The support to development of health infrastructure during that time can best be described as a collection of individual projects without particular coherence. The health sector agreement signed in 1985 was rather to be considered an umbrella for existing and future individual projects.

In 1988, the district health service was decentralised, leaving MOH with the overall responsibility but transferring responsibility for implementation to District Councils, through the Ministry of Local Government Land and Housing (MLGLH). Since then rural health facilities have been run and maintained by MLGLH³⁵.

Relevance

All the facilities visited in Tutume Sub-District were built prior to the National Health Plan which was published in 1983. The sites for infrastructure development, prior to 1983, were defined in successive National Development Plans which had been developed on the basis of bottom up planning exercises, facilitated by the MOH and involving local government throughout the country. At this distance in time it has not proved possible to examine the criteria used for the prioritisation of health facility development in the 1970s and 1980s. However as Norway undertook an appraisal process on the construction programme it is assumed that the prioritisation developed was valid and consequently the construction programme was relevant.

Effectiveness

Among the facilities visited, most were still functioning the way they were originally built, without any modifications or adaptations. Most facilities were very busy with many having a thousand out-patient consultations or more per month. Some of the early built health posts had been replaced with health clinics and the old buildings were now being used as storage space or for other programmes. One facility had been expanded with support from the Presidential Emergency Plan for AIDS Relief (PEPFAR) and one had ceased to operate as a

³⁵ In March 2010, responsibility for the operation and management of all health services in the country was to be transferred to the MOH with the Ministry of Infrastructure, Science and Technology (MIST), Department of Building and Engineering Services (DBES) responsible for the maintenance of all health infrastructure.

health facility because a new, larger health facility had been built nearby, and the old building is to become the home of a community social program.

Water borne, in-house sanitary facilities were constructed as installations for staff and women giving birth, with external pit latrines of various improved types for ordinary out-patients. Most facilities were connected to utilities i.e. water/electricity/drainage systems. Only two facilities visited were not connected to the main power supply. The radio communication system appeared to be in poor condition in most health facilities³⁶ with no radios found to be working. Several reasons were put forward for this - the council did not pay for the license fee, the antenna was broken, and the radio was not functioning. Following interviews with staff involved with medical equipment maintenance (see below) it would appear that there are significant problems with the system for medical equipment maintenance.

After 30 years in operation, upgrading and expansion of many of these facilities is required, but any intervention must be very carefully thought through in order not to redevelop a functional working environment into something less practical in the process. The expansion of the health post, mentioned above, did not add functional or technical quality to the work space. Functional properties were lost, work rooms were left with no daylight and ventilation, the waiting space for patients became too small and with no ventilation. In addition, workmanship was poor and specifications clearly not followed during construction.

All health facilities visited were located on sizeable, fenced compounds which had ample space for expansion. With the reported heavy work-loads in many there is a need for expansion of their waiting area, consultation rooms, and their space for storing of medicines. The issue of confidentiality between patient and staff during consultations is a functional aspect of the small health posts which is not up to current standards. However, this can be corrected without excessive cost and without interference with the buildings' superstructure.

Efficiency

Although no concrete evidence³⁷ was found that a standardised design had been used for the different types of health facilities to be constructed, it seems clear that this was the approach adopted very early in the process of constructing rural health facilities. To some extent this is a 'one size fits all approach', within each category of facility. The early standard designs were plain, functional, economical with the space used, and had very little in them that would require much or sophisticated maintenance. They were built with good materials and good specifications; and obviously supervision during construction ensured that specifications were followed and that technically sound buildings were constructed.

The employment of standardised designs for a limited assortment of health facilities is a well known strategy to manage dispersed construction programmes including large numbers of units. It is an efficient approach which potentially reduces management input to each project, and over time produces lower construction costs and better construction quality as contractors and supervisors become acquainted with project designs and specifications. In Botswana, with little diversity in climate and other geophysical conditions, this approach has worked well. The vast majority of health facilities visited during this evaluation were performing the

³⁶ There is reasonable mobile phone coverage in Botswana and so perhaps a radio network is no longer so necessary.

³⁷ In the form of standard designs for health facilities.

function for which they were originally built and those that were not were all in use for other purposes, relevant to the provision of health services for the rural population.

A broad assessment shows that about 80% of all building materials used in the construction of the simple structure for the rural health facilities were imported. Cement, structural timber, roofing materials, electrical wiring and fittings, and drains and sanitary fittings were all imported from other countries in the region. Only bricks were manufactured in the country. All indications are that this situation has not changed much today. Should the budget for maintenance be cut and the routine maintenance schedules be abolished as a result of the current economic downturn it will soon have consequences for the condition of the rural health facilities.

The newly established District Councils were in the early 1980s responsible for the implementation of the district-based construction projects. This was a new responsibility to be undertaken by new institutions with no experience of tendering procedures. This lack of capacity led to delays in the floating of tenders and subsequent implementation, delaying the programme.

Sustainability

Protection of capital investments in buildings and equipment requires a policy with a strategic framework to guide its execution. Successful execution requires competent and dedicated management, adequate funding, and technically capable staff to carry out the activities, in the given order of priority.

Since 1988, MLGLH, now MLG, has been responsible for the running and upkeep of the rural health facilities, while the hospitals remained the responsibility of MOH. The MLG has a technical sections at central ministry level and in each council, nationwide. While the central MLG usually handles projects with any new construction, the local offices, called Department of Architecture and Building Services, handle repair work and routine maintenance.

During the many years of being responsible for maintaining the rural health facilities the MLG has built up technical capacity at the district level, capable of handling facilities maintenance. In practical terms this has been organised as a rolling plan which ensured that each facility received general maintenance every five years. At any time, breakdowns could be reported to Architecture and Buildings and at some point it would get fixed. Response to a break down would not necessarily be rapid but it would come, eventually³⁸. Had these

³⁸ At present, responsibility for the rural health service, including the facilities, is being transferred to the MOH. In turn the MOH intends to delegate the responsibility for the maintenance of the facilities, including the annual maintenance budget, to the MIST/DBES. The discussion of this proposal is ongoing and the facilities are left in a vacuum as no budget for facilities maintenance currently seems to be available from any source. It appears to be a general opinion in several quarters that DBES at present does not have sufficient technical resources at district level to take over the responsibility to maintain the rural health facilities. From DBES the view is that they would require a complete technical inventory be taken of all rural health infrastructure in the country as a prerequisite to a commitment to taking over these maintenance responsibilities, the preparation of which indeed would be both time consuming and costly. The change of responsibility from MLG to MOH has brought about some uncertainty with the staffs at the health facilities no longer convinced that they will get help to have their technical break downs repaired. The shifting of responsibility for the health buildings from the MLG to the MOH and the subsequent delegation of responsibility for their

buildings not received maintenance since they were constructed they would have been in much worse conditions.

Although no baseline data was available for this evaluation, the early NORAD support to the development of basic physical infrastructure for rural health was significant and important for the development of a rural health service in the country. The fact that the buildings constructed during the 1970s and 1980s are still there and for the most part in good technical conditions, performing the duties that they were originally assigned, is in itself a testimony of a construction program, planned and carried out with care and thoughtfulness.

○ *Central Medical Stores*

Relevance

Norwegian support to the medical supplies system in Botswana began in 1977. In 1986, a NORAD supported review of medical supplies system was conducted which resulted in advice on the development and requirements of the National Pharmaceutical Services of Botswana. This included storage capacity and rather than upgrading existing facilities at the then Central Medical Stores (CMS) it was recommended to build a new facility. This recommendation was adopted and with a comprehensive Norwegian assistance package including programming, design and construction management, a new building for the CMS was completed in Gaborone in 1995.

The 1986 review also recommended the establishment of a decentralised system for storage of medical supplies in the country through the establishment of a series of sub-depots. This was not implemented at the time but is now an option being considered as a means to increase efficiency of the centralised storage facility in Gaborone.

Efficiency

The appraisal of the capacity needs of a new CMS, carried out to guide the planning of the new facility was generous in its assessment of space requirements. The additional space allocated for future growth of volume to be handled must have been considerable. Today, after 16 years in operation, it is estimated that the CMS has about 30 % surplus capacity to accommodate future volume growth.

Effectiveness

The new CMS completed in 1995 was a state-of-the-art facility. Its location at the periphery of Gaborone still provides for easy access to and from the compound by the heavy lorry traffic transporting medical supplies. It is obvious that everything was done at the time to develop a facility which accommodated optimum work flows, ample storage capacity, and a safe and comfortable work environment. This has been achieved while, at the same time, the part of the facility to which a wider audience has access, articulates the architectural language of a prestigious public building. The building complex has been planned such that the present increased needs for security and control of access are easily achieved.

Sustainability

The CMS facility has endured the years of operation with grace. In the past no modifications to the structures have been required for the facility to accommodate the functional

maintenance to the MIST/DBES may signal difficult times ahead if this change is not supported by a development of a political and technical regulatory framework. What was preserved over many years could very quickly be lost.

requirements it had to meet. At the time of this evaluation, the building complex appears to be in a good condition with no visible structural failures. It is reported though that the central air conditioning system has been failing occasionally, and indeed it was not working at the time of the inspection visit. This should be taken as a sign that a thorough maintenance system should be established to safeguard the future of the CMS facility.

At present, the management of the CMS is contracted out. Reportedly this was done to realign operational management but it has also fostered rethinking of the issue of how best to maintain the building facilities. It is now under consideration to outsource the maintenance of the CMS complex to a facilities management company, which would appear to be an interesting proposition should such a company with the required capacity offer its services in Botswana.

○ *Dental Health Service*

Relevance

Norwegian support to the national dental health service began in 1978. Support to the sector included development of plans for the dental health sector, construction of dental clinics at hospitals and training of Dental Therapists. The support to the training of Dental Therapists included the construction of a training facility in Gaborone which was completed with equipment installed by 1982.

Other support to the development of dental health facilities included the procurement of dental equipment for Serowe Dental Clinic in 1980; the construction of Maun Dental Clinic, (1982), with staff housing (1988); Lobatse and Tutume Dental Clinics (1987) and Mahalapye Dental Clinic.

The Dental Therapist Training School was built and inaugurated in 1982. The decision to locate the training of dentists in close proximity to other health sector training activities would appear to have been logical. The later easy incorporation of the dental training activity into a larger training facility also appears to have supported the establishment of a learning environment with the potential of cross-fertilisation between different health professions.

