MINISTRY of HEALTH
REPUBLIC OF BOTSWANA

GOVERNMENT OF BOTSWANA

MINISTRY OF LOCAL GOVERNMENT

Self-Directed Learning Workbook

District Level M & E Training and Reference Material for Primary Health Care Programmes

Workbook 1

An Orientation to District-Level Monitoring & Evaluation Duties

I-TECH International Training & Education Center for Health

UNIVERSITY of WASHINGTON

UCSF University of California San Francisco

BOT USA PROJECT

NACA NATIONAL AIDS COORDINATING AGENCY

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- Ministry of Local Government - Monitoring, Evaluation, and Research Unit
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Foreword

Monitoring and evaluation (M&E) is an important process for collecting and analyzing data on health programmes that can be used for evidence-based planning and decision making. The information garnered from M&E increases capacity to improve health service delivery and the health of the population.

This set of three self directed learning workbooks is designed to provide information and guidance to you in carrying out M&E of health programmes in your district. The workbooks can be used as training documents as well as reference material for district-level M&E officers. They can also be used by other programme officers in the district who are involved in M&E.

The first workbook, entitled ***An Orientation to District-Level Monitoring & Evaluation*** is focuses on tasks and information necessary for newly recruited M&E officers who are beginning work in the field. It provides an orientation including: an overview of HIV and AIDS, the national health programmes in Botswana, job description, core activities of district M&E officers, an introduction to M&E, and an introduction to e-reporting of district health data.

The second workbook, entitled ***Doing the "M" in M&E*** focuses on monitoring activities. This workbook provides information on basic M&E processes. It also provides a practical overview of data collection, data management, data quality, basic data analysis, as well as a guide on presentation skills.

The third workbook, entitled ***Doing the "E" in M&E*** focuses on evaluation activities. This workbook provides information on designing evaluation studies, collecting and analyzing evaluation data, and writing reports.

Together these workbooks create a comprehensive view of the role that M&E officers are expected to play in their districts and provide you with the necessary guidance and tools necessary for you to fulfil this role. By actively reading the workbooks and completing the associated exercises, M&E officers will be prepared to carry out M&E activities for HIV and AIDS and other health programmes in their districts.

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HIV and AIDS is a priority in all Districts in Botswana

Chapter 1:
Overview of HIV and AIDS in Botswana

Estimated time needed for completion: 2 hours

Chapter Overview

Your main function as a Monitoring and Evaluation (M&E) officer is to contribute to Botswana's fight against HIV and AIDS through supporting the M&E of HIV and AIDS programmes as well as other health programmes in your district. In this chapter you will learn and about the HIV and AIDS epidemic in the Southern African Development Community (SADC) and how it compares to the global epidemic. You will also learn the history and current status of the national response to HIV and AIDS in Botswana as well as how you can best support the Government of Botswana (GOB) in the fight against HIV and AIDS.

Learning Objectives

At the end of this chapter, you will be able to:

- explain basic facts about HIV and AIDS and prevention of the disease;
- give estimations of the global, regional, and national HIV prevalence; and
- list the strategies implemented by Botswana in its national response to HIV and AIDS.

Learning Activity 1

Basic Facts about HIV and AIDS and Prevention of the Disease

Directions: Answer the following questions to the best of your ability. This is a tool for you to assess your understanding of HIV and AIDS.

1. What is the relationship between HIV and AIDS?

2. How is HIV transmitted?

3. How is HIV not transmitted?

4. How can someone protect themselves from an HIV infection?

5. What is the relationship between HIV and other sexually transmitted infections (STIs)?

6. How many years does it take for someone with HIV to develop AIDS?

7. Is there a cure for AIDS?

8. How can someone find out whether or not they have HIV?

(Adapted from the Foundation for AIDS Research (amfAR no date))

Discussion 1

Basic Facts about HIV and AIDS and Prevention of the Disease

1. What is the relationship between HIV and AIDS?

HIV is an abbreviation for Human Immunodeficiency Virus. It is the virus that causes AIDS. AIDS stands for Acquired Immune Deficiency Syndrome. After a person becomes infected with HIV, they develop AIDS over time. AIDS is a disease that causes the body's immune system to break down and fail to fight off germs and parasites. These germs and parasites can then infect the body, resulting in what are known as opportunistic infections.

2. How is HIV transmitted?

HIV transmission occurs when there is an exchange of blood, semen, or vaginal secretions while having unprotected sex (vaginal or anal) with someone infected with HIV.

An HIV infected woman can pass the virus to her baby during pregnancy, labour, delivery, and through her breast milk.

HIV can be transmitted through blood when one needle or syringe is used with more than one person. Health care workers are at an increased risk of exposure to HIV through accidental pricks by a needle. In addition, blood and body fluid transfusions can result in transmission of HIV if not well screened for HIV.

3. How is HIV not transmitted?

HIV cannot be transmitted through casual contact such as shaking hands. It also cannot be transmitted by sharing eating utensils, bathroom facilities, or a swimming pool with someone who is infected with HIV or has developed AIDS.

4. How can someone protect themselves from an HIV infection?

There are multiple ways someone can protect themselves from becoming infected with HIV. This includes either abstaining from sexual intercourse or using condoms every time they have sex with a partner whose HIV status is unknown to them. Risk of getting HIV can be reduced by having fewer sexual partners. Additionally, receiving treatment immediately for STIs can reduce the risk of contracting HIV. Male circumcision can also reduce the risk of men contracting HIV.

5. What is the relationship between HIV and other sexually transmitted infections (STIs)?

Some STIs can increase the risk of becoming infected with HIV because STIs can cause the skin to break or sores to develop. HIV can enter the body easily through breaks in the skin and sores.

6. How long does it take for someone with HIV to develop AIDS?

Most people do not develop symptoms of AIDS for about 10-12 years after being infected with HIV and a few remain symptom-free for much longer. Even when someone shows no symptoms of AIDS, HIV infected people can spread the virus to their sexual partner(s) if they have unprotected sex.

7. Is there a cure for AIDS?

There is still no cure for AIDS. Antiretroviral drugs (ARV) are now available. When ARVs are taken properly people with HIV can live longer and healthier lives.

8. How can someone find out whether or not they have HIV?

The only way to know whether or not a person has HIV is to get tested.

(Adapted from the Foundation for AIDS Research (amfAR no date))

1.1 The Global HIV and AIDS Situation

(Information and data in section 1.1 was adapted from the *Report on the Global AIDS Epidemic* (UNAIDS 2010))

Globally, the number of people infected with HIV continues to rise. The number of people living with HIV increased four-fold from around 8 million in 1990 to 33.3 million in 2009 (Figure 1.1.a). It is, however, important to note that in many countries; the prevalence of HIV (% of people living with HIV) is declining among young people. Overall, 93% of people living with HIV (93%) are adults aged 15 years and older. On a global level, men and women are being equally affected by HIV, with only slightly more than half of all people living with HIV being female (Table 1.1.a).

Figure 1.1.a Global estimates of the number of people living with HIV from 1990 to 2009 (UNAIDS 2010)

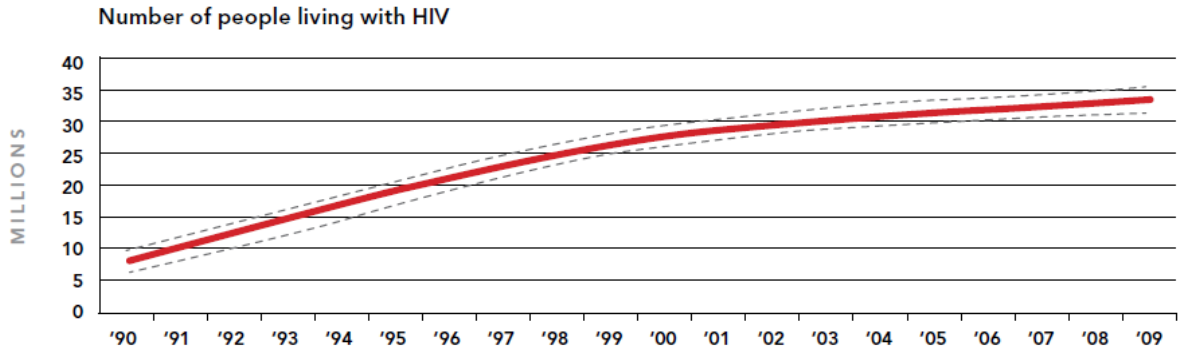


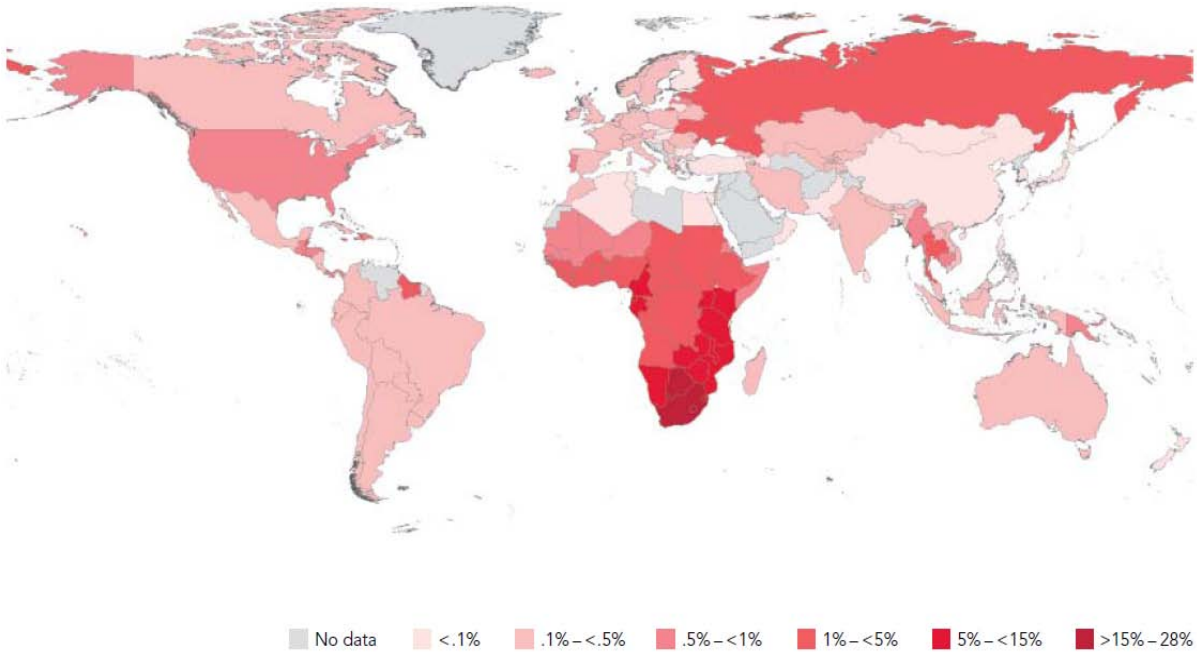
Table 1.1.a Global estimates of the number of people living with HIV at the end of 2009 (UNAIDS 2010)

	Estimate	Range
Adults and children living with HIV	33.3 million	31.4 – 35.3 million
Adults living with HIV	30.8 million	29.2 – 32.6 million
Adult women living with HIV	15.9 million	14.8 – 17.2 million
Children living with HIV	2.5 million	1.6 – 3.4 million

There are substantial geographic variations in the number of people across the globe who are infected with HIV. Of the 33.3 million people in the world living with HIV, 22.5 million (68%) are in sub-Saharan Africa. Asia, which is home to 60% of the world's population, has the second greatest number of people living with HIV, 4.1 million people. This means that for every 1 person living with HIV in Asia, there were approximately 6 people living with HIV in sub-Saharan Africa.

Globally, the prevalence of HIV among adults is 0.8%. Figure 1.1.b, depicts global variations in HIV prevalence rates by geographic location. In sub-Saharan Africa 5.0% of adults are living with HIV; however there is substantial variation with rates ranging from 0.1% (Comoros) to 25.9% (Swaziland) by country. Adult prevalence rates are estimated to be 1.0% in the Caribbean, followed by 0.8% in Eastern Europe and central Asia.

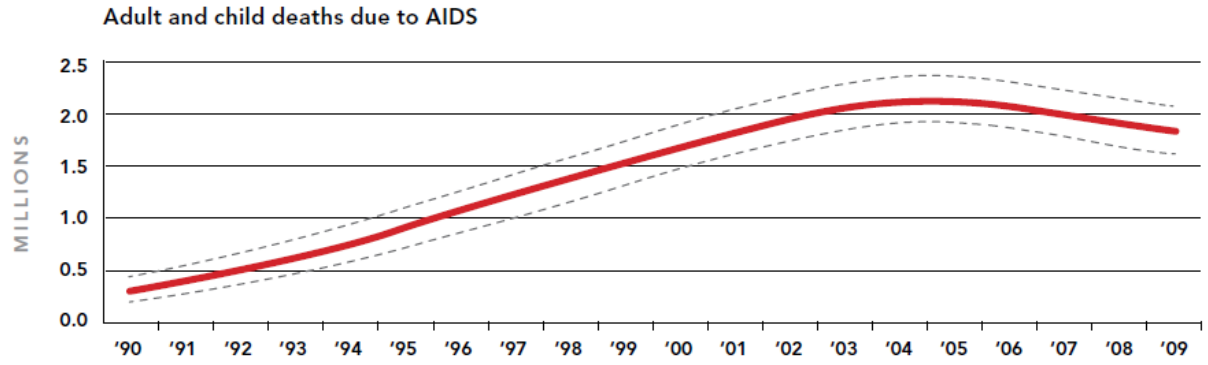
Figure 1.1.b Global prevalence of HIV at the end of 2009 (UNAIDS 2010)



As shown in Figure 1.1.c, the number of annual AIDS-related deaths has been steadily decreasing. Peaking in 2004 at 2.1 million, the annual number of AIDS-related deaths declined to an estimated 1.8 million in 2009. While this is a decline, it is still a substantial number of annual deaths. To put this into perspective, consider that 1.8 million is also the approximate number of people residing in Botswana. Sub-Saharan Africa also accounts for the majority of AIDS-related deaths. In 2009, 1.4 million AIDS-related deaths occurred in sub-Saharan Africa, which accounted for 70% of AIDS-related deaths worldwide.

The decline in AIDS-related deaths reflects the beneficial effect of increased availability of and access to antiretroviral therapy (ART) and quality care and support to people living with HIV. Antiretroviral therapy (ART) using a combination of antiretroviral (ARV) drugs, known as highly active antiretroviral therapy (HAART), has been shown to greatly impact the progression of HIV and AIDS. When taken as directed, HAART can reduce a patient's viral load (the amount of HIV in the bloodstream) to very low levels and increase the CD4 count (a specific type of white blood cell that is a vital part of the immune system) to near normal levels. While not a cure for HIV, HAART reduces the damaging effects of HIV on a patient and improves their quality of life.