Efficiency

The simple structural system with which the original training facility was designed and constructed has made it easy and economical to adapt the building to new functional uses. In that respect the design philosophy guiding the design of the building was superior to many of the more sophisticated structure being built today.

Effectiveness

The establishment of the Dental Therapists Training Facility in Gaborone is recollected with great satisfaction by those who were part of the process and subsequently worked in the facility. When it was built, it included eight dental chairs for students and four chairs for staff plus whatever was required of auxiliary facilities. The facility was working well and there were never any shortages of equipment or other operational needs. The only constraint was in the available office space for teaching staff and administration. Overall the facility appears to have been well programmed, planned and built, and it appears to have fulfilled its purpose at the time it was functioning as the home for the dental training school.

In 1999, a new building for the Institute of Health Sciences (IHS) was completed elsewhere in the hospital compound in which now eight training programmes are located. The training

of dental therapists was relocated to this new facility. Since 2006, the old dental building has been the administrative home of the Harvard AIDS Institute.

Sustainability

The building has a prestigious location, to the left at the main entrance of the Princess Marina National Referral Hospital. It is obvious that the structure is not new but apart from a crack in a main wall due to a minor structural settlement and a few other small items needing maintenance the facility is in good condition. A brief interview with one of the staff now working in the building indicated satisfaction with the way the work space in the building had been arranged and was functioning, and that the interior had no maintenance issues. Unless plans for redevelopment of the hospital on its now rather full compound should dictate major reconstruction work, there is every reason to anticipate that the old dental therapy training facility would continue to function and serve the hospital in various capacities in the future.

○ *Medical Equipment Repair and Maintenance*

Relevance

As the health sector in Botswana developed and primary health facilities were built to provide more sophisticated health services to the population, capacity to repair medical equipment when it broke down was required. The establishment of regional workshops in the North and the South of the country appears to be a rational response to an increasing need to keep medical equipment in working order.

Support to the establishment of medical equipment workshops was provided by Norway through the 1980s. In 1986 the regional medical workshop at Serowe was completed and in 1987, the regional medical workshop at Maun was finished. Central medical workshops were established at the two national referral hospitals, the Princess Marina National Referral Hospital in Gaborone and the Nyangagbwe Referral Hospital in Francistown. While the two workshops in Gaborone and Francistown were the technically most advanced in the country, to which sophisticated equipment could be sent for maintenance or repair either in-house or by specialists contracted, often from equipment suppliers, the regional workshops were established with a lower level of technical capacity to serve the regional health facilities.

The workshop in Gaborone currently has 21 staff and is meant to serve the Southern part of the country while the workshop in Francistown has 16 staff and is serving the Northern part of the country. Smaller biomedical workshops are now located at other hospitals such as the Scottish Livingstone Hospital in Molepolole. Only the workshops at the two large referral hospitals have financial resources allocated, allowing them to procure spare parts and actively engage in the repair of other than the most basic medical equipment.

Effectiveness

At the time they were established, indications are that both technical and managerial capacity and funding were available to match the requirements and Botswana was successful in establishing a functioning Biomedical Engineering system with well-equipped workshops, trained staff and systems for the full range of necessary inputs.

Sustainability

At the time the two regional workshops were established, they appear to have served their purpose well but since then they have not kept pace with the development in the health sector and now appear in need of a major overhaul to be able again to serve their purpose.

There appears to have been a significant deterioration in the system for the maintenance of medical equipment such that it was the most commonly listed problem in hospitals visited. The problems confronted are numerous and are both systemic and specific and amongst those identified by the evaluation were:

- Maintenance contracts with suppliers of the more sophisticated equipment which used to ensure a short response time to breakdowns were abolished three years ago;
- Allocated budgets are inadequate to allow for procurement of the required testing equipment and spare parts;
- Specialised staff only receives training when it comes as a package with new procured equipment, never in the form of general refresher training;
- The process of delisting and disposing of obsolete and broken equipment is cumbersome; the policy governing equipment maintenance is unclear and several government entities are involved. At present the work and spare part storage spaces at the workshop in Gaborone is filled to the brim with obsolete and broken equipment that should have been discarded years ago.
- Currently no complex repairs of medical equipment take place in the workshop in Gaborone.

This brief review would indicate that the currently system for repair and maintenance of medical equipment in the country is unable to provide the services which it was originally assigned. It appears to be over-centralised, and has limited resources, managerial, technical or financial. There appears to be no guiding policy and no strategy to help show those involved in the activities the way ahead. It needs to be rebuilt, starting with the development of a sector policy, which would include consideration of existing workshop facilities and staff training and a strategy for its implementation.

Discussion

The decision to develop standard designs for a limited range of health facilities and staff houses as a means to implement a large construction component of the wider support to the health sector was very rational. The approach reduced construction costs, and reduced time for both planning, design and construction of the different types of facilities. These are all important aspects of the implementation of a large infrastructure development activity.

The approach also would have helped create some continuity in an implementation environment which could otherwise be characterised as a collection of individual projects without particular coherence.

It would appear the focus was on building good, economical and functional buildings as fast as possible. It was on the implementation of building projects rather than on updating or modernising the global framework within which these buildings were constructed and were to be maintained. Developing the policies, strategies and legal framework, guiding the construction of buildings for health appears not to have been a priority.

In retrospect, it appears that a project specific implementation strategy was developed to guide the many construction activities. Standard designs for smaller health facilities were developed and some simple briefing materials were developed to guide construction of more complex health facilities like primary hospitals. Much experience was gained and much construction work was done at a quality which must have been among the best in the sector at the time it took place. However, no deliberate effort seems to have been made to

institutionalise this experience by incorporating it into new policies and regulatory measures for the construction sector at large.

Today, large new hospitals are being built in several places in the country but those who manage the implementation process complain that it is difficult to ensure that what comes out of the process is also what was intended. It is a common experience in many countries that the contents and quality of briefing documents that are drawn up early in the process to guide the implementation of complex health facilities are crucial for the final result. The initial attempt made in the early 1990s to develop such documentation and to use it actively in the process of realising new large buildings for health have not been adopted and further developed.

It was reported that the general construction laws and other regulatory measures such as the building code have seen small adjustments over the years but this has merely been an evolutionary process following adjustments made in these areas in other countries in the region.

4.3.4 Analysis of the Human Resources for Health in Botswana

Since Independence one of the major stated obstacles facing the Botswana health sector has been the shortage of health staff at all levels of the health care system. During the implementation of the NDP 6 and 7, services and facilities expanded rapidly, but the growth in the HRH did not keep pace with this. Human resource development therefore became a priority, not only in terms of production of the required number of staff members, but also in terms of skills and qualifications. The tables and graphs in this section show the changes in numbers of human resources for health over the years, from 1978 till 2006³⁹.

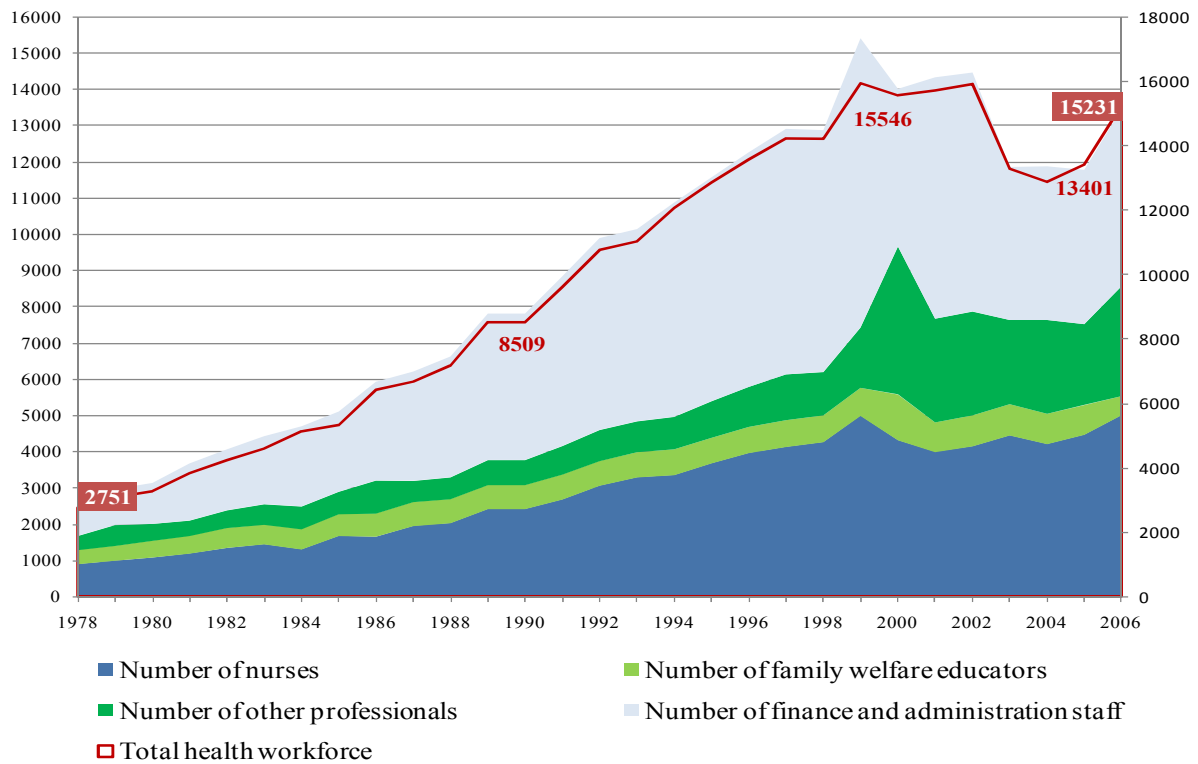
The Botswana health workforce has increased more than fivefold since 1978, when the total health staff amounted to 2,751. The graph below shows the steady increase since the late 70s with a decline in the period 2002-2004⁴⁰, after which the health workforce grew rapidly to 15,231 in 2006.

Although Norway contributed to the training and further development of public sector health workers, through technical and other support, its role in formal basic training of any health cadre was limited to the introduction of the first Dental Therapy Training programme in the 1980s and the expansion of the Pharmaceutical, Midwifery and Laboratory training programmes from 2005.

³⁹ Most data referred to in this section are extracted from a single source, the Health Statistics published by the Central Statistics Office. It must be noted that after 2000 there is no clear delineation between the number of health workers in the *public* and *private* or *other* sectors, nor is it anywhere indicated that private sector health staff are still included in the statistics. Wherever relevant we will refer to the Botswana Human Resource Strategic Plan for Health 2008-2016 where it is clear that the numbers of staff members reflected are only working in the public health sector.

⁴⁰ The reason for the sudden decline of the total health workforce with 2,631 staff from 2002 to 2003 is due to an abrupt fall, by around 2000 workers, in finance and administration staff. This may be related to a reclassification of the workforce statistics.

Graph 30 - Botswana, Number of health workforce (total and for selected categories of cadres), 1978-2006



Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1978-2006).

The numbers of major categories of cadres, such as doctors and nurses, increased over time as the above graph shows. Both categories have increased five-fold in the last 28 years (see also Graph 30). In 2006 there were about 590 doctors and 5,000 nurses in the country (CSO 2006) compared to 92 doctors and 891 nurses in 1978.

The staff ratios in Table 16 show an increase in number of doctors per 10,000 population from 1.2 in 1980 to 3.3 in 2006, an increase of more than 150%, which we also observe for nurses from 11.4 to 28.8 per 10,000 population for the same period. The staff ratio for the cadre of Family Welfare Educators (or Health Education Assistants as they were re-categorised) hardly changed over this period of time.

Table 16 - Botswana, Staff ratios for selected health cadres (per 10,000 population), 1980-2006

	1980*	1985	1990	1995	2000	2006
Doctors	1.2	1.7	1.9	2.7	3.02	3.3
Nurses	11.4	15.4	18.7	25.2	26.2	28.8
Family Welfare Educators	5.0	5.6	5.1	4.9	7.7	5.2

Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1981-2006).

Note: * In the CSO Medical/Health Statistics, the staff ratios are only available as from 1981 onwards and therefore the 1980 staff ratios are own calculations (based on the health staff numbers from the Medical Statistics report 1980 and population data from the Census 1981).

For a number of cadres⁴¹ (Medical Doctors, Nurses, Dental Therapists, Laboratory Technicians, Midwives and Pharmaceutical Technologists) time series data have been collected (see Table 17) in order to assess the numbers in these cadres over the years.

Table 17 - Botswana, Number of selected health personnel, by category, 1980-2006

	1980	1985	1990	1995	2000	2006	change
Doctors	117	189	236	396	465	591	405%
Nurses	1,071	1,670	2,416	3,678	4,319	5,006	367%
Family welfare educators	474	609	666	713	1,269	533	12%
Pharmacists	10	9	13	23	27	60	500%
Pharmacy technicians	17	51	96	134	165	163	859%
Dentists	10	14	11	41	34	4	-60%
Dental technicians	1	1	4	15	23*	8*	700%
Dental therapists	8	4	4	41	56*	20*	150%
Dental therapist assistants	0	3	5	15	11	14	367%
Laboratory technicians	15	27	47	102	181	142	847%
Laboratory technical assistants	5	43	27	26	2	18	260%
Lecturers & tutors (combined)	0	0	156	191	303	297	90%
TOTAL HEALTH STAFF**	3,263	5,314	8,509	12,844	15,546	15,231	367%

Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1980-2006).

Notes: ° Percentage change between 1978 (start of the time series) and 2006.

After 2000 the division between dental therapists and technicians was no longer made (either one of these subcategories was used) and therefore the numbers for these categories for 2000 and 2006 have been calculated by using the average of the percentage division from 1995 to 1999.

** The total health staff numbers are not the sum of the different categories of health personnel per year, but the total staff employed in the (public and private) health sector in Botswana.

○ *Pharmaceutical staff*

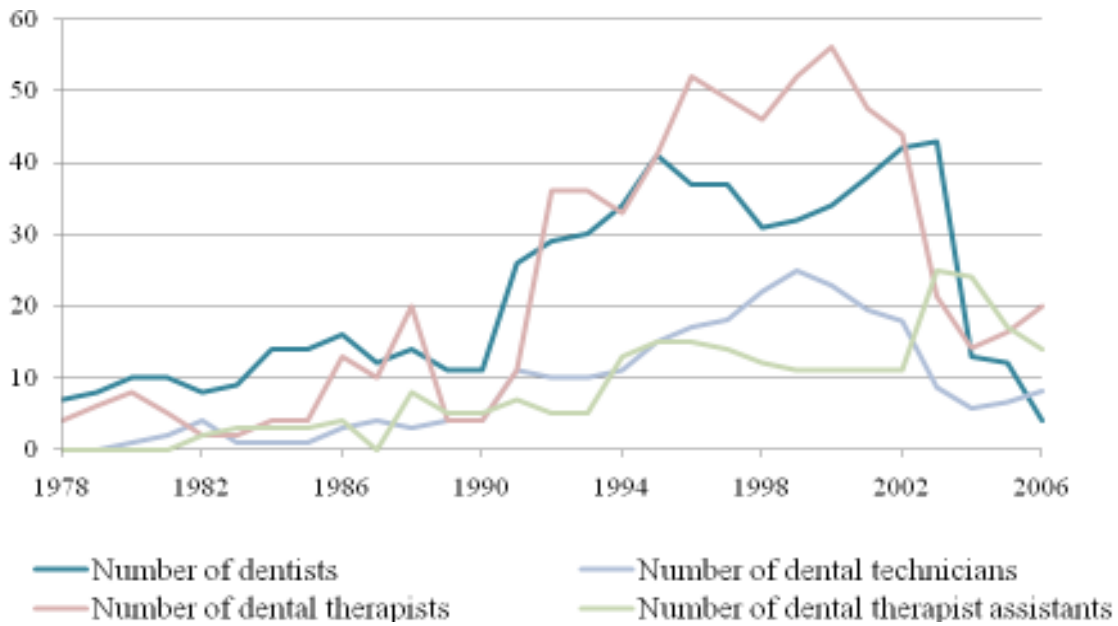
In the period 1980 to 2006, the number of pharmacists and pharmacy technicians increased significantly, pharmacists from 10 to 60, and Pharmacy Technicians from 17 to 163 (Table 17).

○ *Dental health staff*

Oral Health personnel have grown steadily in numbers over the period from 1978 to 2003. In the 90s there was certainly an effort to produce more oral health personnel and in the period 1997 to 2010, 94 Dental Therapists were trained locally under the Dental Therapy training programme that had been developed with support from NORAD. There was a significant unexplained decrease in the numbers for most dental health cadres in 2006 (Table 17 and Graph 31).

⁴¹ For which Norway provided some training support.

Graph 31 - Botswana, Number of dental health staff, 1978-2006

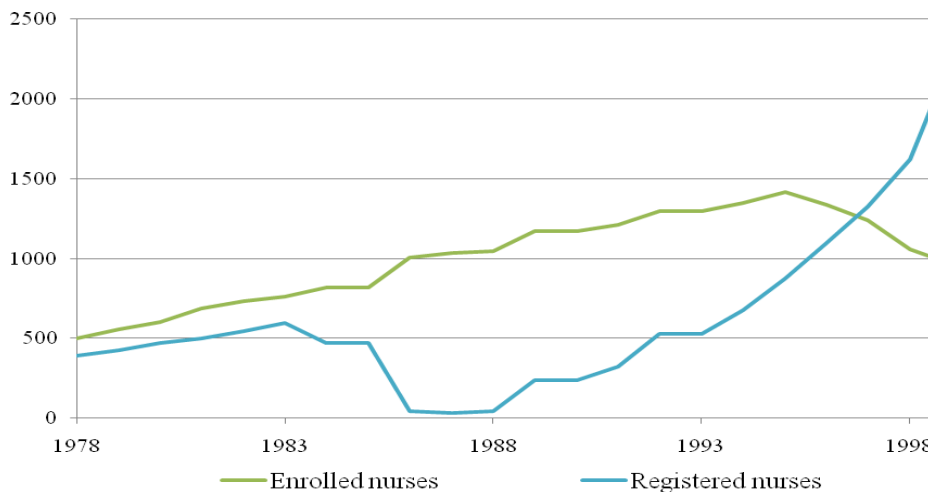


Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1978-2006).

o *Nurses*

In 2008 there were 4,714 nurses employed in the health sector (MOH 2008) including all categories of nursing personnel (general nurses, enrolled nurses (EN), EN/midwife, registered nurses (RN), RN/midwives). The Health Statistics reports on disaggregated numbers of nurses only up to 1999. Graph 32 depicts the changes from 1978 till 1999 for enrolled and registered nurses, showing the decrease in the number of enrolled nurses following the decision to train only Registered and degree level nurses.

Graph 32 - Botswana, Number of nurses, 1978-1999

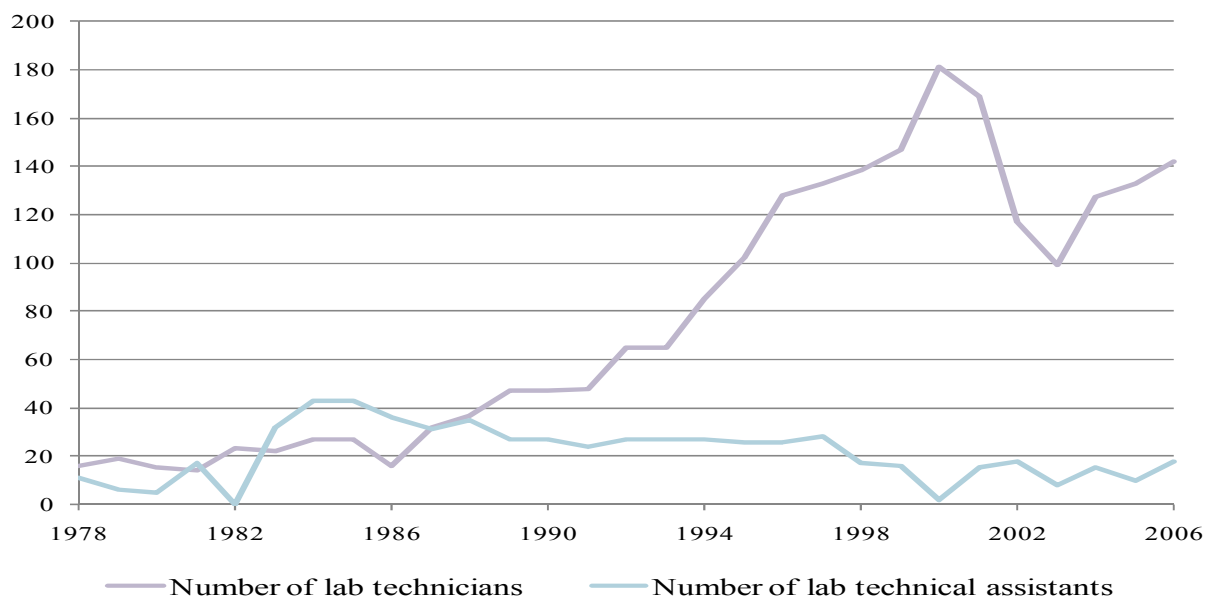


Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1978-1999).

o *Medical Laboratory staff*

In 1978 there were 15 laboratory technicians in Botswana. Since the 1980s there has been a steady growth in the number of such technicians to 142⁴² in 2006 (see Table 17 and Graph 33). In 2008 there were 254 Medical Laboratory professionals in the health sector (MOH 2008).