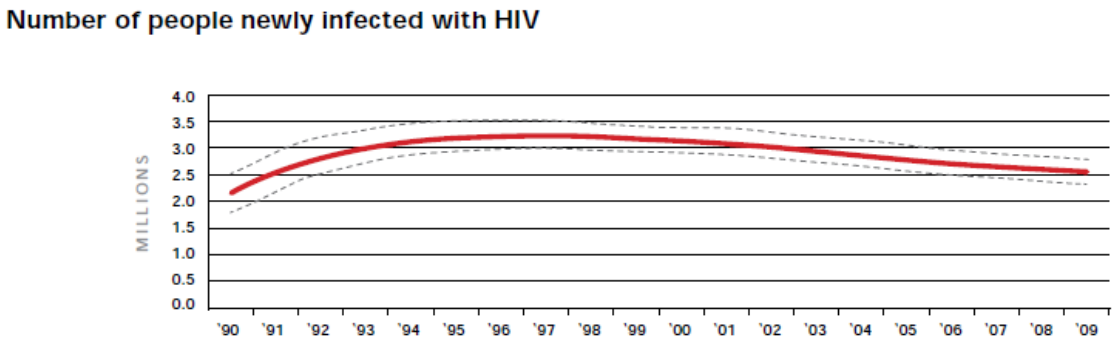
Figure 1.1.c Global estimates of the number of AIDS-related deaths from 1990 to 2009 (UNAIDS 2010)



AIDS-related deaths are also declining among children. In 2009, approximately 260,000 children younger than 15 years of age died from AIDS-related illnesses, which is 19% fewer than the 320,000 estimated to have died in 2004. The trend is a result of the steady expansion of services to prevent the transmission of HIV to infants as well as a slow increase in the access to treatment for children.

Global prevention of new HIV infections remains an elusive goal. In 2009, there were an estimated 2.6 million people who became newly infected with HIV. As depicted in Figure 1.1.d, the annual number of new infections has slowly decreased since peaking at approximately 3.2 million in 1997. The number of new infections is not only decreasing among adults, but also among children. An estimated 370,000 children under the age of 15 years were newly infected with HIV in 2009, which is a decline of 24% from five years earlier.

Figure 1.1.d Global estimates of the number of people newly infected with HIV from 1990 to 2009 (UNAIDS 2010)



Global strategies aimed at further reducing the annual number of new infections include promotion of safer sex, prevention of mother-to-child transmission, provision of male circumcision, encouragement of safer practices for intravenous drug users, improvement in blood safety, and support for infection control in health care facilities.

Significance for M&E

With new HIV infections continuing to occur alongside a reduction in AIDS-related deaths, the number of people living with HIV and AIDS (PLWHA) is expected to increase. The effort and resources needed to ensure the health of individuals living with HIV and AIDS will also increase.

Monitoring - documents what is being done to fight HIV and AIDS. Monitoring answers questions such as those listed below.

- What actions have we taken?
- How much money have we spent?
- How many human and other types of resources have we used?
- How many people receive prevention services?
- How many people are treated?
- How many people did we fail to serve?

Evaluation - tells us how we are doing in our fight against HIV and AIDS. Evaluation answers questions such as those listed below.

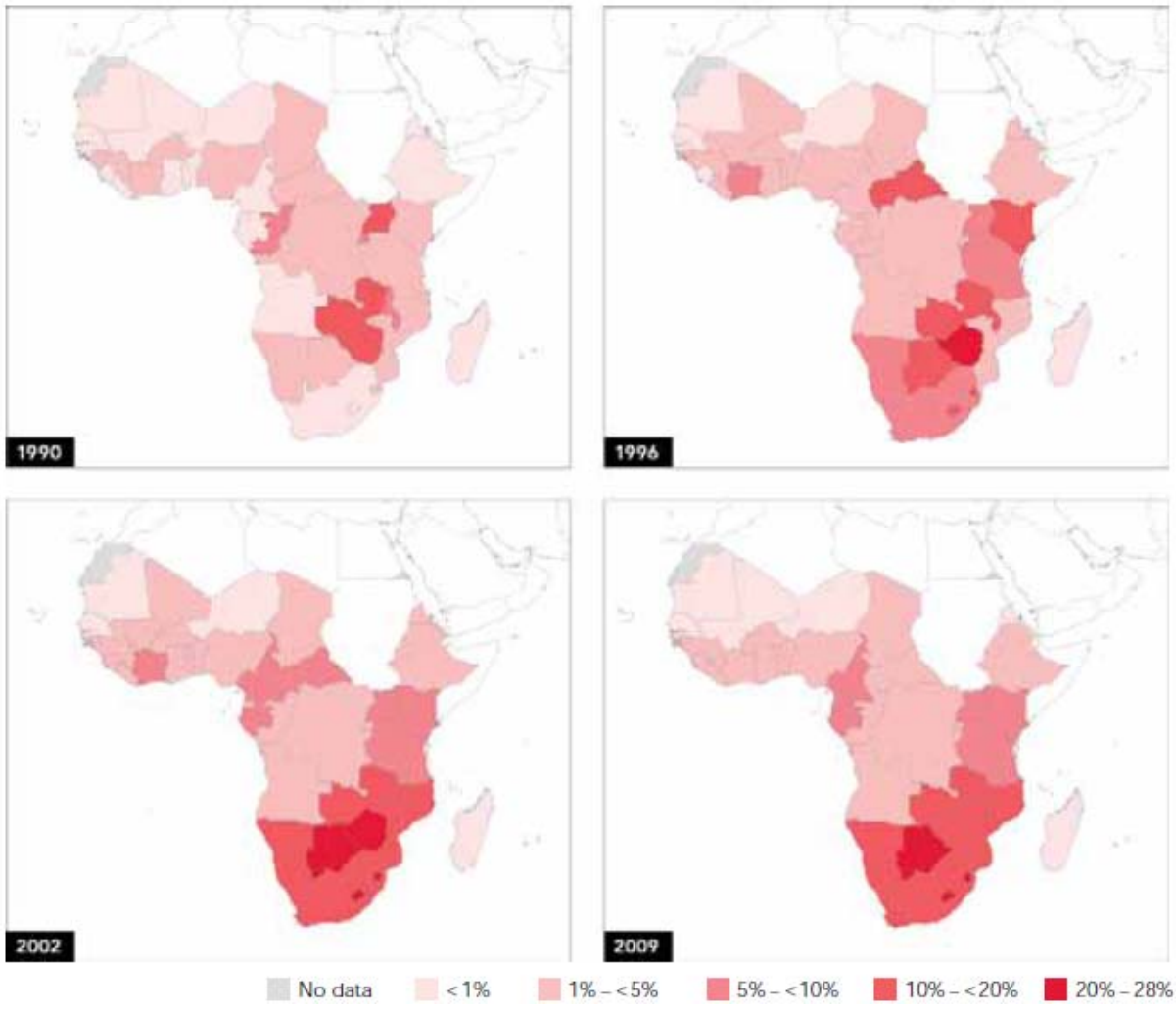
- Are we spending our limited resources wisely?
- Are we able to help reduce the number of new infections?
- Are we improving the life expectancy of individuals with HIV and AIDS?
- Are individuals infected with HIV and AIDS living full and productive lives?
- Are we serving our people according to their needs?

1.2 The Regional HIV and AIDS Situation

(Information and data in section 1.2 was adapted from the *Report on the Global AIDS Epidemic* (UNAIDS 2010))

Sub-Saharan Africa bears the greatest burden of people living with HIV. By the end of 2009, 22.5 million people infected with HIV were living in sub-Saharan Africa, which is 68% of the global total. As seen in Figure 1.2, the HIV epidemic in sub-Saharan Africa varies considerably by country. While HIV prevalence rates have increased since 1990, prevalence rates appear to be stabilizing or slowly declining in most countries. One unique feature of the HIV epidemic in sub-Saharan Africa is that there are more women than men living with HIV.

Figure 1.2. HIV prevalence in sub-Saharan Africa from 1990 to 2009 (UNAIDS 2010)



Southern Africa is the most seriously affected sub-region in the African continent. As listed in Table 1.2, the percentage of the adult population living with HIV ranges between 11-15% for Mozambique, Namibia, Zambia, and Zimbabwe. Adult prevalence rates are estimated at 17.8% in South Africa. In Botswana, Lesotho, and Swaziland more than 20% (2 in 10) of adult population is infected with HIV. Even though prevalence rates in Mozambique, South Africa, and Zimbabwe are lower than in several other southern African countries, due to the relatively high population in these countries, this represents a substantial number of people living with HIV. These three counties also have the highest annual number of AIDS-related deaths.

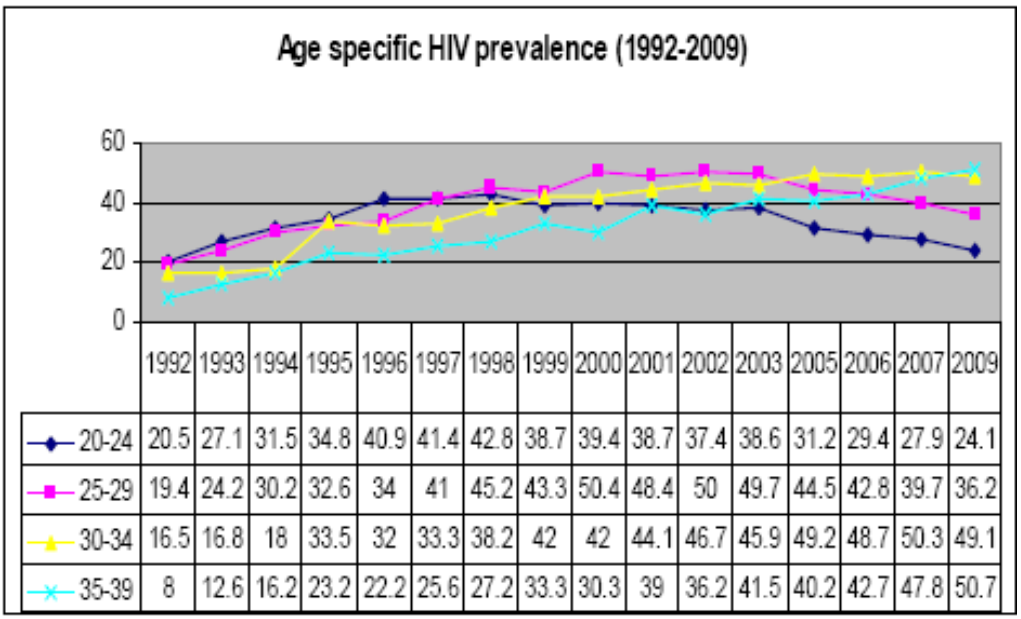
Table 1.2 HIV and AIDS in Southern Africa at the end of 2009 (UNAIDS 2010)

Country	Adult HIV prevalence rate (%)	Number of people with HIV	Number of adults with HIV	Number of children with HIV	Number of AIDS-related deaths	Number of AIDS-related orphans
Botswana	24.8	320,000	300,000	20,000	5,800	93,000
Lesotho	23.6	290,000	260,000	30,000	14,000	130,000
Mozambique	11.5	1,400,000	1,200,000	200,000	74,000	670,000
Namibia	13.1	180,000	160,000	20,000	6,700	70,000
South Africa	17.8	5,600,000	5,300,000	300,000	310,000	1,900,000
Swaziland	25.9	180,000	170,000	10,000	7,000	69,000
Zambia	13.5	980,000	860,000	120,000	45,000	690,000
Zimbabwe	14.3	1,200,000	1,000,000	200,000	83,000	1,000,000

1.3 The HIV and AIDS Situation in Botswana

Botswana has the second highest HIV prevalence in the world behind Swaziland, with approximately 24.8% of the adult population living with HIV (UNAIDS 2010). As you can see from the graph below (Figure 1.3.a), trends related to HIV prevalence have varied across age groups (CSO & NACA 2009). In 2009, 50% (1 in every 2) of adults aged 30 - 34 were living with HIV compared to 24.1% (1 in 4) of those aged 20 - 24. Figure 1.3.a also illustrates an upward trend for all age groups until 2003 when the prevalence among those aged 20 - 24 and 25 - 29 begin to decline. The difference in prevalence between the older and younger age groups can be explained by the fact that those who were infected with HIV in 1992 when aged 20 - 24 (20.5%) and are still alive, move to be later included in the older age groups every 5 years (e.g., 30 - 34 year old age group in 2002 (46.7%)), the remainder of the number being accounted for by new infections. The striking difference in the proportions living with HIV in these two age groups across 10 years (20 - 24 in 1992 and 30 - 34 in 2002) shows the importance of preventing new infections.