Graph 33 - Botswana, Number of laboratory health personnel, 1978-2006



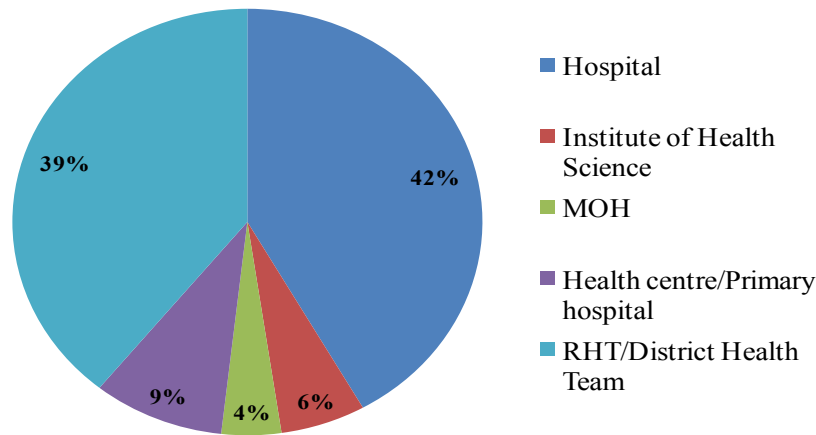
Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1978-2006).

4.3.4.1 Health workforce by location

Over the years there has been a change in the distribution of the workforce amongst the various levels of care, central level MOH and training institutions. In 1979, more than half of the health workforce was at hospitals (general and referral hospitals). The staff at primary level (clinics, health post, and RHT) represented a little over a third of the total health workforce. In 2006, the hospitals had a lower share of the total health workforce (albeit still high, 42%) and other levels increased their share as compared to 1979, for example staff at primary level represented 39% of the total health workforce by 2006. Graph 34 shows the distribution of health workers by location in 2006.

⁴² Data for laboratory technologists are not reported every year in the Health Statistics and it is not clear whether that means that there were no lab technologist positions or that they were reflected in other categories.

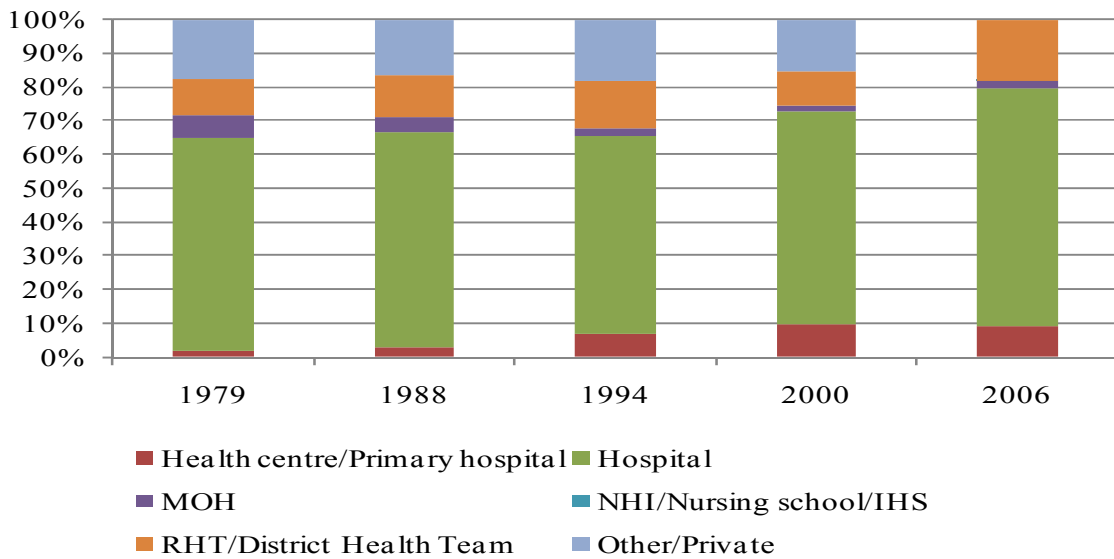
Graph 34 - Botswana, Health workforce by location, 2006



Source: Central Statistics Office, Health Statistics Report (annual report 2006).

Graph 35 and Graph 36 show the share of doctors and nurses by location⁴³ for the years, 1979, 1988, 1994, 2000 and 2006. Each year there has been an increase in the proportion of doctors posted at primary hospitals and RHT/DHT.

Graph 35 - Botswana, Percentage of doctors by location, 1979-2006

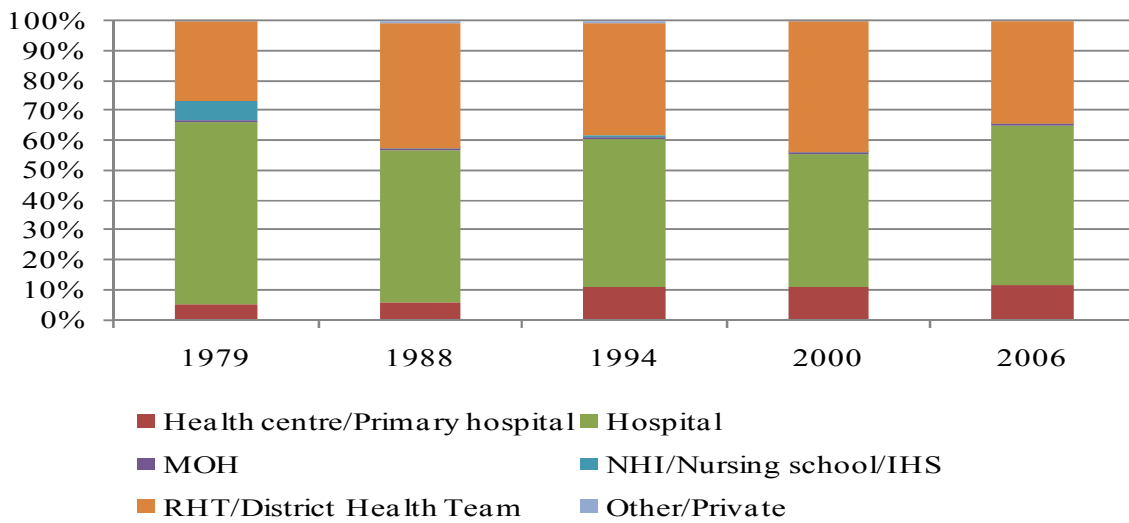


Source: Central Statistics Office, Health Statistics Report (annual report 2006).

The proportion of nurses in primary hospital increased gradually and reached 10% in around 1994 and has been kept at that level up to the present day.

⁴³ To ensure comparability of the data the location categories were reorganised: health centres and primary hospitals were combined; the regional and district health teams were brought together and were consolidated with other subcategories (clinics and health posts); the National Health Institute, Nursing School and current Institute for Health Sciences were aggregated, together with the subcategory of oral health services.

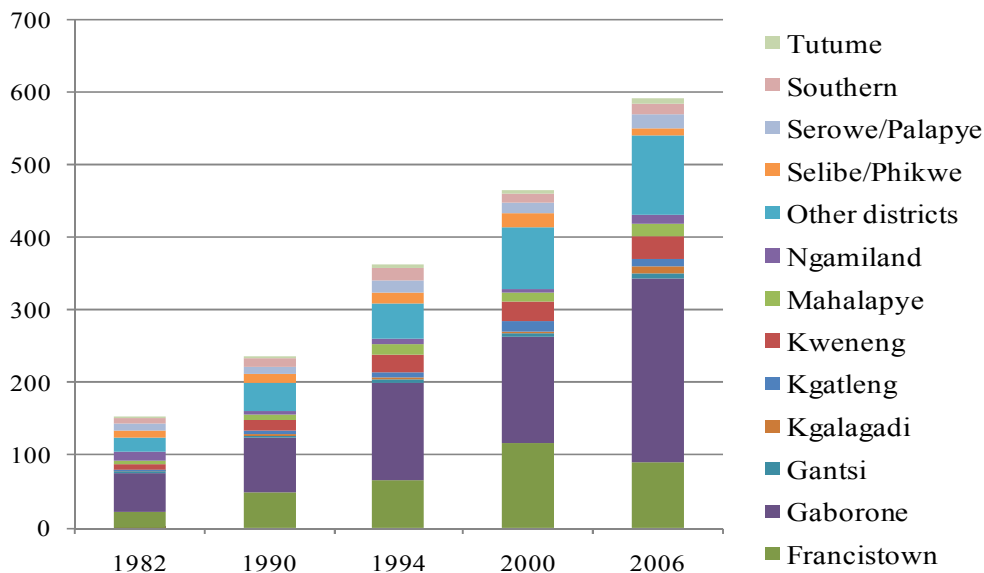
Graph 36 - Botswana, Percentage of nurses by location, 1979-2006



Source: Central Statistics Office, Health Statistics Report (annual report 2006).

Graph 37 shows the placement of health cadres by district. This reflects the location of the two referral hospitals in the two most populous districts, which include the main towns of Gaborone and Francistown. These districts have the highest proportion of all cadres of health workers. In 2006, 43% of the doctors were employed in Gaborone district, 17% in Francistown, and the remaining 40% in all other Botswana districts⁴⁴.

Graph 37 - Botswana, Number of professional doctors by district, 1982-2006



Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1979-2006).

⁴⁴ To make the data comparable between 1982 & 2006, it was necessary to reorganise them as the district designations changed several times over the period. Where it was not possible to find a clear link between the changed names/split-ups/aggregations, the districts were pooled under "other districts".