Figure 1.3.a HIV prevalence by age group from 1992 to 2009 in Botswana (CSO & NACA 2009)



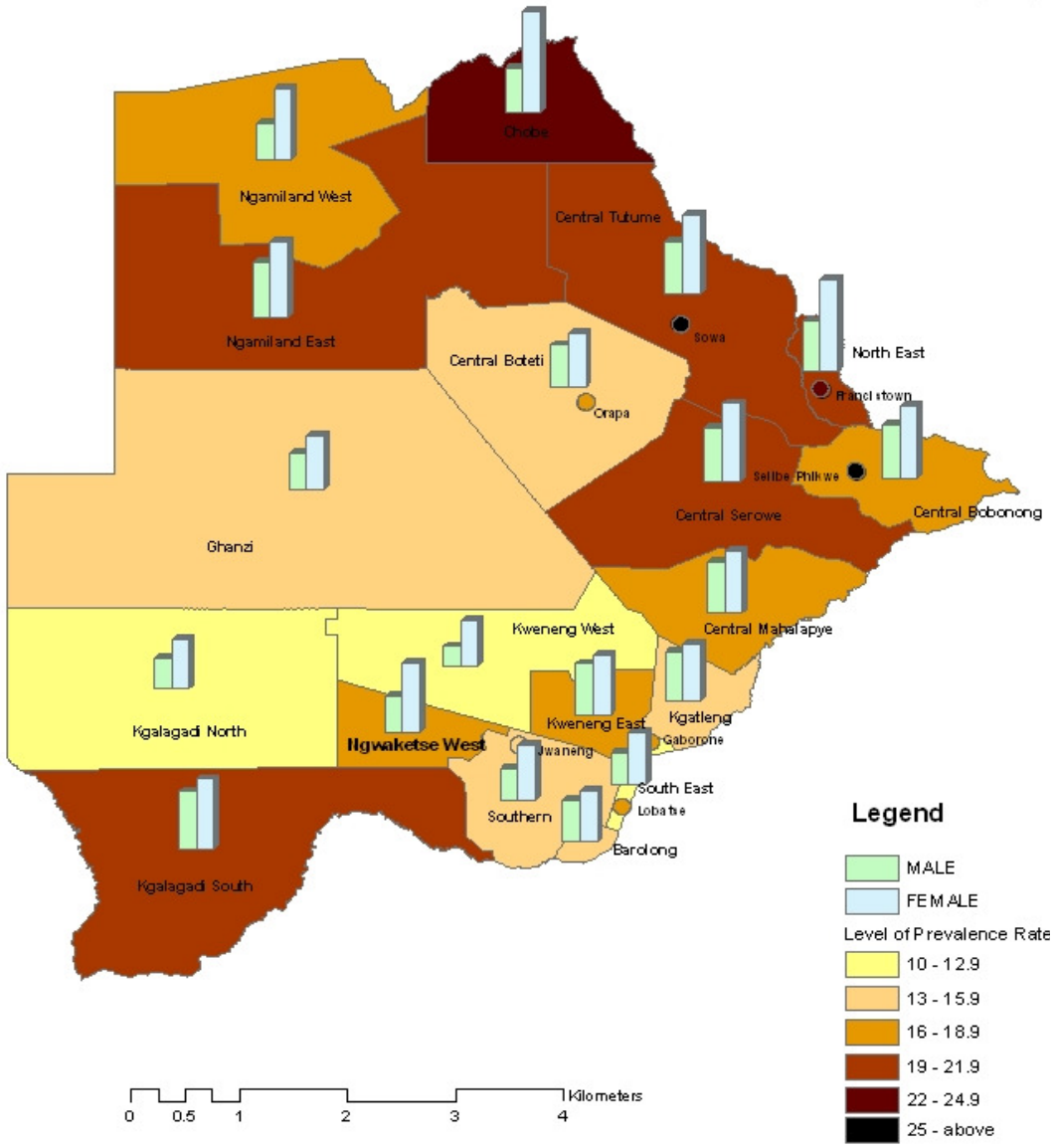
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2005	2006	2007	2009
20-24	20.5	27.1	31.5	34.8	40.9	41.4	42.8	38.7	39.4	38.7	37.4	38.6	31.2	29.4	27.9	24.1
25-29	19.4	24.2	30.2	32.6	34	41	45.2	43.3	50.4	48.4	50	49.7	44.5	42.8	39.7	36.2
30-34	16.5	16.8	18	33.5	32	33.3	38.2	42	42	44.1	46.7	45.9	49.2	48.7	50.3	49.1
35-39	8	12.6	16.2	23.2	22.2	25.6	27.2	33.3	30.3	39	36.2	41.5	40.2	42.7	47.8	50.7

Significance for M&E

As an M&E officer you will be helping to gather data on HIV and AIDS as well as the implementation of HIV-related health programmes. This information will be used to plan efforts to prevent future HIV infections and to meet the health care needs of people living with HIV and AIDS.

In addition to differences in HIV prevalence by age and over time, HIV prevalence differs by district in Botswana. Figure 1.3.b illustrates district-level HIV prevalence in 2008 (CSO & NACA 2009). The northern and north-eastern parts of the country have higher HIV prevalence rates, between 16% and 25%, than the southern and western parts where the prevalence is between 10% and 15%. Another important piece of information conveyed in Figure 1.3.b is that the prevalence for women is higher than the prevalence for men in each district.

Figure 1.3.b HIV prevalence by sex and district in Botswana, 2008 (CSO & NACA 2009)



Understanding variations in HIV prevalence can help ensure that resources are allocated appropriately in your district. In the previous sections we gave you examples of data stratified, or separated, into different categories such as age or gender. These data are useful because they can give us specific information about a group of people that we can use to concentrate our efforts or design new programmes. After looking at the data we may, for example, realize that youth are more at risk than older adults. We can then design more studies to find out why HIV and AIDS affect the youth more than older individuals. We can create a programme that is appropriate for teens, using images and language that appeal to teens and reflects their reality.

Reflection

Take a moment and consider the following:

Suppose your town of 20,000 people has a large elderly population (33%) while the neighboring town of the same size has a higher proportion of children under five (40%).

- Why would this be important to know?
- What would you do with this information?

Learning Activity 1.3

HIV Prevalence by District

Directions: Figure 1.3.b shows a comparison of HIV prevalence amongst different districts in Botswana. Refer to the figure and determine the HIV prevalence in your district.

1. What is the ratio of HIV infections in your district?

   1 in _____ people in _____ District are infected with HIV

2. You have organized a concert at the community hall in your district as a condom promotion strategy. There were 100 people present at the event. Using the ratio of HIV infections in your district that you determined above, calculate the percentage and number of those people attending the concert who are likely to be infected with HIV.

Discussion 1.3

HIV Prevalence by District

1. What is the ratio of HIV infections in your district?

If for example you work in Selibe Phikwe District the map shows its level of prevalence to be 25 and above, you may estimate the HIV prevalence as 25%. The ratio of HIV infections in this district will therefore, be 1 in 4.

Hence, 1 in __4____ people in __Selibe Phikwe_____ District are infected with HIV

2. You have organized a concert at the community hall in your district as a condom promotion strategy. There were 100 people present at the event. Using the ratio of HIV infections in your district that you determined above, calculate the percentage and number of those people attending the concert who are likely to be infected with HIV.

If 1 in 4 people in Selibe Phikwe are infected with HIV, then out of the 100 people attending the condom promotion concert, 25 of them (25%) are likely to be infected with HIV.

1.3.1 Gender Equity in Healthcare in Botswana

In Botswana, more women than men are affected by HIV. For example, HIV prevalence rates among young women aged 15-24 years is 11.8%, compared to 5.2% among young men in the same age group (UNAIDS 2010). Similar trends are seen in most other countries in sub-Saharan Africa. There are multiple factors that may account for these differences. Biologically, women are more vulnerable to contracting HIV infections because of small tears that can occur during vaginal intercourse can allow the virus to enter the body. Cultural factors may also increase a women's risk of acquiring HIV. For example, a woman's risk of getting HIV would be higher if she did not feel empowered to negotiate safer sex or if she was exposed to non-consensual sexual relations (rape). Economic factors may also be contributing to higher HIV prevalence rates among women in Botswana. Limited economic earning potential may lead women to enter into or maintain riskier sexual relationships with men in search of financial support.

Gender differences exist not only in relation to vulnerability to HIV and AIDS; but also in the ability to access care, support, or treatment; and ability to cope when infected or affected by HIV. Because men often control finances, women may not be able to access health care, support, or treatment. Additionally, cultural expectations may make a woman obliged to take care of the sick while it is not necessarily true that a man must take care of a sick woman or a family member.

In order to achieve gender equity in health, unnecessary and unjust health inequities need to be eliminated. Equity does not mean getting things equally but ensuring that women and men have an equal opportunity to enjoy good health. Achieving gender equity will be an ongoing challenge, but is seen as a priority for the global community as well as for the GOB.

The Botswana health system places a priority on women's and children's health programmes, in general. Ensuring that programmes focused on HIV and AIDS are poised to promote gender equity is a priority. The MOH website lists multiple examples of how programmes that were gender biased towards women and girls are being reoriented to take the health needs of men and boys into consideration (MOH n.d.).

- The PMTCT programme has a male involvement initiative to encourage male engagement in and support on sexual reproductive issues.

- The Sexually Transmitted Infections programme is leading the implementation of male circumcision as an add-on strategy in the prevention of HIV. Women have a dual role to support their male counterparts and sons in this initiative.

- The Maternal Child Health/Family Planning Programme has been refocused toward Sexual Reproductive Health (SRH) in order to address the broader gender issues, including other cultural aspects that have an impact on health. There is a male involvement initiative including mainstreaming of gender into SRH services. SRH advocates for labour companions within maternity settings, male partners who accompany their partners during antenatal care, labour and delivery, and child welfare services.

- The Workplace Wellness Programme has been using peer education and support as a strategy to reach out to the workforce. The programme advocates for the establishment of multidisciplinary committees that are also gender balanced.

- The HIV Testing & Counselling Programme has a component on couples counselling in recognition of the gender dynamics of HIV and AIDS.

- Behaviour Change Interventions and Communications (BCIC) have, in the development of BCIC messages, recognized the gender dimension of HIV and AIDS in all age groups.

- The Community Home-Based Care Programme is making efforts to encourage men to play an active role in the provision of care and support services.

Significance for M&E

Health equity is a very important concept in public health. Health equity means ensuring that resources are allocated appropriately to meet the needs of the people. This means that we must distribute them according to demonstrated need. We should not allocate resources based on capacity to pay or for personal convenience. We must allocate appropriately to best serve the people and ensure that all who need services receive them regardless of their capacity to pay.

Giving every country the same amount of money to fight HIV and AIDS is not an appropriate distribution of resources as each country is affected by HIV and AIDS differently. You must consider the HIV and AIDS prevalence in your district when determining how to allocate funds and other resources in order to adequately meet the needs for your community.

1.3.2 Impact of HIV and AIDS on Society in Botswana

HIV and AIDS have had a substantial impact in Botswana at the individual, family, community, and national levels. (NACA 2010). As a result of HIV and AIDS:

- Life expectancy at birth decreased from 65 years in 1990-1995 to less than 40 years in 2000-2005 (UNAIDS 2008),
- Many families have been impoverished due to death of a primary bread-winner,
- There has been a financial strain on the health care system'
- Employee absenteeism has risen due to ill-health and has decreased productivity,
- Expenditure on the recruitment and training of replacement staff has increased,
- There have been adverse affects on Botswana's economic growth and development, which in turn has reduced available resources to cope with the epidemic,
- The number of children with one or both parents deceased or ill has increased, making many children vulnerable to:
  - dropping out of school to take care of sick parents and /or siblings,
  - missing opportunities for a better education and better life,
  - being abused by family and members of the community, and
  - being exploited for labour.

As you work in the districts you will clearly see how HIV has affected the individual, family, community, and nation at large.

Significance for M&E

The downward trend of HIV infection in younger people may mean fewer people living with HIV in the distant future. It is important to ensure that people continue protecting themselves from HIV infections as they grow older. It is important to continue reaching different age groups and address the numerous risk factors for HIV infection.

Monitoring and evaluation can provide information on the lives of people in different age groups as well as what proportion of each age group has HIV and AIDS. This allows us to tailor HIV and AIDS prevention and treatment programmes for each age group.

Learning Activity 1.3.2

The Impact of HIV

Directions: HIV and AIDS can impact individuals and society as a whole. For each of the scenarios listed below, identify the potential effects to society and to individuals.

1. A 30 year-old husband and father of two is ill and cannot leave the house to go to work.

   Individual/Family:

   Community/Nation:

2. An HIV infected 29 year-old female teacher is ill and unable to work.

   Individual/Family:

   Community/Nation:

3. A single mother of 3 young children (aged 14, 8, and 2 years old) dies of complications brought upon by AIDS.

   Individual/Family:

   Community/Nation:

Discussion 1.3.2

The Impact of HIV

1. A 30 year-old husband and father of two is ill and cannot leave the house to go to work.

Individual/Family: *If he is the primary income earner, his family may struggle to have enough money to pay for housing, school fees, etc. His wife may need to work longer hours, take another job, or stay home from work to care for her ill husband.*

Community/Nation: *Death and illness as a result of HIV has decreased available labour and thus slowed economic growth and productivity.*

2. An HIV infected 29 year-old female teacher is ill and unable to work.

Individual/Family: *She may require another family member to stay home from work or school to care of her. Depending on whether she improves quickly or continues to be too ill to work, her family may also struggle financially as a result of the loss of income.*

Community/Nation: *Depending on the availability of other teachers to teach her class, her illness may result in a loss of days of instruction for her students. If she is ill for an extended period of time it may put a strain on the other teachers. Her absence will also disrupt the education of her students.*

3. A single mother of 3 children (aged 14, 8, and 2) dies of complications brought upon by AIDS.

Individual/Family*: In addition to the loss of the support and care a mother provides, her children, particularly the oldest, may be required to drop out of school in order to care for the two younger children. One or more of her children may also be infected and require extra care and supervision from family and others. If their father is not able to provide for his children or is absent or dead the children may become orphans and vulnerable.*

Community/Nation: *Her three children will require resources such as housing and food from family, local organisations, and government programmes. If her children do not attend school they are less likely to grow up to become part of a skilled workforce.*

1.4 The National Response to HIV and AIDS in Botswana

1.4.1 Coordinating Bodies

(Information and data in section 1.4.1 was adapted from the NACA Website (NACA 2010))

Botswana's first AIDS case was reported in 1985 (NACA 2010). The following year the National AIDS Control (NACP) was formed within the Ministry of Health. In 1987 the one year Short Term Plan was developed as an emergency response plan. A five year *First Medium Term Plan 1987- 1993 (MTP I)* was later developed as an expanded response to public health through Information Education and Communications campaign, testing and laboratory services. In 1993 the *National Policy of HIV/AIDS* was developed.

As the epidemic intensified it became clear that HIV and AIDS were not solely health problems but included developmental dimensions which cut across sectors. *The Second Medium Term Plan (MTPII)* was developed with the aim of including the stakeholders and providing a platform for a multi-sectoral response using a participatory approach. The *National Strategic Framework 2003-2009 (NSF)* was developed to guide the multi-sectoral response.

The National AIDS Council was formed in the Office of the President as the primary governmental entity coordinating the national response to HIV and AIDS. Representatives from 17 different sectors in society including civil, private, and public sectors are part of the NAC. The NAC has since established several divisions, including a Men's Sector; Ethics, Law and Human Rights Sector; and Youth Sector.

The National AIDS Coordinating Agency (NACA) is secretariat to and provides technical support to the NAC. It coordinates the national health sector response. The NACA works closely with development partners who provide financial and technical assistance. The NACA coordinates the response to the HIV and AIDS epidemic by private, non-governmental, and public sector entities.

The Ministry of Local Government (MLG) coordinates the response to HIV in districts through the District Multi-sectoral AIDS Committees (DMSAC) and the Village/Ward Multi-sectoral AIDS Committees (V/WMSAC) at district, village, and ward levels respectively (NACA n.d.).

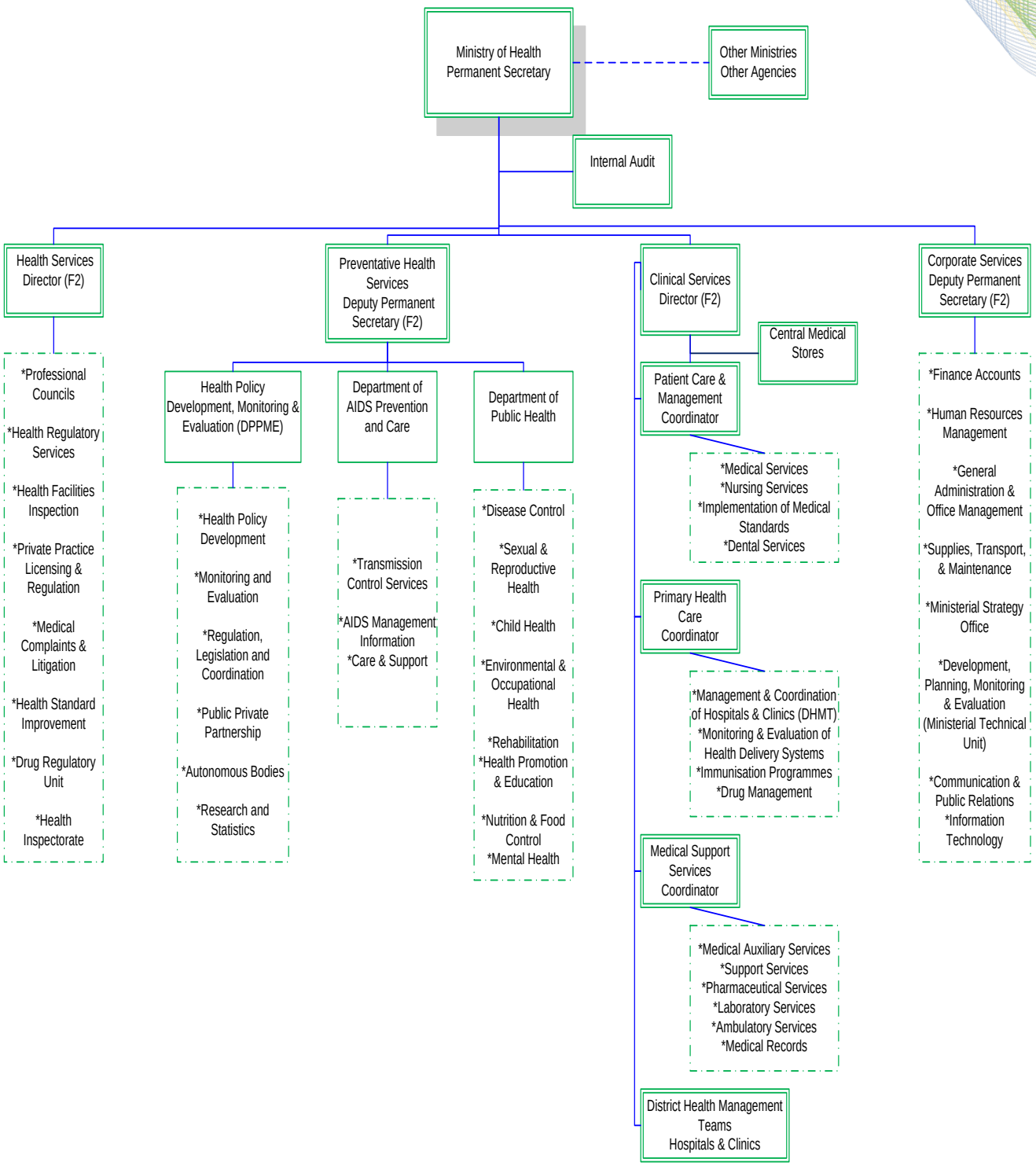
Several other governmental and non-governmental entities including the Partnership Forum, Madikwe Forum, Country Coordinating Mechanism (CCM), the Ministry AIDS Coordinator's Forum (MAC Forum), and Implementation Review Committee (IRC) were created to provide direction, guidance, and leadership to various aspects of the national response to the HIV and AIDS epidemic (NACA n.d.).

The duties of the Ministry of Health (MOH) include providing sector leadership; formulating policies, plans, and programmes; providing technical assistance; and

implementing programmes. The district health management teams (DHMT) are coordinated by the MOH and are involved in ensuring that quality care is provided in health facilities and the community. You will learn more about these other information gathering activities in Workbooks 2 and 3. Figure 1.4.1 shows you the structure of the MOH.

Laboratory services are a key component to many national programmes

Figure 1.4.1 Structure of MOH



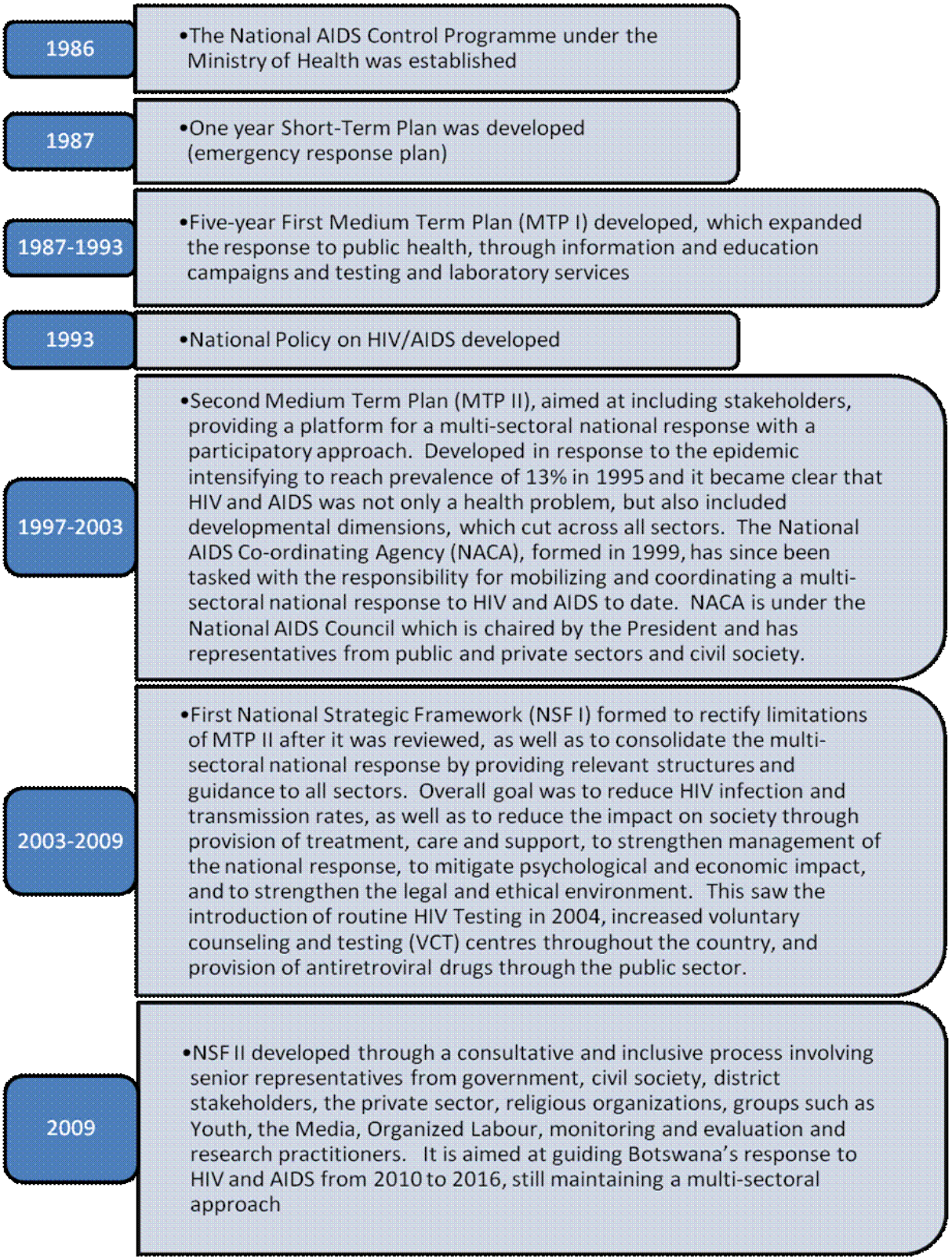
1.4.2 Government of Botswana (GOB) Activities

The GOB is highly committed to their fight against HIV and AIDS and it envisions that by the year 2016 there will be no new HIV infections. Coordination targets all levels of service delivery – from the village to the Office of the President. Activities have evolved from a one-year, short-term plan to two mid-term plans to where we are today. Activities have been guided by the *National HIV and AIDS Policy* and the *National Strategic Framework* that support an expanded multi-sectoral response to HIV and AIDS. Figure 1.4.2 shows the timeline of the national response to HIV and AIDS.

In 2002 ARV therapy was launched in four sites, making Botswana one of the first African countries to establish an ART programme. Services have expanded greatly. According to the MOH website (n.d.), ART is currently being offered in 32 sites and 140 clinics across the country. As of October 2009: 141,370 patients were enrolled on HAART (MOH n.d.).

There are many other HIV and AIDS programmes in addition to provision of ART. You will learn about these in chapter 2 of this workbook. You will be gathering, analyzing, and sharing information on all these programmes at the district level.

Figure 1.4.2 Timeline of Botswana National Response to HIV and AIDS (NACA 2010)



1.4.3 Funding for HIV and AIDS in Botswana

(Information and data in section 1.4.3 was adapted from the *Progress Report of the National Response to the 2001 Declaration of Commitment on HIV/AIDS* (NACA 2010))

The total amount of money spent on Botswana's HIV and AIDS response increased five-fold from US $69.8 million in 2003 to US $351.6 million in 2007 (Table 1.4.3). However, funding was decreased in 2008 to US$ 348.4 million as a result of the global financial crisis.

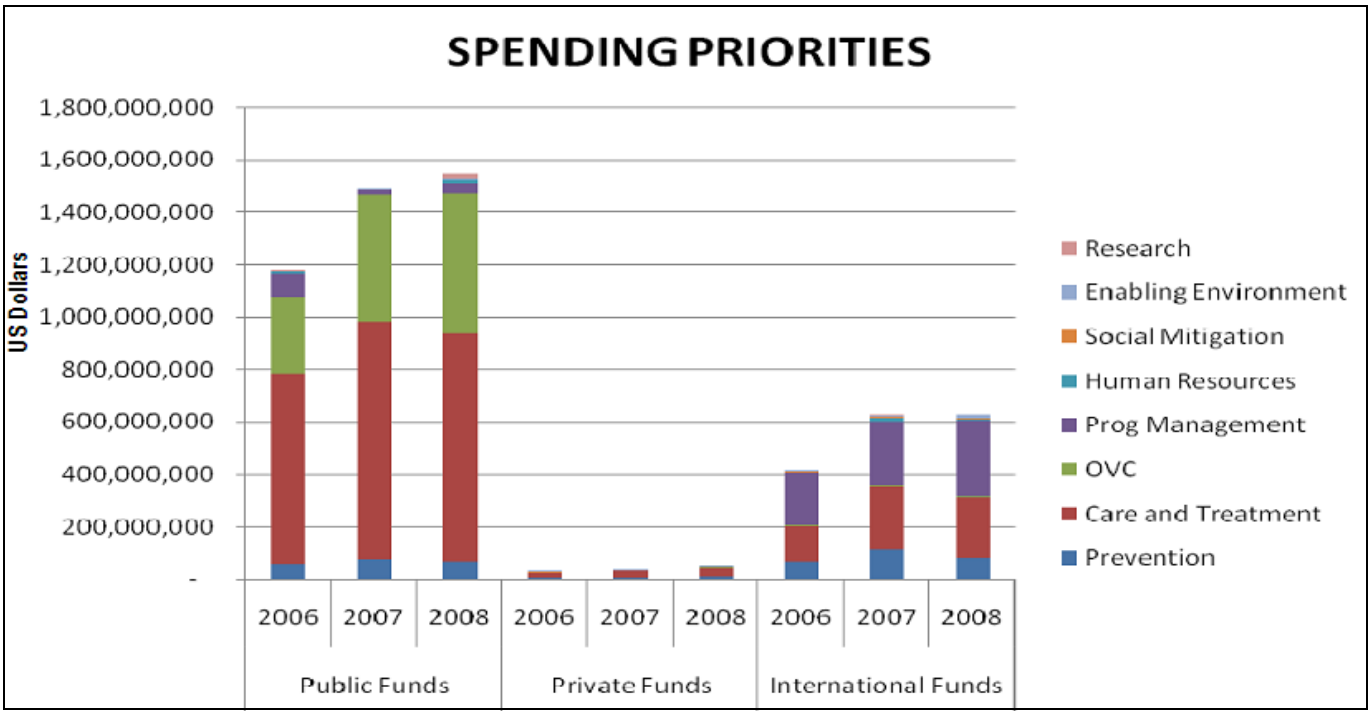
Table 1.4.3. Annual amount of money spent on the national response to HIV and AIDS in Botswana from 2003 to 2008 (NACA 2010)

Year of expenditure	USD spent
2003	US$ 69.8 million
2006	US$ 165 million
2007	US$ 351.6 million
2008	US$ 348.4 million

Sixty-six percent of the funds spent in 2008 were provided by the GOB, primarily from public revenue, unlike many other sub-Saharan African countries whose funding depends largely on international donors. Only 32% of the total spending in 2008 came from international partners and 2% came from private funders (NACA 2010). Botswana has had financial and technical assistance from various development partners, such as African Comprehensive HIV/AIDS Partnerships (ACHAP) and BOTUSA, a partnership between the US Center for Disease Control and the GOB.

Botswana has adopted the Joint United Nations Programme on HIV/AIDS (UNAIDS) National HIV and AIDS Spending Assessment (NASA). This is a comprehensive and systematic methodology that is used to determine the flow of resources intended to address HIV and AIDS. It describes the allocation of funds, from their origin down to the end point of service delivery, among the different institutions dedicated in the fight against the disease. This is tracked by financing sources whether it is public, private, or foreign and among the different providers and beneficiaries (target groups). The graph in Figure 1.4.3 below shows different sources of funding and priority areas.

Figure 1.4.3 Annual amount of money spent on the national response to HIV and AIDS in Botswana from 2006 to 2008 by various spending priorities and source of funds **(NACA 2010)**



Learning Activity 1.4.3

Spending Priorities and M&E Officers

Directions: Imagine you are in charge of directing spending for HIV and AIDS in your district. Where would you direct the majority of the funds? How would you prioritize the various programme areas? Explain your rationale for making this decision on the programme areas you've ranked as the top three. The major spending areas are:

- Research
- Enabling Environment
- Social Mitigation
- Human Resources
- Programme Management
- Orphans and Vulnerable Children
- Care and Treatment
- Prevention

Discussion 1.4.3

Spending Priorities and M&E Officers

There is no right or wrong answer.

- *You might decide to direct the majority of funds to prevention since preventing infection is the best way to stop the HIV and AIDS epidemic from growing.*
- *You might decide to fund research in order to facilitate finding a better treatment or a cure.*
- *You might choose human resources in order to increase the number of qualified health care providers to care for people infected with HIV and AIDS.*
- *You might choose programme management because good management of programmes and quality data collection will help inform programmatic decision making and thus improve programmes as a whole.*

These are just some ideas. Your response may be different. The point of this exercise is to emphasize that there are many worthwhile activities competing for HIV and AIDS funding.