○ *Health workforce by nationality*

Shortages of Botswana health staff still prevail in the Botswana health sector and there remains a dependence on foreign workers for some cadres. This is significant for medical doctors with only 10% of medical doctors having Botswana nationality. Table 18 shows that the situation has not changed since the 80s. Most of the non-Botswana medical doctors come from other African countries. On the other hand, most nurses have a Botswana nationality, in 2008, 96% of nurses were Botswana, the same proportion as twenty years ago.

Table 18 - Botswana, Doctors and nurses by nationality (numbers and %), 1988-2008

	Doctors				Nurses			
	Botswana		Foreign		Botswana		Foreign	
	#	%	#	%	#	%	#	%
1988	28	14%	171	86%	2,237	96%	95	4%
1999	36	11%	290	89%	3,556	87%	534	13%
2006	60	10%	530	90%	4,706	96%	200	4%

Source: Central Statistics Office, Medical/Health Statistics Reports (annual reports 1988, 1999 & 2006).

○ *Regional comparisons*

Regionally comparable data (Table 19) on health status indicators, health sector performance indicators and health financing show that Botswana's expenditure on health is less than in South Africa but greater than in Namibia and much greater than Malawi, Zambia and Lesotho. In terms of both health sector performance and health status, Botswana compares well with both Namibia and South Africa and much better than the other less affluent nations.

Table 19 - Regional comparisons – Selected indicators, 2000-2009

Category	Botswana	Lesotho	Malawi	Namibia	South Africa	Zambia
<i>Total population (2008)</i>	1,921,000	2,049,000	14,846,000	2,130,000	49,668,000	12,620,000
Health status						
Life expectancy at birth (years) (2008)	61	47	53	63	53	48
Infant mortality rate per 1000 live births (2008)	26	63	65	31	48	92
Under-five mortality rate per 1000 (2008)	31	79	100	42	67	148
Maternal Mortality ratio per 100,000 live births (2005) *	380 (120-1000)	960 (570-1400)	1,100 (720-1500)	210 (110-300)	400 (270-530)	830 (520-1200)
Health sector performance						
Births attended by skilled health personnel (%) (2000-2008)	94	55	54	81	91	47
Hospital Beds / 10,000 population (2000-2009)	18	13	11	27	28	19
ART coverage (%) among people with advanced HIV	79 (69-91)	26 (21-33)	35 (29-42)	88 (73->95)	28 (22-36)	46 (40-56)
Health expenditure						
Per capita total expenditure on health at average exchange rate (US\$) (2007)	372	51	17	319	497	57

Source: World Health Statistics 2010, WHO (accessed online 13 April 2011).

Note: * Interagency estimates by WHO, UNICEF, UNFPA, World Bank.

Regionally comparable data of health staff ratios (Table 20) confirm that Botswana performs rather well in terms of doctors, nurses and pharmaceutical personnel, but the staff ratio of dentists (all subcategories together) and lab personnel is low for a middle income country.

Table 20 - Regional comparison of staff numbers and ratios, 2000-2009

Category	Botswana	Malawi	Namibia	South Africa	Zambia
<i>Total population</i>	1,921,000	14,846,000	2,130,000	49,668,000	12,620,000
Health staff numbers					
Physicians	715	257	598	34,829	649
Dentists	38	211	113	5,995	56
Nursing & midwifery	4,753	3,896	6,145	184,459	8,369
Pharmaceutical personnel	333	293	288	12,521	108
Laboratory	136	46	481	2,002	1,415
Health staff ratios (per 10,000 population)					
Physicians	3.7	0.2	3.0	7.7	1.2
Dentists	0.2	0.1	0.6	1.3	0.4
Nursing & midwifery	26.0	2.6	31.0	41.0	7.2
Pharmaceutical personnel	1.7	0.2	1.4	2.8	0.1
Laboratory	0.15	0.03	2.4	0.4	0.1

Source: World Health Statistics 2010 (accessed online 8 April 2011).

Note: * Population data are from 2008; health workforce numbers and ratios date from different years: 2000-2009.

4.4 Stakeholder / Beneficiary Sub-study 4

4.4.1 Purpose of the study

The purpose of this sub study was to gain the views of the beneficiaries in relation to changes in health services delivery in Botswana over the last 35 years, particularly, if possible, with reference to any Norwegian supported inputs.

The study sought to answer the key question of:

To what extent has the (Norwegian) assistance been responsive to the needs and expectations of the target user groups for assistance? Target user groups for Norwegian assistance were:

- (1) Rural populations*
- (2) Other disadvantaged groups (e.g. the poor, handicapped/disabled)*

See Annex 1 for details on the methodology for the study.

4.4.2 Community Perceptions on Health Services and Health Service Developments

Community members interviewed generally believe that health facilities are able to treat almost all diseases including HIV related illnesses. They appreciated the fact that most health services can be obtained in the facilities. The communities mentioned the following positive achievements/changes in the health care system:

- Treatment of diseases is good, especially HIV/AIDS and related illnesses. (The hospital and most clinics have a special unit for treatment of special diseases especially HIV/AIDS, this has solved the problem of long distances travelled to other villages and towns (Francistown, Gweta, Nata).
- Communities are now better informed about health issues
- Over the years, the preference for traditional healing practices has fallen as people have embraced modern health care. However, in the remote settlements like Manxotae, some people still prefer traditional beliefs especially traditional child birth practices.
- There has been an increase in initiatives for Community volunteers engaged in providing care to patients – many patients are also on ART, are weak and cannot manage to go to clinic for treatment.
- Volunteers involved in awareness and mobilization, patient monitoring has reduced defaulting rates.

The major problems cited with the services include

- Overcrowding of facilities which requires patients to wait for long periods for consultations and treatment.
- There have been shortages of drugs, particularly for hypertension, for the last two years. Patients have to buy drugs from chemists at high prices.
- For health posts and clinics which do not have centres for treatment of infectious diseases (i.e. AIDS), patients complained about the difficulties of having to go to neighbouring villages for drugs.
- Resource constraints and capacity limitations continue to hinder optimal involvement of communities in planning and delivery of health care services.

- Shortage of staff especially nurses is a problem particularly because nurses are off duty during weekends and holidays, which results in patients not being able to receive help during these times.

4.4.3 Description of Community Participation Processes

Community participation in development planning systems is a vital process that aims at ensuring that services meet the needs and expectations of different beneficiary groups. Planning and managing the provision of services in rural and disadvantaged communities like Manxotae and villages in Tutume sub district requires greater attention to the participation of vulnerable, marginalized, illiterate, relatively passive and poorly organized groups. The study sought to find out how different groups participate in health systems i.e. to communicate their needs and expectations, receive information and to actually get engaged in health care.

The following are some of the major planning frameworks which guide the participatory planning processes in Botswana:

- District Development Planning Manual which outlines and emphasizes the need for community consultations to be conducted by council planning staff to facilitate practical bottom-up planning processes. It notes that while such consultations are done, they are not adequately participatory as much of the development plans are decided in a top-down approach.
- National Strategic Framework on HIV/AIDS calls for active participation of various community groups in deciding, planning and implementing HIV/AIDS interventions in communities, through strengthening the capacities of community institutions.
- Ministry of Health, through various units, develops policies and guidelines for community participation in health provision, including Guidelines for Village Health Committees. The Ministry of Local Government through the Department of Social Services has also reviewed community development planning processes and developed guidelines for effective participation on all groups.
- The long-term vision for Botswana 'Vision 2016' document encourages innovative strategies for strengthening families and communities to deal with all health challenges.

The following is a summary of the main mechanisms and strategies in place for community participation in health service planning and delivery:

○ *District Planning Mechanism*

Councillors carry out consultations with their electorate to identify needs which they present and debate during council meetings, attended together with District Planners. The Council has a special committee on Health which deals with health planning.

○ *The Kgotla Community meeting place*

This has always been the major forum used by Government officers, district officers, politicians, development partners and all local and foreign agencies for communicating on development issues and programmes with communities. It brings together stakeholders and community to discuss issues, needs, propose and determine actions required to address identified problems as well as providing feedback on services and queries. It is the meeting which every community members can attend. The Kgotla meetings are normally arranged through the VDC, and whose chairman usually chairs the proceedings. The resident chief or his representative oversees the deliberations and welcomes participants. While the Kgotla

remains the most popular and widely accepted forum for popular participation, it has been criticized for its loss of popularity and value by young people, middle and high-income working class and women. Over the years the system has seen falling attendance rates, which has resulted in calls for alternative means of participation.

○ *Workshops, Meetings, Health related Events and Commemorations*

Community members may get involved in discussions during such events, usually organized by health workers for various groups such as students, patients, care givers, youth etc. By way of contributing to the discussions, debates, action planning and reviews, participants are able to feel part of the plans and solutions.

○ *Participation Through Voluntary Service Provision*

The Botswana health care system has since its inception, recognized the importance of community participation, and established Village Health Committees (VHC) in health facilities, through which communities could get involved in the system. The VHC gives community members opportunity to volunteer their time to provide basic health education, care and support to families and individuals, working closely with FWEs. In recent years, in response to the impact of HIV/AIDS, newer volunteer programmes have emerged i.e. the Tuberculosis Care Programme, Community Home Based Care Programme and the Prevention of Mother to Child Transmission (Peer Mothers/Peer Fathers Support Programme). A majority of these volunteers (apart from PMTCT who are mostly young women), are women of 40 years and above. Men and young people were reported to have no interest in voluntary unpaid work, and rather look for paid jobs.

Some issues: the CHBC and TB volunteers are paid allowances while VHC volunteers do not receive allowances. This has resulted in some VHC volunteers switching to the other committees for allowances, which has contributed to the collapse of VHCs in most villages.

○ *Health Related Research:*

The Ministry of Health has an established research unit which plans and conducts studies in communities to identify health needs, review health services and assess patients' satisfaction. These studies inform plans for health provision and provide opportunities for communities to voice their needs and concerns.

It is through the above processes that communities in Tutume participated in lobbying for the establishment of health centres, upgrading of facilities, increase of health staff, expansion of services, acquisition of ambulances and so forth. To this extent most of them felt their voice is heard. For example, during public consultations, communities believed that they played a role in decisions taken to establish, upgrade health facilities and deploy additional staff to meet their needs. Some of the factors contributed by communities to influence health services include:

- More people were re-settling back from ploughing areas (masimo) and cattle posts to reside permanently in Tutume, which increased the demand for expansion of health provision.
- There were more diseases that needed better services and more health workers.
- People had to walk long distances and cross some rivers to go for health services which was difficult without bridges and good roads at the time.
- The need for establishment/upgrading of facilities was expressed through kgotla meetings addressed by various authorities including politicians and government officials.