Chapter Summary

As an M&E officer, your main function will be to contribute to Botswana's fight against HIV and AIDS through supporting HIV and AIDS programmes in the district where you work. The types of support expected from you will be covered in the chapters that follow. In this chapter you learned basic facts about HIV and AIDS as well as prevention of the disease. An overview of the global HIV and AIDS epidemic and HIV and AIDS in the SADC was also presented. You learned about the national HIV and AIDS epidemic in Botswana as well as how the HIV and AIDS differ by district level. Gender related issues were discussed. Additionally, we introduced information about the national response to HIV and AIDS, the structure of the MOH, and how you will be supporting the GOB in the fight against HIV and AIDS.

HIV and AIDS is a priority in all Districts in Botswana

Self Assessment Quiz

1. True or False

   The number of new cases of HIV among adults is greater than the number of AIDS- related deaths in this population.

2. True or False

   In Botswana more women than men are affected by HIV and AIDS.

3. List 2 consequences of the HIV epidemic on society in Botswana.

   1)

   2)

4. True or False

   The number of registered orphans in Botswana is decreasing partly due to more people being on ARV treatment, hence less AIDS deaths.

5. Describe the main difference in the funding of HIV and AIDS activities between Botswana and most other sub-Saharan African countries.

6. What are the GOB's top two spending priorities for national HIV funds?

   1)

   2)

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Self Assessment Quiz Answer Key

1. **True** or False

   The number of new cases of HIV among adults is greater than the number of AIDS- related deaths in this population.

   The result is that we have more and more people living with HIV and AIDS

2. **True** or False

   In Botswana, more women than men are affected by HIV and AIDS.

3. List 2 consequences of the HIV epidemic on society in Botswana

   Items listed below are consequences of the HIV epidemic in Botswana:

   1) *Decreased life expectancy*
   2) *Reduced capacity to earn an income*
   3) *Strain on health care system due to increased patient loads and infected workforce*
   4) *Reduced workforce*
   5) *Decreased economic growth and development*

4. **True** or False

   The number of registered orphans in Botswana is decreasing partly due to more people being on ARV treatment, hence less AIDS deaths.

5. Describe the main difference in the funding of HIV and AIDS activities between Botswana and most other sub-Saharan African countries.

   Most other sub-Saharan countries depend primarily on funding from international donors, while Botswana's funding primarily comes from public revenue. Only 32% of the total spending in 2008 came from international partners and 2% from private funds.

6. What are the GOB's top two spending priorities for national HIV funds?

   1) *Care and treatment*
   2) *Support for orphans and vulnerable children*

Self-Directed Learning Workbook 1:
Chapter Two
Overview of National Health Programmes

Laboratory services are a key component to many national programmes

Chapter 2:
Overview of National Health Programmes

Estimated time needed for completion: 3 hours

Chapter Overview

Monitoring and Evaluation (M&E) officers are an important part of the health care system. In order for you to effectively and efficiently complete your M&E duties, it is important to be knowledgeable about and have a good understanding of the national health care system, the various programmes within the system, and how each of the programmes work.

This chapter provides an overview of the following HIV programmes.

- *Masa* - Anti-Retroviral Therapy (ART)
- Prevention of Mother-to-Child Transmission (PMTCT)
- Orphans and Vulnerable Children (OVC)
- Tuberculosis (TB)
- Isoniazid Preventative Therapy (IPT)
- Community Home-Based Care (CHBC)
- Behaviour Change Interventions and Communication (BCIC)
- Sexually Transmitted Infections (STI)
- Safe Male Circumcision (SMC)
- HIV Testing and Counselling (HTC)

This chapter will outline the following for each of the programmes listed above:

- goals and objectives of the health programme,
- service delivery overview, and
- data flow and management from facility to national levels.

Learning Objectives

At the end of this chapter, participants will be able to:

- describe how the Botswana national health care system is organized and
- describe the goals, objectives, and service delivery implementation of at least one public health programme in Botswana.

2.1 The Botswana Health System

The Botswana health system is based on a Primary Health Care (PHC) model. This is an integrated system that includes preventative, curative, health-promotion, and supportive components that are available at all health facilities in the country. Through the PHC approach to health services delivery, Botswana has made remarkable strides in providing accessible and affordable services to all its citizens using a network of referrals; national referral, district, primary hospitals and clinics. This has been especially effective for organizations providing health services for rural populations in Botswana.

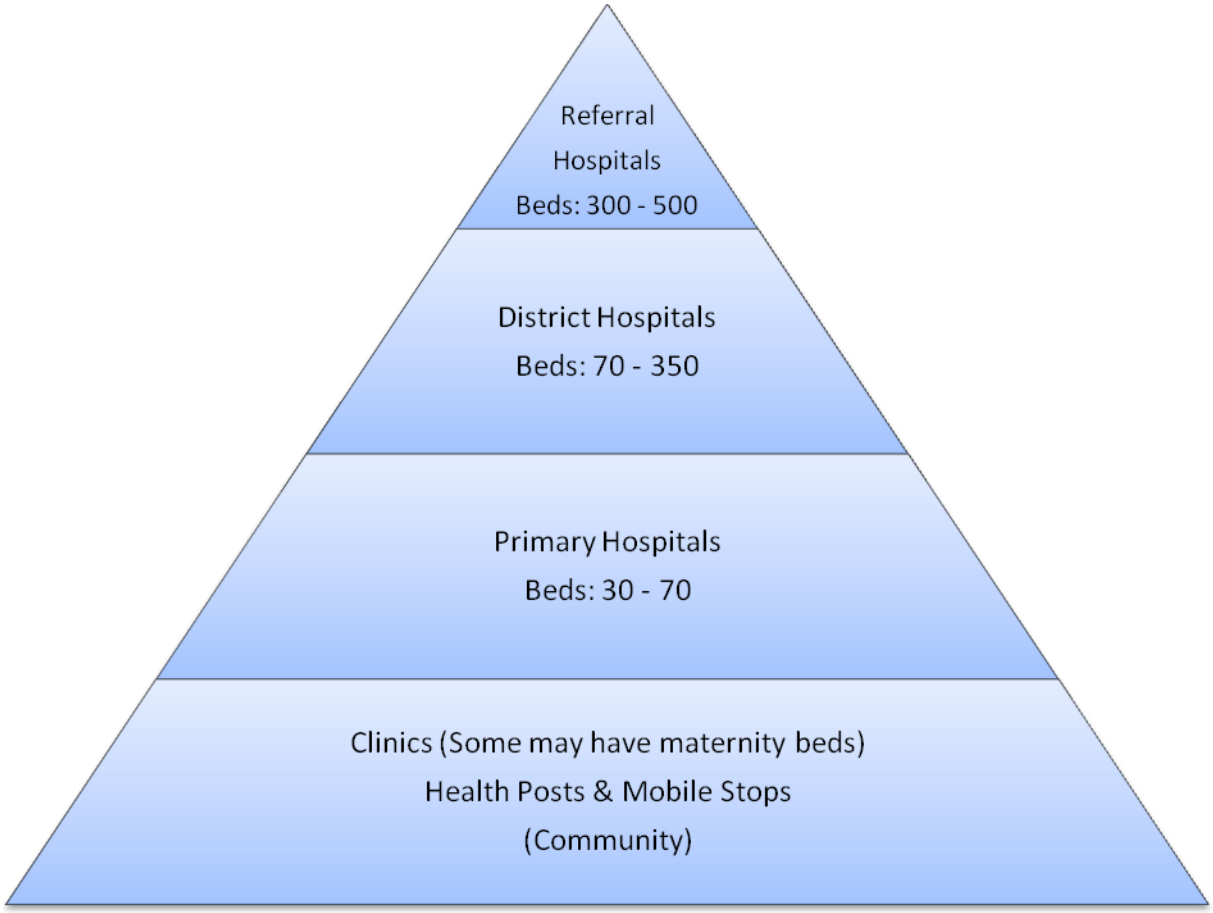
2.1.1 Health Facilities

Both health posts and clinics provide out-patient services such as general consultations, child care, immunizations, pre- and post-natal care, routine HIV counselling and testing, PMTCT, TB care, and so forth. In out-patient facilities, patients are seen at the facility and then either go home with a diagnosis and/or treatment or are sent to a higher-level facility if more specialized diagnosis or treatment is needed.

The health post is the smallest unit that provides health care in the system and serves an area with less than 500 people whereas clinics, primary and some district hospitals serve between 500 to 10,000 people. The number of people served by a facility (also known as coverage) is determined based on a variety of factors. One such factor in determining access to a facility by patients is the ease of getting to the facility (in terms of availability of transportation and distance from the patient's home).

Hospitals have in-patient facilities, where those seeking medical help may be kept overnight or longer to receive health care. Primary hospitals have a capacity of 30 - 70 beds; district hospitals (including hospitals located at mines) have a capacity of 70-350 beds; tertiary or referral hospitals can accommodate 300 -500 patients at a given time. There are three national referral hospitals: Nyangabwe in Francistown, Princess Marina in Gaborone, and Sbrana Psychiatric Hospitals in Lobatse. Referral hospitals and some of the newly upgraded district hospitals offer specialized services. (See Figure 2.1)

Figure 2.1 Organizations of Primary Health Care Services



The Health care services in Botswana are operated in a way that allows an individual to access service at any level of the system by way of referral depending on the need for care and seriousness of their health condition. The health services are also linked to the social welfare services.

Reflection

Take a moment and consider the following questions based on your experiences with the Botswana health system:

- How many types of health care facilities, for example, health posts, are there in your home village?
- How many types of health care facilities are there in the area where you work?
- How are they similar?
- How are they different?

2.2 Botswana National Health Programmes

The rest of this chapter will provide you with an overview of some of the National HIV & AIDS programmes that you will be working with as an M&E officer.

2.2.1 *Masa* / ART

Botswana was the first African country to provide Anti-Retroviral Therapy (ART) free of charge to its citizens. The national ART programme known as *Masa* was established in 2002. In Setswana, the word *Masa* means new dawn. This name was chosen as the programme signifies a new dawn and hope for longer, healthier lives for People Living with HIV and AIDS (PLWHA). The national ART programme is now available in 32 hospitals and 183 clinics with 80 providing ART services on site and 103 on an outreach basis, and new facilities are constantly being added (NACA 2010). These facilities are often referred to as Infectious Disease Care Clinics (IDCCs).

With the help of the services provided by *Masa*, more than 160,000 people in Botswana were on anti-retroviral (ARV) therapy by December 2010. This represents about 94.5% of all people in need of ART in Botswana according to current treatment guidelines. Data also show that at least 30% of HIV positive pregnant women were on ART in 2009, compared to 18.2% in 2007 (NACA 2010).

Goal of the Masa / ART Programme

The overall goal of the *Masa*/ ART programme is to reduce the impact of HIV & AIDS in Botswana and enhance prevention efforts through the effective introduction and use of ARTs.

Objectives of the Masa / ART Programme

The primary objectives of the programme are to:

- provide ART to all eligible citizens;
- mobilise communities to support treatment and care of infected individuals;
- build capacity, both human resource and infrastructure, necessary for the successful implementation of the programme;
- advise on and implement systems and policies to support the ART programme; and
- monitor and evaluate the programme to ensure continuous improvement, quality, and effectiveness.

Service delivery by the Masa / ART Programme

To ensure a smooth and effective implementation of the *Masa*/ART programme, the following initial technical implementation processes were put into place:

- Clinical Care: treatment protocols, guidelines and manuals, and staff training;
- Counselling: effective, participatory and confidential counselling services for HIV-testing, ARV therapy, and adherence;
- Logistics: Pharmacy: procurement, storage, and distribution of ARV drugs;
- Logistics: Laboratory: laboratory equipment, supplies, space, and services;
- Information Technology: appropriate, confidential storage and dissemination of information between different health service levels to provide patient support, pharmacy, and laboratory management;
- Information, Education, and Communication (IEC): dissemination of information about ARV therapy services in order to enable people to locate and access services; and
- Local Government Management and Infrastructure: preparation, implementation, and evaluation of all aspects of the ARV programme at the local authority level in the respective health sites offering ARV therapy. (As of 2010, all health services have been moved to the Ministry of Health (MOH).)

Following the initial expansion of *Masa*, the second phase was characterised by several strategies whose primary aim was to improve access to ART services. These strategies include:

- Outsourcing of ART Services: In order to decrease congestion in public health facilities and ARV sites, ARV services have been outsourced to the private sector (private doctors and clinics). This has either eliminated or reduced the waiting time for people who are eligible to initiate highly active antiretroviral therapy (HAART).
- Decentralising Laboratory Services: In the quest to make the ARV programme more effective and accessible, laboratory services have been expanded and decentralized from the national laboratories in Gaborone and Francistown. Currently 23 laboratories perform CD4 cell count screening, 23 perform viral load estimation and 10 perform both CD4 cell count and viral load tests throughout the country.
- Task Shifting: Nurses are being trained on how to prescribe and dispense ARTs. This means that nurses can prescribe for ART monthly refills to patients who are already on ART and are considered stable by their doctors. Therefore, patients on ART no longer have to wait for a doctor to write the prescription for their treatment.
- Updated Treatment Guidelines: The ARV programme continually updates the treatment guidelines to keep current with the latest developments in HIV and AIDS treatment (See *ARV Treatment Guidelines*).