4.4.4 The Role of Village Health Committees

Village Health Committees are village level institutions responsible for ensuring that health services meet the needs of the community and facilitate active participation of communities in the planning and provision of health services. Their main role has always been to educate communities on health issues, assess health needs, carry out income generation activities, mobilize communities for health action, conduct follow-ups and liaise with the health facility through health educators. The volunteers deal with all health issues affecting their community, supported by Health Educators, community leaders, health workers and other community institutions. VHCs are commended for their contribution towards achievements in health indicators especially improvement in child welfare, nutrition and family planning. However, their contribution has not been well recognized and rewarded, hence limited attention from development workers.

During the first phase of NORAD support, most VHCs were active and could address many of the health issues, even though there were still problems with many committees not being active. Information from health workers who worked with the Norwegian doctors stated the following factors contributed to the functioning and vibrancy of VHCs at that time:

- The doctors and health workers had passion and interest in working with communities and worked closely with VHCs to plan innovative activities such as music competitions.
- The doctors and teams were always found where the people were and would go out to remote areas.
- The level of interaction (despite language challenges) was high which motivated both local staff and communities as well as the volunteers themselves.
- The health teams were 'simple' and easy to work with.

The problem mentioned with health workers in the recent years is their lack of passion for communities, hence their lack of commitment for activating and supporting VHCs. Another problem is that activities are now held outside the communities, e.g. workshops are held in hotels away from volunteers' villages; this has eroded the concept to community identity, unity and common goal.

The birth of new specialized committees for HIV/AIDS i.e. Community Home-Based Care Committee and Tuberculosis Care Committee worsened the already weak VHCs. The debates around this are mainly on role clarity and incentives. VHCs and other key informants view these other committees as functions which should be part of the VHC structures but have been overlooked or undermined by donors who established these committees.

○ *Main challenges faced by VHCs*

- Lack of resources which hinders effective engagement of volunteers. The Ministry of Health does not have a budget for supporting VHCs
- Lack of recognition which is a major incentive.
- Lack of incentives for volunteers has always affected the rate of involvement
- The existence of other voluntary committees, which were established to deal specifically with HIV/AIDS and Tuberculosis, has threatened the existence, performance and sustainability of VHCs. The main reason is that these other

committees pay monthly allowances to volunteers while VHC volunteers are not paid incentives. Many VHC volunteers have left for the other committees.

- Lack of capacity for participation due to limited opportunities for training and support.
- Poor mobilization, mentorship and coordination of communities for meaningful participation
- There are no clear guidelines for community participation
- Dependency syndrome hinders spirit of participation
- Men and youth do not participate in VHCs due to lack of financial incentives.
- Health workers do not provide the necessary support to VHCs as they give more attention to clinical work as opposed to community work.
- The roles of VHCs are not clear to the volunteers, health workers, communities and other community organizations.

○ *Are VHCs still relevant and valuable?*

The Ministry of Health and retired informants who worked with VHCs believe that the VHCs are still relevant today as they were at the beginning of public health. However, there is need to revive and strengthen them to become active and effective institutions which can oversee and manage all health issues in their communities.

The Ministry of Health, through the Health Promotion and Education Division is working on strategies to strengthen VHCs, which include:

- Resource mobilization for training and income generation initiatives, community mobilization and support to volunteers
- A database has been developed to track information on VHCs throughout the country.
- Evaluation studies have been conducted to identify the needs of VHCs
- A position of National Coordinator for VHCs has been created and filled at the Ministry.
- Guidelines have been developed for VHC operation and training is underway to orientate VHCs on the guidelines.

4.4.5 Norwegian and Botswana Stakeholders

The Norwegian and Botswana Stakeholders interviewed by the Evaluation team were able to discuss the full range of inputs provided by the Norwegian assistance from 1975 to the present day (Table 21).

Table 21 - Area of experience of Norwegian inputs for Botswana and Norwegian informants

NORAD Programme	Botswana	Norwegians
TA provided 1975 – 92	10	6
Infrastructure inputs 1975 -92	4	7
Central Programmes (Dental, BEMS, Pharmaceuticals, HR Planning)	8	5
Institutional Development Programme	10	8
of which:		
Research	3	3
Quality	3	1
PHC	2	2
Coordination	1	2
TA provided 2004 – 07	7	5
TOTAL number interviewed	26	21

Note: several respondents were able to discuss more than one of the Norwegian programme areas.

The roles played by the respondents included individuals involved in the full range of programme activities including programme design, implementation, coordination and also several beneficiaries of training from both the Botswana and the Norwegian perspectives.

A semi-structured interview was conducted with each respondent (see Annex 1) either in person (in Botswana) or over the telephone (for Norwegians) in which their knowledge and experience of the Norwegian contributions were discussed in terms of the DAC evaluation criteria. The findings from these discussions were wide ranging and the following table tries to present the consolidated views of the Botswana respondents in terms of relevance, effectiveness and sustainability⁴⁵ for the Norwegian inputs. We have presented these responses (see Table 22) in relation to five broad programme categories covering (1) PHC infrastructure development (2) TA to the PHC level, (3) Support to Central Systems development (CMS, Dental, BEMS, HR. Planning, PHC at MOLG), (4) The Institutional Collaboration Phase and (5) the HR in support of ART roll out. The comments of these respondents are used to other areas of the report.

⁴⁵ Note that it was found difficult to address the issue of efficiency through these interviews.

Table 22 - Overall positive responses in relation to the five broad Norwegian support programmes by (i) Botswana stakeholders and (ii) Norwegian Stakeholders

	PHC TA	PHC Infrastructure	Central	Institutional Development	HIV TA
(i) Botswana stakeholders					
Relevance	100%	100%	100%	100%	100%
Effectiveness	100%	100%	100%	40%	50%
Sustainability	100%	100%	100%	20%	50%
<i>Respondents</i>	10	9	7	10	6
(ii) Norwegian Stakeholders					
Relevance	100%	100%	100%	50%	100%
Effectiveness	100%	100%	100%	13%	40%
Sustainability	100%	100%	100%	0%	40%
<i>Respondents</i>	6	7	5	8	5

Notes: Several respondents were able to discuss more than one of the Norwegian programme areas.

○ *The First phase of the Norwegian Collaboration*

All of the Botswana respondents were very positive about both the TA and Infrastructure support to the PHC phase of the Norwegian assistance. Both elements of the support were considered to be highly relevant to the Botswana health service at the time, effectively delivered and has subsequently been sustained. Similar views were expressed by the smaller number who felt qualified to talk about the support provided to the central systems development support, they were also very positive.

Amongst Norwegians, the same picture emerged, all were very positive about both the TA and infrastructure support to PHC and about the central support to the development of various institutions and systems at central level. These external respondents recognised that they were unaware of events subsequent to their departure and so could not, in many cases, comment on sustainability with any certainty.

There was much less unanimity around the Institutional Development programme by both Norwegian and Botswana stakeholders. All ten Botswana, but only four out of the eight Norwegian, respondents felt that the elements of this programme were relevant and a high priority to the MOH at the time. Respondents discussing this programme generally only felt qualified to discuss one of the eight separate components and so their comments related to only that component. Much smaller numbers felt their programme component was effectively delivered (4 Botswana, 1 Norwegian) and only very few felt it was sustainable. Among the issues raised were:

○ *The overall Institutional Collaboration programme*

The overall design of the programme was said to be overly complex with complicated financial management arrangements. It was also very ambitious with originally very high expectations when the original project contracts were developed.

The complex administrative requirements meant that most of the component projects were slow to start. As a result, outputs were much less than had been anticipated as the capacity of the MOH partners and, in some cases the Norwegian partners, to manage the projects was inadequate. Staff changes both in Norway and Botswana did not help for continuity.

There were changes in component objectives and expected outputs over the life of the programme which made monitoring hard.

Programme procedures were very demanding with extensive reporting requirements, particularly at the beginning, and annual review meetings.

A number of both Botswana and Norwegian respondents felt that, partly as a result of weak existing institutional capacity within the collaborating units of the MOH, the programmes were driven more by the Norwegian institutions.

With regard to the anticipated institutional collaboration that was to continue on after the formal programme had ended, it was never clear how this was expected to work and no institutional links were developed that continued on after the programme finished (although some links between individuals remain).

○ *Quality Improvement Programme, including the Twinning arrangements*

- This component had widely divergent views with some respondents, both Botswana and Norwegian, thinking highly of it but others, again both nationalities, being less complimentary.
- While a unit was developed within the MOH to implement the project and initially it had a high level of support, external events led to its weakening. The MOH reorganisation resulted in a new unit which apparently had the same responsibilities, but in fact this unit became responsible for implementing a new government-wide initiative to improve efficiency throughout the public service and with this and the loss of the original trained audit team, the focus of health facility quality audit was lost.
- The very strength of the unit initially resulted in its staff being diverted to undertake other priority activities, weakening the core function.
- The audit teams consisted of officers who had been trained in audit techniques while seconded from their primary duties. They also performed the periodic audits during periods of absence from their normal duties. This apparently led to management problems in units which lost these key personnel while they undertook audits.
- As the trained auditors advanced in their careers, or moved on to other sectors, the pool of auditors was diminished. Following the end of the project, no new cadres of auditors were trained to replace the losses.
- There was considerable disagreement over the audit findings themselves. Some respondents felt that this was a useful process that gave facility managers practical assistance in identifying weaknesses that could be addressed. Others felt that the lack of management autonomy within health facilities meant that the managers were powerless to do much about any audit reports they received.
- The twinning arrangement provided some useful inputs to Botswana but has not been sustained.

○ *PHC Training*

- The PHC training was very inefficient with, in the beginning, only one DHT being trained per year.
- The training programme took two weeks and it was difficult to get key members of DHTs to attend for such a long period.
- Rapid staff turnover meant that the skills were dissipated from a trained team, although presumably the skills would have been retained by the individuals.