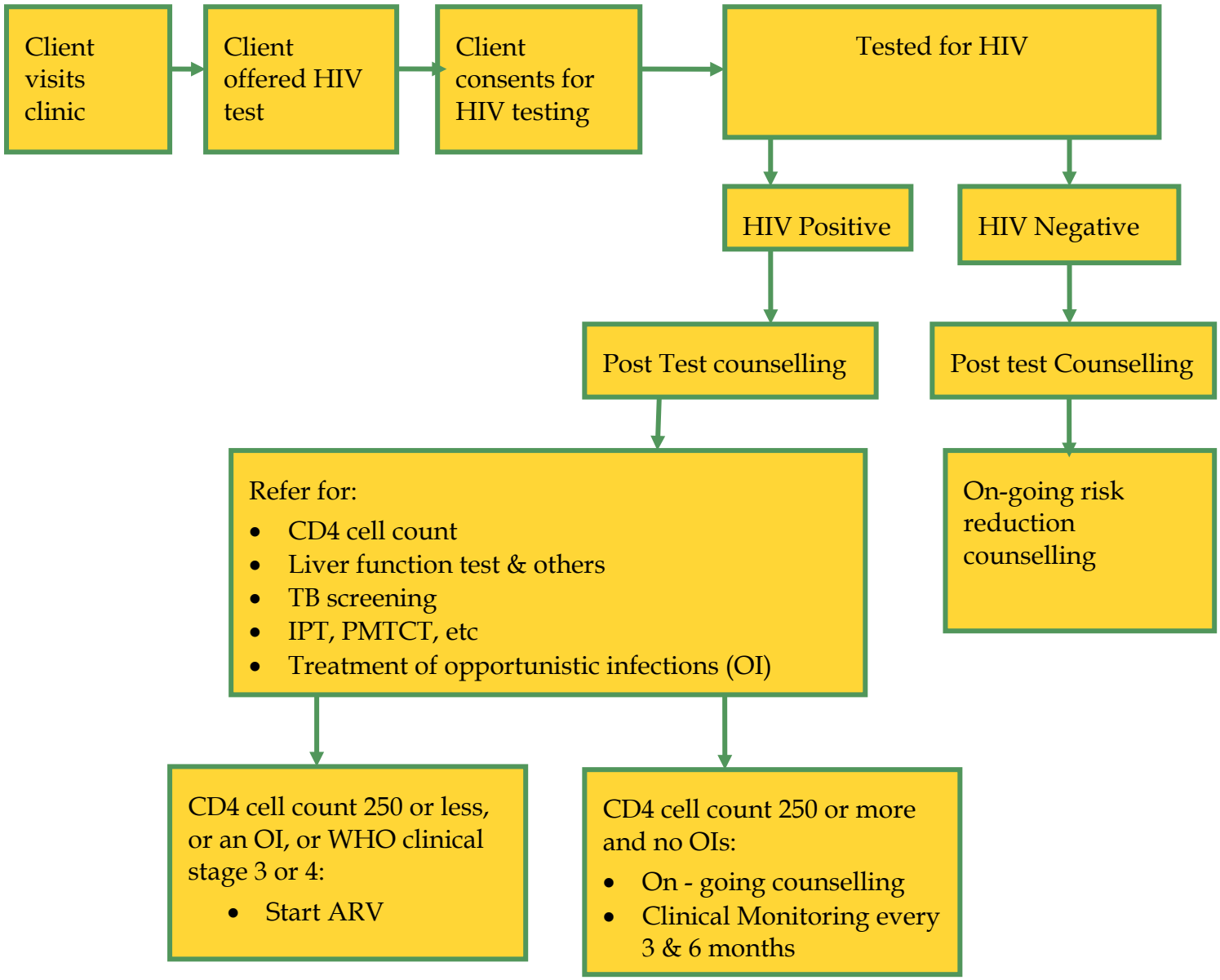
Improved access to ARV services by many eligible Batswana has led to some notable successes. A few highlights include:

- Fewer people are suffering from illnesses (morbidity) due to HIV and fewer people are dying (mortality) due to HIV or other associated causes (overall mortality).
- The number of people in need of community home-based care services has been reduced from 12,000 to 3,500 due to the implementation of an effective ART programme.
- The number of orphans has been reduced as parents and guardians now live longer, healthier lives, and are able to care for their children.
- More health care providers have been trained in collaboration with development partners to effectively manage HIV and AIDS patients (DHAPC 2010).

All clients are offered routine HIV testing and counselling (HTC). A client who tests positive is post test counselled and referred for a series of laboratory tests which include CD4 cell count, liver function test, haemoglobin (HB), and others. The client is also referred for TB screening and put on IPT if there is no active TB disease. They are put on anti TB treatment if there is active TB. Pregnant women are enrolled in the PMTCT programme. If the CD4 cell count is 250 or less, or the woman has an opportunistic infection, or has WHO clinical stage 3 or 4, she is started on ARVs; if CD4 cell count is 250 or more they are monitored every 3 or 6 months.

Figure 2.2.1a Patient flow for enrolment in the ARV **Programme**

The figure below shows the procedures and eligibility criteria for enrolment into the ARV programme.



Note: In 2008 *The Botswana National HIV & AIDS Treatment Guidelines* were revised and the CD4 cell count was increased from 200 to 250 for initiating treatment. Patients with CD4 cell counts between 250 and 400 are monitored closely every three -months and treatment can start whenever deemed appropriate. Patients with CD4 cell counts above 400 are monitored on a six-month basis. In addition to these eligibility criteria, specific criteria were established for the treatment of children.

The ARV programme uses a satellite structure, in which several clinics are linked to a hospital and this site sends one consolidated report to the district M&E officer.

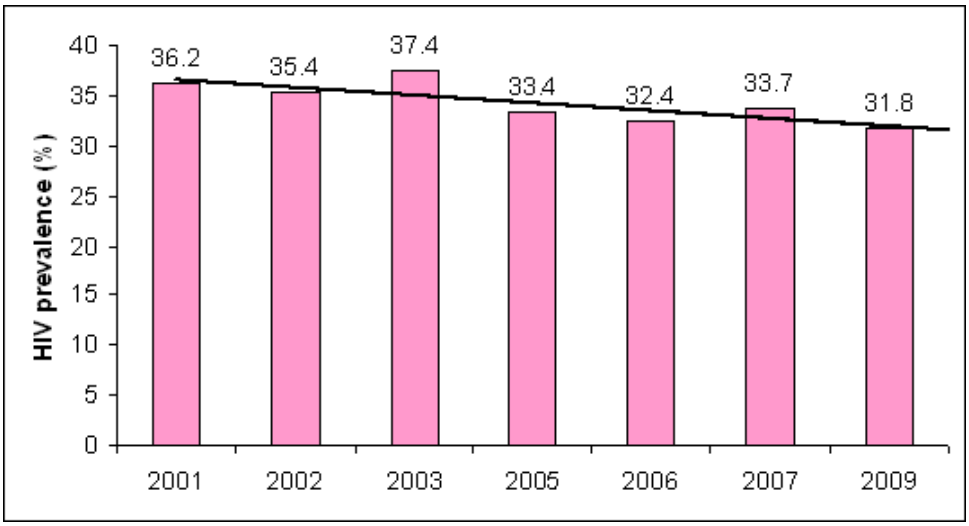
On a monthly basis, a paper-based summary report from each ARV clinic is submitted to either the ARV site manager at the hospital or an ARV focal person at the District Health Management Team (DHMT). As districts differ, there are some instances where clinics submit their ARV summary reports to the DHMT M&E officer. In some districts, ARV data from private physicians are also collected by the DHMT. The site manager at the hospital aggregates the monthly *Site Manager's Reports* received from the ARV sites in the district and then generates a cumulative monthly *ARV Site Managers Report* for the district. On a monthly basis, this report is sent from the hospital to the MOH M&E Unit at the national level, with a copy being sent to the DHMT. The MOH M&E Unit also receives the monthly *Site Manager's Reports* from other ARV sites in the district, including BCL Mine. In addition, quarterly reports from Associate Fund Administrators (AFA), on PULA and Botswana Public Officers' Medical AID Scheme (BOPMAS), as well as from Botswana Medical AID (BOMAID) are also received at the MOH M&E Unit.. The *Site Manager's Reports* received at national level are aggregated to produce a national report, which is then circulated to stakeholders, including the National AIDS Coordinating Agency (NACA), who then forwards it to the National AIDS Council (NAC).

Another report which is generated at district level is the *ARV Roll-out Report*, which is sent to MOH Primary Health Care Clinical Services department. This report includes data on staffing, KITSO trainings, ARV patient statistics, infrastructure development, and the progress of health satellites within the district.

2.2.2 Prevention of Mother-to-Child Transmission (PMTCT)

Botswana has an HIV prevalence of 31.8% among pregnant women as of 2009. Over the years Botswana has experienced a steady decline in the prevalence among pregnant women aged 15-49 years, from 36.2% in 2001 to 31.8% in 2009 (DHAPC 2010).

Figure 2.2.2.a Trends in HIV prevalence among pregnant women aged 15-49 (DHAPC 2010)



In order to meet Botswana's vision to have "zero new infections by 2016" Botswana's PMTCT programme intends to virtually eliminate transmission to less than 1% from its current figures of less than 4%. This view has also been echoed by UN Secretary General Ban Ki Moon who said;

> "We have effective drugs; there is no reason why any mother should die of AIDS. There is no reason why any child should be born with HIV; if we work hard enough we can virtually eliminate mother-to-child transmission" (Shapiro et al. 2009).

The PMTCT programme was piloted in Francistown and Gaborone in 1999. Pregnant women who registered for ante-natal care (ANC) were offered HIV counselling and testing. Those who agreed to be tested and were found to be HIV-infected were enrolled in the programme. They were given AZT at 34 weeks of pregnancy, as well as counselling on different infant feeding choices.

Roll out of the PMTCT programme started in July 2000 and by November 2001 all public health facilities in the country were offering the services. Significant utilization of the programme was evident in 2002 after introduction of the *Masa* programme. The introduction and deployment of the lay counsellor cadre in 2002 to all clinics and hospitals further increased utilization of the service. Even greater results were achieved after the introduction of routine HIV testing (RHT) as a national policy in 2004.

Data from MOH shows that the proportion of pregnant women in Botswana who tested for HIV increased from 49% in 2002 to 91% in 2009. The uptake of PMTCT programme among those who tested positive for HIV increased from 27% in 2002 to 94% in 2009. This led to the reduction of MTCT from 40% in 2001 with no interventions in place, to less than 4% in 2007 (NACA 2010).

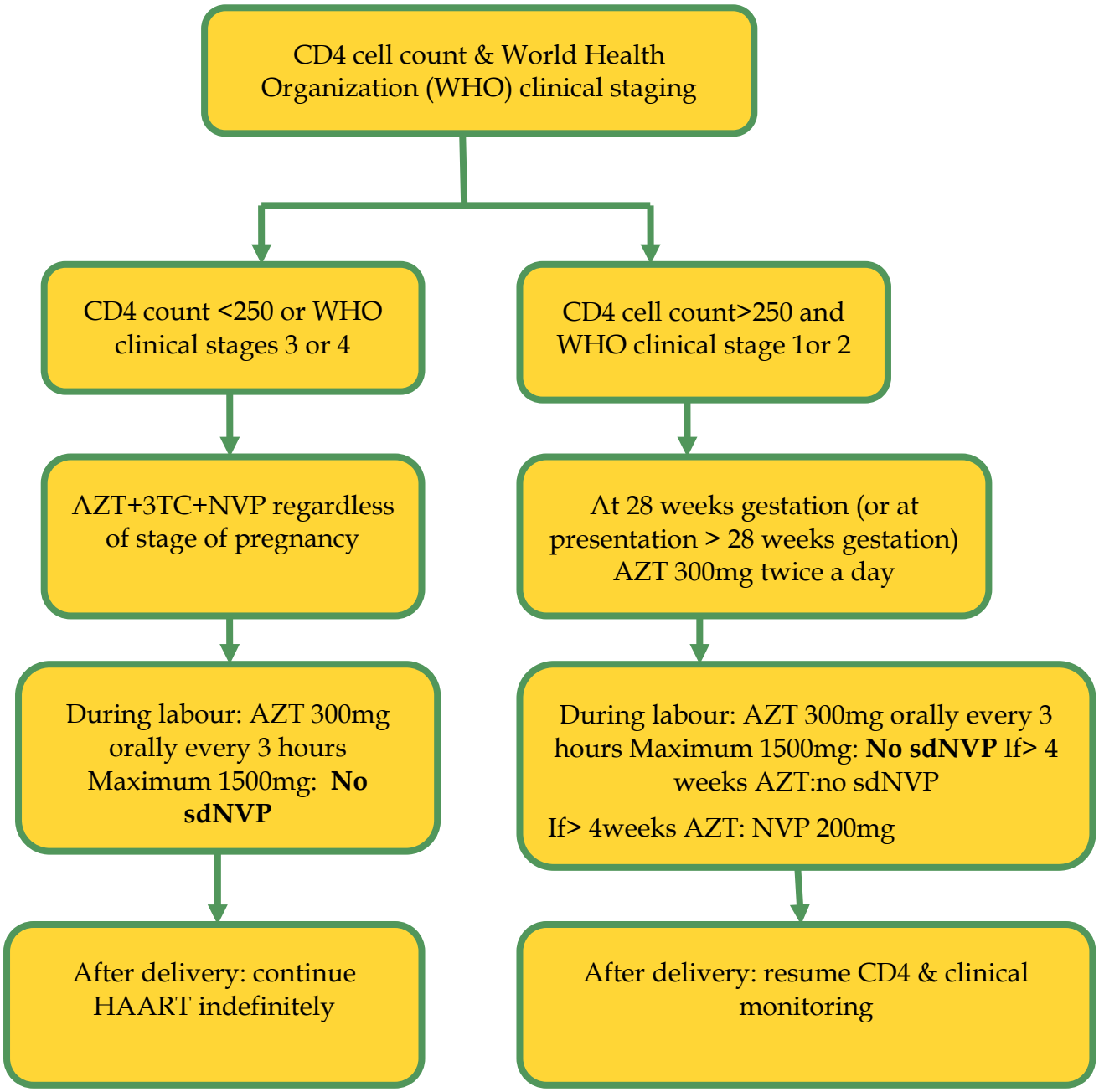
Goal of the PMTCT Programme

The overall goal of the PMTCT programme is to reduce MTCT of HIV and to improve child survival and development through the reduction of HIV-related morbidity and mortality.

Objective of the PMTCT Programme

To increase the PMTCT uptake, both prophylaxis and treatment, to 95% by March 2015.

Figure 2.2.2.b 2008 PMTCT Guidelines Summary



(Source :Botswana National HIV/AIDS Treatment Guidelines 2008 Version)

The PMTCT programme delivers several interventions (deliberate actions to get the desired public health result) to reduce MTCT and meet its programme objectives. Some of these interventions include:

- **Routine HIV-testing (RHT) using rapid test**

  The uptake of PMTCT increased tremendously since RHT was introduced in January 2004. Offering routine HIV testing means that all women who come for an ANC visit are given information on HIV & AIDS, how the mother can transmit HIV to her baby and how the programme can help them, their babies and partners. They are then offered an HIV test followed by post-test counselling. Women who decline a test are offered additional counselling. They are allowed time to think this through and make a decision later. Not many women decline to test for HIV and usually test after counselling.

  Rapid HIV testing is when clients get their HIV test results within 25- 30 minutes instead of waiting for days or even weeks for laboratory test results as was the case before introduction of RHT.

  The protocol for RHT has changed with the recent changes in PMTCT guidelines. Women who test negative at the initial ANC visit are tested again at 36 weeks (8 months) of pregnancy. If they are not re-tested at 36 weeks or before delivery, they are tested when they come to the health facility at/or after delivery. This change came about due to an increasing number of women whose HIV status changed later in pregnancy and risk infecting their infants.