○ *Research (both HSR and Decentralisation)*

- Some respondents were not convinced that increasing research capacity within the HRU was a priority; it was not reflected by the strength of the staffing in the Unit.
- It may have been more appropriate for the link to have been with the University of Botswana. It may have been more appropriate for the HRU to be a research management unit, commissioning research from research institutions such as the UoB rather than carrying out research itself.
- The HRU staff involved directly in the collaboration did not have the necessary weight to debate on equal terms with the experienced researchers from Norway.
- The capacity of a number of individuals was increased through training; however this has not been retained by the MOH.
- It may have been more appropriate to help the UoB to develop a course or module in health research techniques.
- Some research activities strayed some way from the original concepts of health systems and decentralisation research.
- There was concern about the ownership of the data with Botswana researchers feeling that they were involved primarily in data collection and not enough in analysis and presentation.

○ *Medical Education*

- It was hard to identify students to attend university in Norway as other countries were offering shorter training programmes, with no need for a one year language training course.
- There is no mechanism to ensure the graduates return. Very few have done so to date.

○ *TA in support to ARV Programme*

With regard to the TA in Support of ARV Programme, all Botswana and Norwegians recognised the relevance of the overall programme but a number were less convinced of the effectiveness of the implementation. Sustainability was also an issue, unsurprisingly as this was primarily a gap filling exercise, although a number of examples were cited where the Norwegian TA had helped established systems and procedures that are still in use. Among the criticisms noted were:

- The original design of this programme was adjusted considerably in implementation. It did not prove possible to recruit Norwegian Public Health Doctors to assist with the roll out of the ARV Programme and so alternative cadres were recruited. While many of these were able to support the AIDS programmes in some way (e.g. a paediatrician provided support for the treatment of children with HIV, a public health specialist supported the TB programme) this was not the original intention. Others gave support to the improvement of anaesthetic and also accident and emergency services, valuable for Botswana but not the original intention.
- Norwegian TA had no particular experience of ART programmes.
- Some TA involved in formal training programmes felt that they were additional to a full complement of lecturers and thus did not enable an increase in the supply of technicians. Their skills were not utilised to help in a curriculum development process that was underway at that time.
- Systems weaknesses meant that some TA felt that they were not as effective as they might have been.

4.5 Annex NORAD Projects and Programmes

The information for this annex comes from a variety of sources including NORAD archive information, a NORAD project accounts summary and evaluation documents. There were gaps in the information identified, there are inconsistencies between some of these different sources and it was not always possible to identify which was the definitively correct source of information. One area of particular potential inaccuracy relates to the provision of Norwegian personnel, both volunteers and technical assistance to the Botswana health sector. Norwegian volunteers who worked in the Botswana health sector were funded from a separate budget from the bilateral agreements that have been identified here. Some information has been found about the value of this contribution up until 1986, but nothing from after that year.

Each of the separate Norwegian Programmes or Projects are summarised in the following table that provide information on their objectives, running dates and value.

4.5.1 Phase 1: 1972 - 1996

Table 23 - Basic Health Services Project		Code: BOT003	1972 - 1988
Objective	To enable shift from clinical focus of existing medical services to a preventive focus for a rural health service		
10/12/1975	Agreement phase 1	1972 – 1979	NOK 9,000,000
4/10/1976	Addendum		NOK 21,000,000
27/10/1977	Addendum	Expansion of remit	
20/08/1980	Agreement phase 2	Extension to 1981	NOK 10,000,000
30/11/1983	Addendum	Extension to Dec 1982 Expansion of remit	NOK4,000,000
		Total sum granted	NOK44,000,000
Sources: NORAD Archives 1975 Project Memorandum 1977 Project addendum 1977 Project addendum 1978 Specific agreement relating to general agreement of 1977 1998 Several health programmes in Botswana 1972 - 1996: Closing Document 1977 Botswana: The development of Basic Health Services in the Rural Areas: An evaluation report. Skogland et al. 1976 Report to NORAD on LG20: Development of Basic Health Services 1975/6. MOLG & L 1981 Report to NORAD on LG20: Physical and Financial Progress 10/80 - 3/81. MOLG & L			

Table 24 - Development of Dental Health Services		BOT008	1978 - 1985
Objective	The development of a National Dental Health Programme to prevent an increase in dental diseases, maintaining incidence at levels of 1979.		
13/06/1980	Initial Agreement	1978 - 1985	NOK 3.1 million
Sources: Norad Archive Documents BOT008			
1976	Project memorandum		
1980	Specific agreement relating to the general Agreement of 1977		
1980	Progress report		
1998	Several health programmes in Botswana 1972 - 1996: Closing Document		

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1985	Report & Proposals for NORAD supported development programmes within the Health Sector	Ministry of Health, Botswana
1987	Review & Proposals to be discussed at the annual Botswana - Norway meeting	Ministry of Health, Botswana

Table 25 - Improvement of Health Care at Health Centres and Hospitals; Development of the Rural Health Services		BOT009	1978 - 1987
Objective	Support for upgrading hospital and building health centres and clinics.		
24/10/1978	Initial Agreement	1979 - ?	NOK 26 million
20/08/1980		Additional funds	NOK 13 million
		Total sum granted	NOK 39 million
Source: Norad Archive Documents			
Apr-98	Several health programmes in Botswana 1972 - 1996: Closing Document		

Table 26 - Evaluation of the Health Status in Botswana		BOT041	1978 - 1987
Objective	To undertake a population based health status study		
?date	Initial Agreement		NOK 2,545,000
Source: Norad Archive Documents			
Apr-98	Several health programmes in Botswana 1972 - 1996: Closing Document		

Table 27 - Assistance within the field of health services		BOT014	1984 - 1987
Objective	To undertake a population based health status study		
12/06/1984	Initial Agreement		NOK 43,000,000
Source: Norad Archive Documents			
Apr-98	Several health programmes in Botswana 1972 - 1996: Closing Document		

Table 28 - Botswana Health Programme		BOT014	1984 - 1987
Objective	To provide assistance within the field of Health Services in Botswana.		
18/03/1985	Initial Agreement		NOK 80,000,000
4/11/1988	Addendum		NOK 60,000,000
4/11/1988	Addendum 1		NOK10,533,000
30/10/1992	Addendum 2		NOK15,900,000
14/06/1993	Addendum 3		NOK13,000,000
2/08/1994	Addendum 4		NOK5,000,000
7/08/1995	Addendum 5		NOK5,500,000
	Total		NOK 189.933 Million
Source: Norad Archive Documents			
Apr-98: Several health programmes in Botswana 1972 - 1996: Closing Document			
1985 : Report & Proposals for NORAD supported development programmes within the Health Sector. Ministry of Health, Botswana.			
1987 : Review & Proposals to be discussed at the annual Botswana - Norway meeting. Ministry of Health, Botswana			

The outputs of all these projects cannot be easily separated as uncompleted activities started under the funding from one project would be completed under the next with no clear cut off point in between. The following table provide a list of achievements, grouped under various programme categories, with an estimate of total expenditure on each from all the above projects.

Table 29 Reported outputs and expenditure for the Phase 1 of Norwegian collaboration with Botswana

Basic Health facilities	Total estimate: NOK 44 million
Districts:	
➤ Central	➤ >160 health posts
➤ Northeast	➤ > 50 clinics
➤ Southern	➤ > 30 Maternity Ward
➤ Kgatleng	➤ > 66 nurse houses
➤ Kgalagadi	➤ Furniture, equipment and vehicles
➤ South-East	➤ Radios
➤ Kweneng	
Regional/District Health teams	Total estimate: NOK 10 million
	➤ Buildings
	➤ Housing
	➤ Vehicles
Health Centres	Total estimate: NOK 46 million
➤ Gomare, Tutume, Good Hope	➤ 3 clinics upgraded to HC+ staff housing
➤ Tsabong, Rakops, Kasane, Gantsi	➤ 4 new HC + staff housing
➤ Maun HC	➤ Staff housing
	➤ Equipment
	➤ Vehicles
Hospitals	Total estimate: NOK 57 million
➤ Selebi Phikwe, Maun, Sekgoma, Mahalapye, Scottish Livingstone, Athlone	➤ Improvements to 6 hospitals
	➤ 2 Regional medical workshops
➤ Princess Marina Hospital	➤ Medical equipment
	➤ workshop for maintenance of vehicles
Dental Health Services	Total estimate: NOK 14 million
➤ Gaborone	➤ Construction and equipping of Dental Therapist Training Unit
➤ Maun, Lobatse, Mahalapye, Selebi Phikwe, Tutume, Molepolole, Tsabong	➤ Dental clinics
	➤ Equipments for DC in Serowe
	➤ Vehicle for the Dental Training Unit
	➤ Masterplan National Dental Health 1983-2000
	➤ Family Preventive Programme
	➤ dental school scholarships, dentist post-graduate courses, dental therapist , dental technicians
Pharmaceutical Sector	Total estimate: NOK 25 million
	➤ improvement of facilities
	➤ increase of the storage capacity
	➤ additional offices
	➤ computerisation

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➤ CMS	➤ new building				
	➤ Drug regulation				
	➤ Training				
Technical Assistance	Total estimate: NOK 130 million				
➤ MOH	➤ Head PHC supervision unit				
	➤ Planning officer				
	➤ Health manpower planning officer				
	➤ Assistant director TSS				
	➤ Hospital engineer				
	➤ Chief laboratory technician				
➤ CMS	➤ Chief pharmacist				
➤ CMS	➤ Principal pharmacist				
➤ NHI	➤ Senior pharmacist				
➤ NHI	➤ Pharmacy tutors				
➤ Ministry of Works	➤ Dental tutors				
➤ Local Government / MOH	➤ Architects				
	➤ RMO/DMO				
Technical Assistance 1972-1984 (not included in agreements)	Total estimate: NOK 30 million				
Volunteers	Total estimate: NOK 36.5 million				
No. of Norwegian Health Sector Volunteers 1974 – 1986.					
Year	No.	Year	No.	Year	No.
1974	9	1978	26	1982	10
1975	25	1979	25	1983	10
1976	34	1980	20	1984	17
1977	23	1981	15	1985	22
				1986	20
Others	Total estimate: NOK 15 million				
	➤ Nurses training in mental health				
	➤ Vehicle for mental health outreach activities				
	➤ Training, consultancies, health research				
	➤ 2 Regional medical workshops				
	➤ Primary hospitals upgrading				
	➤ NORAD/WHO project on performance				

Norway contributed to the funding of two separate additional health projects. The first, a co-financing arrangement with the World Bank, the Botswana Family Health Project, and the second, the Remote Areas Development Project (RADP), was a comprehensive rural development programme that had a health component. While these two activities were distinct from the other Norwegian inputs going on over the same period, they had a similar focus and outputs, the development of rural health services.