- **ARV Prophylaxis (for mothers)**

  All HIV-infected pregnant women are evaluated for CD4 cell count to determine whether they are to be offered HAART or prophylaxis. HAART, which is a regimen consisting of a combination of 3 or more drugs prescribed as HIV and AIDS treatment

  - If the CD4 cell count is greater than or equal to 250, the woman is not eligible for HAART. She is offered ARV prophylaxis (Zidovudine-ZDV/AZT) starting at 28 weeks (7 months) of pregnancy. This is taken twice daily until she goes into labour. During labour ZDV/AZT is given every 3 hours until delivery to reduce the increased risk of MTCT during labour and delivery. If for any reason ZDV/AZT was taken for less than 4 weeks during pregnancy, then a single dose of Nevirapine (sdNVP) is given during labour to further minimize chances of HIV infection to the infant. If ZDV/AZT was taken for more than 4 weeks during pregnancy then no sdNVP is given at delivery.
  - A woman who has a CD4 cell count of 250 or less is eligible for HAART. She is started on HAART for her own health and for prevention of infection to the infant and continues being monitored closely throughout the pregnancy.

- **Safe Obstetric Practices**

  In Botswana more than 90% of women deliver their babies in a health facility manned by a trained health worker. When an HIV infected woman goes into labour all efforts and precautions are taken to further reduce the risk of infection to the infant.

  The following are some of the standard practice measures that are used:

  - Universal infection control practices are observed at all times: These are a set of precautions taken in a work environment to prevent HIV and other infections to everybody in the facility including patients, health workers, and visitors.
  - Vaginal examinations performed minimally (4 per hour) unless indicated otherwise: This is a normal examination done for a woman in labour to determine the progress of labour or cervical dilatation. It has been established that doing fewer examinations minimizes the risk of HIV infection during labour.
  - Artificial rupture of membranes delayed until the cervical opening is dilated to at least 7cm: The membrane or bag of water protects the baby during pregnancy and labour. Keeping the waters intact throughout the early stages of labour can prevent the baby from being exposed to cervical and vaginal secretions that have high loads of HIV.
  - Episiotomy performed only when it is necessary: An episiotomy is an incision or cut made on the muscles of the vagina (perineum) to aid the birthing process: Blood flows when a cut is made, thus increasing the risk of HIV exposure to the baby. Midwives are encouraged to avoid episiotomies and only do them when it is absolutely necessary.
  - Only silicon and not metal cups are used when vacuum extractions are indicated: This is a method of delivery where a baby has to be pulled out through application of a vacuum. The procedure is rarely done and only used in instances when the mother may need mechanical assistance to deliver the baby. The silicon extractor is gently on the baby's scalp and does not cause bruising to the baby's head and expose it to HIV infection.

- **ARV Prophylaxis (for infants)**

  All HIV exposed infants are given a single dose of Nevirapine (sdNVP) and ZDV/AZT within 72 hours of birth. The baby then continues to take ZDV/AZT for 4 weeks.

  According to the PMTCT guidelines, all HIV-exposed infants have to be tested for HIV with DNA Polymerase Chain Reaction (PCR) starting at six weeks after birth for early diagnosis of HIV (EIHD). This is a test that detects HIV DNA material and not antibodies. For infants who reach 18 months before they are tested, the ELISA or HIV rapid tests are used instead of the PCR.

  To further protect the baby from the risk of chest infections like pneumonia, HIV-exposed infants are started on Cotrimoxazole, at six weeks.

Cotrimoxazole continues until the infant's HIV test results are known. If the HIV test results are negative, the antibiotic is stopped; if the HIV test results are positive, the drug is continued and the infant is referred for initiation of HAART.

- **Infant Feeding**

  Regardless of their HIV status all women and their partners are provided with counselling and information on feeding options during ANC. This information is to help ensure they understand the recommended methods of feeding so that they can make informed decisions about how to feed their infant.

  HIV positive women for whom formula feeding is acceptable, feasible, affordable, sustainable, and safe (AFASS), as per *PMTCT Infant Feeding Guideline* (DHAPC 2010), formula feeding is recommended until the baby is twelve months of age. Complementary feeds should be introduced at six months of age.

  If the HIV-infected women for whom formula feeding is not AFASS (or who opts to breastfeed) then she should exclusively breastfeed for six months of the baby's life. At six months, exclusive breastfeeding should be stopped, and the baby be switched to formula feeding. The mother should be assisted to prepare formula hygienically and to use a cup to feed the baby. Complementary feeds should be introduced at six months of age.

  Regardless of feeding choice, all mothers are counselled to avoid mixed feeding, which can increase the baby's risk of HIV and compromise nutritional status (See *PMTCT Guidelines*) (DHAPC 2010).

  Mixed feeding means giving a child

  - breast milk with other milk (including infant formula) or foods, or
  - infant formula with other milks (including breast milk) and other foods.

Achievements of the PMTCT Programme

Since its inception, the following positive strides have been made by the PMTCT programme:

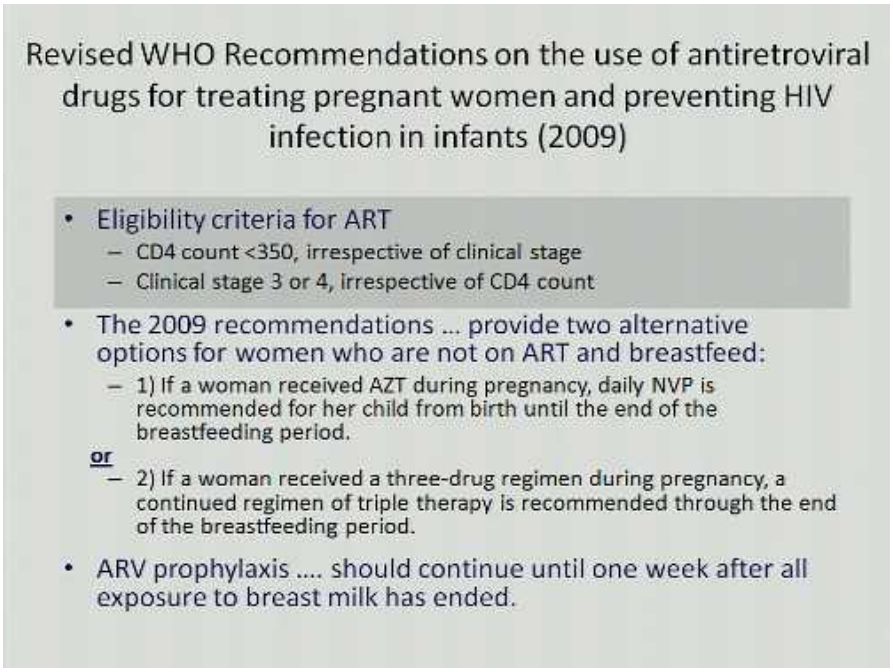
- integration of PMTCT into Sexual and Reproductive Health (SRH) services;
- integration of RHT into PMTCT care provision;
- routine HIV Testing of all babies exposed to HIV from 6 weeks of age, using PCR tests for early diagnosis,;

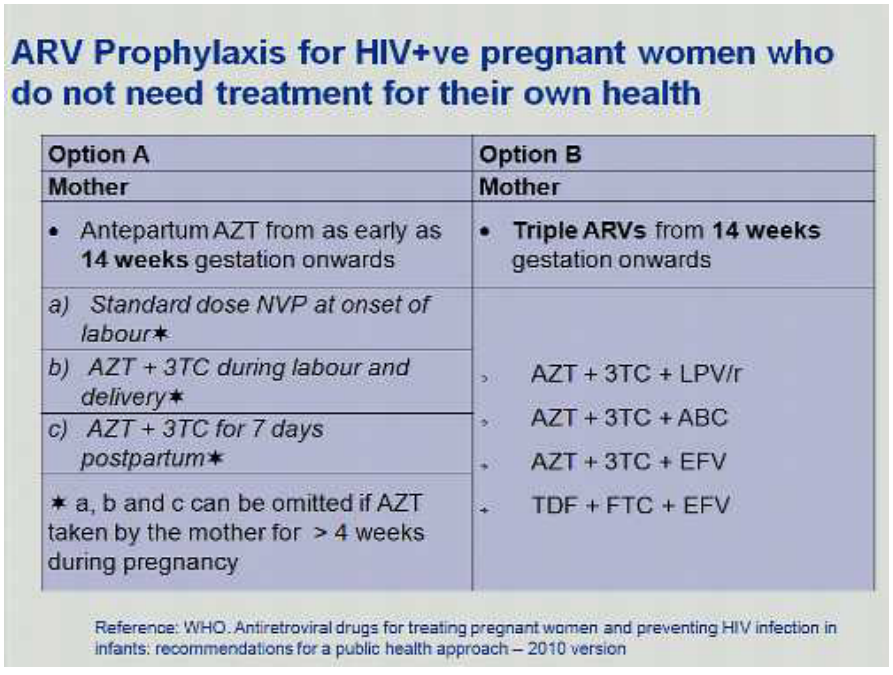
- task-shifting through the introduction of lay counsellors and the expansion of psycho-social support services to pregnant women, their partners, and families through non-governmental organizations (NGOs);
- an increase in HIV testing by pregnant women from 49% in 2002 to 91% in 2009;
- an increase in PMTCT programme uptake from 27% in 2002 to 94% in 2009;
- an increase in the infant testing rate to 85% 2008 (DHAPC 2010); and
- a reduction in transmission rates from the estimated 40% without intervention to less than 4% in December 2008.

Revised PMTCT Recommendations from the World Health Organization (WHO)

The WHO recently released guidelines to improve PMTCT outcomes for consideration by countries, two options have been provided and are outlined below in figures 2.2.2.c and 2.2.2.d.

Figure 2.2.2.c Revised WHO Recommendations





Botswana has not yet taken a stand with regards to these recommendations. However, universal HAART for HIV positive women is currently being piloted in 5 districts in Botswana. There is increasing evidence that when HIV-infected women are on HAART, the viral load remains suppressed, posing minimal risk to the baby thus making it safe for them to breastfeed. Figure 2.2.2.e below outlines the Mma Bana Study. (Shapiro et al. 2009) Further reading on this and other studies will enable you to be better informed about current practices in PMTCT.

Figure 2.2.2.d ARV Prophylaxis: Mother & Infant

ARV Prophylaxis: Mother & Infant

Option A	Option B
Mother	**Mother**
• Antepartum AZT (from as early as 14 weeks gestation onwards)	• Triple ARVs from 14 weeks gestation until **one week after all exposure to breast milk has ended**
*a) Standard dose NVP at onset of labour**	→ AZT + 3TC + LPV/r → AZT + 3TC + ABC → AZT + 3TC + EFV → TDF + FTC + EFV
*b) AZT + 3TC during labour and delivery**	
*c) AZT + 3TC for 7 days postpartum**	
* a, b and c can be omitted if AZT taken by the mother for > 4 weeks during pregnancy	
Infant	**Infant**
• **Breastfed**: Daily NVP from birth until one week after all exposure to breast milk has ended	• **Irrespective of mode of infant feeding** Daily NVP or twice daily AZT from birth until 4 to 6 weeks of age
• **NOT** breastfed: AZT or NVP for 6 weeks from birth	

WHO Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants: recommendations for a public health approach – 2010 version

Figure 2.2.2.e Mma Bana Study

Mma Bana Study

- HIV-1 RNA suppression to < 400 copies/mL was similar at delivery and throughout breastfeeding by randomized arm, and for the observational arm
  - *95% suppressed at delivery, 93% throughout breastfeeding*
- Among 709 live births, HIV transmission was only 1.1% overall, and only 2 transmissions occurred during breastfeeding (0.3%)
  - *Lowest MTCT rate recorded in a breastfeeding population*
- HAART regimens were safe and well-tolerated for women and for their breastfeeding infants

CONCLUSION:

- Maternal HAART from early in the third trimester of pregnancy through 6 months of breastfeeding is a safe and very effective strategy for preventing MTCT while allowing for the benefits of breastfeeding

Courtesy : Shapiro R, Ogwu A etal...BHP,

District Data Management

Reporting from the facilities to the DHMT occurs on a monthly basis by the 5th of each month. The PMTCT focal person at the DHMT receives the data from the facilities and shares the information with the DHMT M&E officer. They then work together to manually aggregate the information on the facility monthly report forms from Ministry of Health's Maternal and Child Health Unit & Maternity Unit into one district summary report. The paper report is then sent to MOH DHAPC M&E Unit and PMTCT data manager's office at national level. The deadline for reports to the national office is the 15th of every month (Ledikwe et al. 2010). On a quarterly basis, the DAC M&E officer aggregates district level data into *BHRIMS 003B* forms and sends it to the Ministry of Local Government (MLG).

Reflection

Based on what you have learned about the PMTCT programme and what you hope to accomplish, take a moment and consider the following questions:

- What do you think are some of the factors that have contributed to such gains in the PMTCT programme?
- What will your contribution be in ensuring success of the programme?

2.2.3 Orphans and Vulnerable Children Programme

The orphans and vulnerable children (OVC) programme is a programme under the Child Protection Services (CPS) Division at the Ministry of Local Government (MLG). It is a division responsible for coordinating all national programmes and activities on children's protection and well being. The CPS Division monitors implementation (which is done through the local authorities (councils)) of all child welfare programmes in the country and also initiates review of all child protection laws and policies. The OVC programme works specifically to improve the lives of orphaned and vulnerable children in Botswana.

The *Botswana* definition of an orphan is a child who has lost one parent (child of a single parent) or both parents (married couples). Married couples include those married in civil or traditional marriages. These parents can be either biological or adoptive.

The *international* definition of an orphan is any child below the age of 18 years who has lost either one parent (child of a single parent) or both parents (child of married parents), either biological or adoptive. Married couples include those in civil and traditional marriages. In addition, a *social orphan* is any child who has been abandoned completely, is in the care of others, or whose parents cannot be traced[5].

A *vulnerable* child is any child below the age of 18, who has no or very restricted access to basic needs. The child may have both parents but his/her rights may be denied (Smart, 2003). The following are ways in which a child can be deemed vulnerable:

- children who live outside family care (street children),
- child labourers,
- children who are neglected,
- children who live in an abusive environment, for example, are sexually exploited,
- children who live in a poverty stricken family that is not able to access basic services,
- children who live in a child headed household,
- children who live with sick parents(s) / guardians,
- children who are handicapped,
- children who are HIV infected, and
- children in remote areas from indigenous minority groups.

Botswana is grappling with how to deal with OVC. Though this cannot solely be attributed to HIV & AIDS, the onset of the epidemic has compounded and multiplied the burden of taking care of OVC on the caregivers and country. Apart from HIV & AIDS, a number of factors increased the vulnerability of orphans and other children. The loss of one or both parents is already a great tragedy to children, many of whom are then faced with a greater risk of exploitation and abuse due to their circumstance.

Prior to 1999, the Government of Botswana (GOB) recognised the need to coordinate and standardise the care and support of OVC. In 1999, a short-term plan of action (STPA) for the care of orphans in Botswana was developed based on the findings of a needs assessment. The overall goal of the STPA is to provide care for orphans through quality services and freedom from physical and sexual abuse. The *National Guidelines on the Care of Orphans and Vulnerable Children* was adopted in 2008. In 2009 the National Assembly adopted the *Children's Act*[7] order to improve the care of OVC.