Table 29 - Family Health Project (Co-financed with World Bank)		1984 - 1992	
Objectives	(a) to improve the effectiveness and efficiency of Botswana's health care delivery system, (b) to strengthen nationwide availability of family planning services.		
1984	Initial Agreement 1984 -89	World Bank Loan	US\$ 11 million
1989	Extension to 1992	Norwegian Grant	US\$ 7.2 million
		Norwegian Grant	NOK47.5 million
<p>The project aimed at assisting the Government to attain these objectives by reorganising and strengthening the central organisation of the Ministry of Health (MOH), progressively building up each level of the health care delivery system, strengthening family planning activities in the Maternal and Child Health program, introducing family planning activities in women's programmes, reducing the unit cost of health care , and improving the efficiency of the pharmaceutical supply system.</p> <p>(a) strengthening the country's Rural Health Teams and (b) developing 13 rural and urban primary health care centres so as to provide more outpatient care and free in-patient resources, (c) upgrading the country's main hospital facility and (d) increasing the uptake incidence of family planning.</p> <p>Norway's contribution was earmarked to</p> <ul style="list-style-type: none"> • Rural Health Services (US\$2.9 million), • Urban Health and Family Planning (US\$1.3 million), • Community Health Sciences Unit (US\$0.7 million), • Manpower Development (US\$1.4 million), and • POP/MCH/FP (US\$0.9 million) <p>Sources: World Bank (1984) World Bank (1993)</p>			

Table 30 - Support to Remote Area Development Programme		BOT022	1988 – 1994
Objective	To assist in the improvement of the living conditions of Remote Area Dwellers of Botswana		
6/09/1988	Specific Agreement		NOK 3,600,000
3/12/1991	1st Addendum		NOK 1,710,000
15/07/1993	2 nd Addendum		NOK 180,000
	Estimated health expenditure		NOK5.49 million
<p>Notes:</p> <p>Contribution towards Botswana's RADP – a multi-sector rural development programme to offer services to scattered populations in rural areas – health, education, water supply, work opportunities. Agreed annual workplan and budgets.</p> <p>Initial agreement included 10%, NOK3.6 million allocation to health. NOK3 million foreseen for TA and training (not health specific). 1991 Addendum 1 added nothing in respect of health sector. It does not specify what % of additional funds will go to health. 1993 Addendum 2 provided additional funds TA and studies. Annual agreements identify annual activities including health facilities to be built/upgraded – including staff housing and vehicle where agreed. Management of specific projects the responsibility of District Health Teams. Village Health Committees were supposed to be established however only one out of eight visited in a 1993 monitoring visit was functioning. Source: Chr. Michelsen Institute (1996)</p>			

4.5.2 Phase 2: 1996 - 2012

A distinctly different form of collaboration commenced in 1996, although it was funded under the ongoing project number (BOT015). After two no-cost extensions, this ended in 2005, although one component, medical doctor training in Norway was continued under a new project number (BOT2202). A final programme of collaboration, to assist with the provision of health human resources in order to help Botswana roll out its new ART programme, was implemented between 2006 and 2009 (BOT2201). These are discussed in the tables below.

Table 31 - Development and Further Improvement of Health Services		BOT 015	1996 -2005
Objective	To improve the quality of the health care services through <ol style="list-style-type: none"> 1. Improved quality of specific elements in the health care system related to planning, organisation, management, Monitoring & evaluation. 2. Establish institutional collaboration between Botswana and Norwegian organisations in areas related to the above. 		
21/02/1996	Specific Agreement	1996 – 2001 – Norway - Botswana	NOK 60 million
10/02/2000	Addendum	Extended to March 2003	
	Addendum	Extended to March 2005 Medical Training removed	
	Total Norwegian Budget		NOK 60 million
Project/Area	Norwegian Partner	Botswana Partner	Objectives
Medical Training	University of Bergen University of Trosøe	MoEducation, Dept. of Student Placement & Welfare	To improve the manpower situation in Botswana through the Education of 32 Batswana Medical graduates in Norway
HIS	Statistics Norway	Botswana MOH, Health Statistics Unit	Develop an efficient Botswana HIS
Quality Management	Norwegian Board of Health Tromsø Regional Hospital Diakonhjemmet College	MOH Performance Improvement Unit & HRU. Princess Marina & Nyangabgwe Hospitals.	Improve quality of care in Botswana health facilities. <ul style="list-style-type: none"> • Quality Management / Audit • Twinning of Hospitals • Patient satisfaction
AIDS	Norwegian Board of Health	MOH, AIDS/STD Unit Botswana National Youth Council	Strengthening capacity of AIDS/STD Unit on AIDS prevention amongst men & youth, coordination of multi-sector response.
Community AIDS Action.	Univ. Of Oslo	Univ. of Botswana, Centre for Continuing Education	Community Education amongst at-risk groups.
Decentralisation research	Diakonhjemmet International (DiS)	MOH, Health Research Unit	Research – client satisfaction, health financing, reproductive health.
Health Systems Research	Univ. Of Oslo	MOH, Health Research Unit	Build research capacity at district level.
PHC Implementation	Rogaland County Medical Office	Ministry of Local Government, Lands & Housing.	District Health team building and referral chain strengthening.
Coordination	DiS	MOH, Planning Unit	Programme Coordination

Sources: Norad Archives
 2000 Addendum to 1996 agreement
 2002 Addendum No. 1 to 1997 agreement
 2000 Amendment to agreement of Feb 1996 for assistance to the Education of Botswana medical students in Norway
 2003 Amendment to extend the time frame to 2005
 1999 Olsen et al Botswana - Norway Health Sector Agreement: Annual Report 1999
 Otsweleng et al (2003); Otsweleng et al (2005).

Table 32 - Actual Expenditure BOT015 to 2013 by component

Components of BOT 015	NORAD Actual Expenditure up to 2003 (NOK)	%
Medical Education	5,173,497	12%
Health Information System	2,755,000	7%
Quality Management	8,633,720	21%
Aids Prevention	1,273,664	3%
Community based AIDS Education	1,339,334	3%
Decentralisation Research	6,251,787	15%
Implementation of PHC	3,784,516	9%
Health System Research	2,181,761	5%
Coordination	3,700,412	9%
Direct costs by NORAD	6,629,000	16%
Total	41,722,691	100%

Table 33 - Assistance to the Education of Botswana Students in Norway		Code 2202	1996 – 2012
Objective	To improve the manpower situation in Botswana through the Education of around 50 Botswana Medical graduates in Norway		
15/07/2003	Agreement (related to agreement 21/2/1996 Inst. Coop.)		NOK 10 million
15/07/2003	Agreement (Agreed Project Summary)		NOK 20million
9/09/2003	Addendum to agreement signed 21/02/1996 (Inst. Coop.)		0
	TOTAL		NOK 30 million
No. of students enrolled 1997 -2006			35
No. of students dropped out of programme			7
No. of students still studying			15
No. of successful graduates			13
No. of graduates recorded as currently employed by MOH in Botswana			3
Sources: Norad Archives Expenditure figures: Expenditure spreadsheet provided by EVAL, Norad. 2004 Agreement on Human Resources Assistance to the MOH 2007 Maphorisa et al. <i>Human Resource Assistance Programme BOT 2201: Mid-Term Review 2007</i> . Norad Collected reviews 21/2007 Student and Graduate numbers provided by MOE 8 April 2011.			

Table 34 - Human Resources Assistance to the Botswana MOH		Code 2201	2004 – 2007
Objective	To improve the delivery of health care services through increased capacity of National Antiretroviral Therapy and the Institutes of Health Sciences (and PHC services)		
8/12/2004	Agreement (not related to any other agreement)	NOK 45,000,000	
To finance a contract between Botswana and Haukeland University Hospital to provide Technical Assistance to support ART related workload & to complement staff of the Institutes of Sciences for 3 yrs. <ol style="list-style-type: none"> 1. To recruit fifteen health professionals to support additional ARV Therapy related to workload, and to complement staff of the Institutes of Sciences for a period of 3 years. 2. To build capacity for the training of health personnel with a view to meeting some of the human resource requirements for the health sector. 3. To improve the ARV Therapy programme uptake through enhanced capacity. 			
Position	Place of Duty	Contract period	
P. Health Specialists (3)	MOH Dep. for AIDS Prevention and Botswana National TB Programme	October 2008	
	Selebwe Phikwe and Bonobong	Sept 2005 Sept 2008	
Medical doctors (7)	Nyangagbwe Hospital Francistown	Nov 2005 Dec 2008	
	Nyangagbwe Hospital Francistown	Feb 2006 Dec 2009	
	Nyangagbwe Hospital Francistown	Oct 2005 Dec 2009	
	Princess Marina Hospital	May 2006 June 2008	
	Mahalapye District Hospital	Oct 2005 Nov 2007	
	Sekgoma Memorial Hospital	March 2006 Dec 2009	
	Princess Marina Hospital	Sept 2007 Aug 2009	
Midwifery lecturer (1)	IHS Serowe	Sept 2005 Feb 2008	
Pharmacy Tech. lecturer (2)	IHS Gaborone	Sept 2005 Sept 2008	
	IHS Gaborone	July 2007 Dec 2009	
Medical Laboratory Tech. lecturer (1)	IHS Gaborone	Sept 2005 Dec 2009	
Training			
Anaesthesia	1 Batswana doctor at university of Limpopo in SA 4 years		
Trauma Treatment	Courses on: In collaboration with HUH and Better and Systematic Trauma Care Foundation (BEST) for training on trauma for all Botswana gov hospitals <ul style="list-style-type: none"> - 27 different hospitals and 1000 health care workers trained by BEST - 81 local facilitators and 5 trainers of trainees have attended instructor courses 		
Damage control	A course in surgery for operating room teams arranged in November 2009		
Sources: Norad Archives Expenditure figures: Expenditure spread sheet provided by EVAL, Norad. 2004 Agreement on Human Resources Assistance to the MOH 2007 Maphorisa et al. <i>Human Resource Assistance Programme BOT 2201: Mid-Term Review 2007</i> . Norad Collected reviews 21/2007. 2009 Otsweleng et al. <i>BOT 2201: Human Resource Assistance to the Botswana MOH Programme: Final Report 2005 – 2009</i> . Ministry of Health Botswana & Haukeland University Hospital.			