Goal of the OVC Programme

The goal of the programme is to improve the quality of services for orphaned and vulnerable children by ensuring that they receive optimal care and support.

Objectives of the OVC Programme

The aim of the programme is to:

- formulate and review policies and guidelines that protect the rights of the orphans and vulnerable children;
- ensure provision of basic needs to orphans and vulnerable children including food, health care, education and housing; and
- ensure psycho-social support services to orphans and vulnerable children, their families, and caregivers.

Service Delivery by the OVC Programme

The OVC programme in Botswana is coordinated through the Department of Social Services (DSS) under the MLG. In relation to the immediate needs of orphans, the plan of action for orphan care focuses on the following:

- Provision of basic needs (food, clothing, toiletries, and housing): Many orphans are without food, clothing, decent housing and toiletries. Therefore, provision of these basic needs remains the most urgent task for the orphan care programme. In collaboration with the MOH, a 'food basket' was established for orphans and other children in need of nutritional care. Once a month registered OVCs are issued with a food basket that contains food rations, which include maize-meal, rice, meat, vegetables, and toiletries. They are also provided with clothing and pocket money, as well as payment of transport and medical costs.
- Ensuring access to education: To ensure that orphans remain in school, they are provided with appropriate school uniform, shoes, and other miscellaneous school items such as pens and writing pads. They also benefit from payment of school fees, including Day Care Centres and school trips.
- Providing alternative care for orphans and children in need: The government has drafted regulations governing alternative arrangements for children in

need of care. These guidelines have identified foster care, guardianship, and children's homes as well as approved child welfare shelters as possible alternative care systems for orphans.

- Protecting orphans from abuse and neglect: The socio-political environment of orphans poses serious challenges to their livelihoods, well-being, and security. Their basic rights are often violated, so the OVC programme ensures that legal interventions that are in place to protect the rights of children also apply to orphans and vulnerable children.

District Data Management of OVC Programme

A Social and Community Development officer (S&CD), who is a social worker at the District or Town Council, receives village and ward aggregate data from area and village Social Workers. Data are received by hand or by fax. The district S&CD officers check monthly data and aggregate it to generate quarterly, semi-annual and annual reports for the district. They send the report on the aggregated data to MLG DSS. Data is stored electronically at the district level by an S&CD officer. These data are used at the district level to make operational decisions, to source funding from NACA, and to observe and correct anomalies (Tsheko 2007).

The S&CD officer also provides data to the DAC M&E officer for inclusion in the *BHRIMS 003B Form*, which is sent quarterly to MLG PHC M&E Unit.

Field-based staff from NGOs/CBOs/FBOs who provide services to OVCs hand-deliver monthly reports to district or national coordinators. Sometimes district level or national level staff go to the village/ward level facilities and collate the data there for monthly reporting purposes. The monthly data is generally checked and aggregated to generate quarterly, semi-annual, and annual reports for their recipients at the district and national levels (Ledikwe et al. 2010).

From the district coordinators, the data from NGOs/CBOs/FBOs can move in one or a combination of ways based upon the organization such as; to the patron church, to the national headquarters/country office, to the grantor (another NGO/CBO/FBO located in-country), DAC, S&CD, and/or donor (Ledikwe et al. 2010).

 **Reflection**	*As a member of the community in the district that you are working in what are some of the things you can do to improve the welfare of children in your district?*

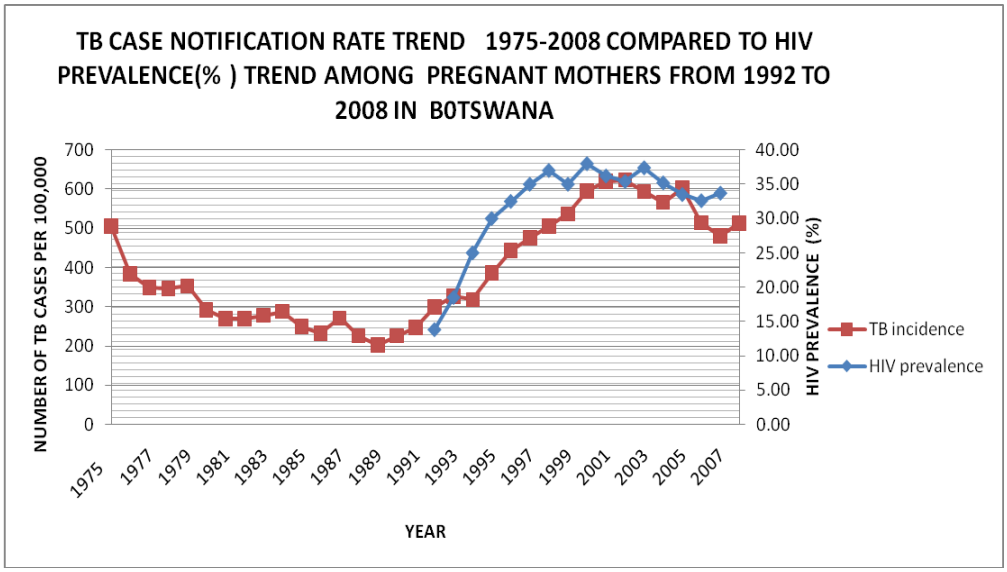
2.2.4 National Tuberculosis Programme

Over the past two decades Botswana has experienced a dramatic increase in TB cases. Prior to 1990, efforts to control TB in Botswana were very successful. In 1975, TB notification rates were 506 per 1000,000 and declined to 199 per 1000,000 in 1989.

With the advent of HIV, the country has seen a reverse of the gains on TB control achieved in the 1980s. By 2002, the TB notification rates had increased to 623 per 100,000, one of the highest in the world (MOH 2010). The 2008 figures show that the TB notification is 536 per 100,000 (MOH 2010) (figure 2.2.4.a below). The increasingly high TB notification rate is attributed to the high burden of HIV in the country. It is estimated that 68% of TB patients in Botswana are co-infected with HIV (MOH 2010). However TB is still a preventable and curable disease despite its association with HIV. With proper management it is still possible to achieve cure rates that are greater than 95% among TB patients.

A number of drug susceptibility surveys have shown a progressive increase in prevalence of multi drug–resistant tuberculosis (MDR-TB) from 0.2% in 1995 to 2.5% in 2008 (MOH 2008). Multi-drug resistance occurs when patient does not respond to Rifampicin and Isoniazide; two very good anti TB drugs. Multi drug resistance occurs when patients do not take their TB treatment regularly (poor adherence), when they do not take all their TB medication as prescribed by, or when health providers do not supervise treatment. Patients who have developed MDR-TB need special care. MDR-TB takes a long time to cure and requires special drugs which are very expensive. Some cases of Extensively Drug Resistant (XDR) TB have also been reported in Botswana, although numbers have been very few. XDR-TB occurs when there is MDR-TB, hence resistance to Rifampicin and Isoniazide, plus resistance to one injectable drug and one floroquinolone. (the latter two being drugs used to treat MDR-TB). The cure rate of XDR-TB is very slim and most people with the infection do not survive.

Figure 2.2.4.a TB Case Notification Rate Trends 1975-2008 Compared to HIV Prevalence



Source: MOH, BNTP Annual Report, 2006-2008,

In the past 5 years the GOB began the process of TB/HIV integration. A national TB/HIV Advisory committee was established in 2005. Surveillance of TB data for national and WHO reporting purposes has been improving over the past several years with the Botswana National Tuberculosis Programme (BNTP) routinely tracking data of HIV testing in TB patients

According to the *2010 TB/HIV Collaborative Policy Guidelines* all HIV infected patients have to be screened for TB and all TB patients have to be tested for HIV and initiated on HAART and TB treatment without delay. Efforts to decrease the burden of TB in HIV infected patients have been more successful with HIV testing and counselling.

The new TB registers and TB treatment cards have been amended to collect information on ARV and Cotrimoxazole Prevention Therapy (CPT). Cotrimoxazole is an antibiotic that is given to HIV infected patients to prevent opportunistic infections like pneumonia. Data indicates that in 2008, 65% of TB patients were tested for HIV, however this falls short of the BNTP target of 90%. The *Masa* database monitoring the ARV programme has also incorporated the TB variables.

Goal of the TB Programme

The goal of the BNTP is to reduce the number of tuberculosis cases in the country as well as morbidity and mortality due to TB.

Objectives of the TB Programme

The programme objectives are to:

- strengthen integration of TB control into the health system and safeguard governmental commitment to TB control;
- detect 70% of expected new cases of infectious TB and cure at least 85% of new cases (i.e., smear negative at the end of treatment);
- ensure standardized short-course chemotherapy (6 months) on an ambulatory basis. This will be done under direct observation whenever possible;
- maintain a reliable and regular TB drug supply and distribution chain;
- strengthen standardised case notification based on case-finding and confirmation by effective Acid Fast Bacilli (AFB) smear microscopy;
- provide timely and reliable TB laboratory services with respect to microscopy and TB culture and sensitivity;
- ensure effective integration of TB and HIV treatment services;
- strengthen the programme supervision based on performance indicators, standardized recording, reporting, monitoring and evaluation; and
- ensure quality and client-oriented TB control services.

Service delivery by the TB programme

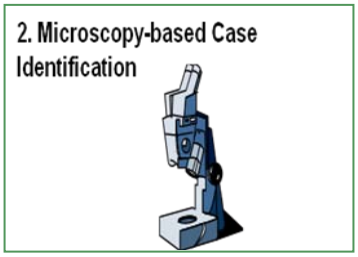
The BNTP was established in 1975 with TB prevention, contact tracing, diagnosis and treatment integrated into the primary health care services.

In 1986 a short course of TB treatment was introduced followed by DOT (Directly Observed Therapy). DOT means that TB patients go to the clinic daily and swallow their TB medication under observation and supervision of a health care worker. Directly observed therapy, short-course (DOTS), is a standard practice in all health facilities in the country. HIV infected clients who do not have active TB disease are put on Isoniazid Preventive Therapy (IPT) as a prophylaxis against active TB (See IPT guidelines).

The Community TB Care (CTBC) initiative has been introduced and involves community volunteers who assist patients with various TB control activities including DOT support, TB education, early diagnosis, and case finding.

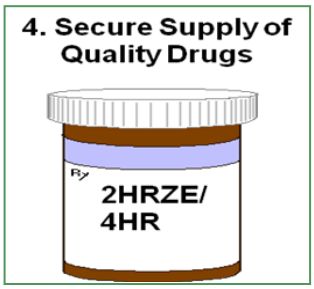
DOTS Strategy

1. Political commitment with increased and sustained financing: This means that the government is committed to considering TB control a priority and ensuring the availability of the necessary resources for the programme. In line with this, GOB has committed itself to maintaining continuous and sustained supply of high quality TB drugs while providing free treatment to all TB patients.



2. Case detection through quality assured bacteriology: This calls for reliance on microscopy-based sputum examinations as the basis to diagnose the presence of infectious organisms. In accordance with this strategy, clients that show signs and symptoms that suggest TB are screened mainly through sputum examination done in a network of laboratories throughout the country. The network comprises of National TB Reference Laboratory (NTRL) in Gaborone, one referral hospital laboratory, 32 government hospitals, 2 government assisted Mission Hospitals, 2 mine hospitals, and 12 private laboratories. Laboratories at district, mission, primary, and mine hospitals perform only smear microscopy while the NRTL performs smear microscopy, culture, identification, and first line drug susceptibility testing. The culture and sensitivity tests are done to determine if the TB bacteria are responding to the drugs that the patient is taking.

3. Standardised treatment with supervision and patient support: TB control in Botswana is based on standardised short-course treatment regimens for adults and children. Treatment is provided at health facilities and by community volunteers under the supervision of the TB control programme. Clients are supervised throughout the course of treatment by trained personnel in a health facility or at community/family level.



4. Uninterrupted supplies of quality-assured drugs: All diagnosed TB patients receive WHO recommended standardised treatment regimens and quality assured drugs for adults and children. The Central Medical Stores (CMS), a unit at MOH, is responsible for the procurement and supply of all TB drugs. Within this unit there is Quality Assurance Unit which is responsible for analyzing and monitoring the quality of the drugs in use in the public sector. CMS has ensured that the supply of drugs is reliable and un-interrupted.

5. Monitoring and Evaluation system and impact measurement: Patient records are entered into well-organised standardised recording and reporting systems. Paper registers are used at the facility level, while at the district level both electronic and paper registers are available. On a quarterly basis, data are sent to the national level which then is entered into an electronic register.

(Images Source: BNTP Manual Training for Health Care Workers)

Isoniazid TB Preventative Therapy (IPT)

The *2002 Botswana National TB Programme Manual* initiated an ambitious Isoniazid Preventative Therapy (IPT) programme in which all people living with HIV without clinical evidence of TB disease are eligible for 6 months of IPT. By 2005, the IPT initiative was implemented in all health facilities around the country. Initially the IPT initiative was under the BNTP. This service has since been integrated in the *Masa* programme as an attempt to ensure effectiveness of the initiative.

The purpose of IPT is to prevent TB infection from progressing into TB disease (reactivation). It is a form of secondary prevention. Studies in several African countries demonstrated the effectiveness of Isoniazid (INH) as a TB preventive therapy. INH decreased the incidence of TB among HIV infected people by about 40% and the protection period ranged from less than one to three years. In the IPT programme Isoniazid (INH) plus Pyridoxine (Vitamin B6) are given to eligible HIV infected people to prevent latent TB from progressing to active TB. HIV infected people are given a 6 months course of INH and vitamin B6. The following is the eligibility criteria for enrolment into the IPT programme:

- confirmed HIV infection,
- no active TB disease,
- 16 years of age and above,
- not pregnant,
- no terminal AIDS disease,
- no history of INH intolerance,
- no history of TB in the previous 3 years,
- no history of hepatitis and no active hepatitis, and
- Not a habitual treatment defaulter.

An external review of the IPT programme was conducted in 2008 which recommended stronger integration of IPT into routine HIV services and improvement of data management systems. Efforts are at an advanced stage to strengthen integration of TB and HIV. One of the things that the integration aims to achieve is to decrease the burden of TB in PLHIV through the implementation of "Three I's":

- intensified TB Case finding,
- infection control in health facilities and other places where people congregate, and
- IPT for HIV infected people who do not have active TB disease.

District Data Management of TB Programme

On a quarterly-basis, TB coordinators visit facilities to record information by hand into a *District TB Register* to coincide with the information at all of the facilities in the *Facility TB Register*. The information is entered into the paper-based *District TB Registers*, which should contain an exact duplicate of the data in the Facility *TB Register*. This information is then entered into the *Electronic TB Register (ETR*) (Ledikwe et al. 2010).

Monthly IPT reporting forms are submitted to the TB coordinator at the DHMT on a monthly basis from the facilities. This information is shared with the DHMT M&E officer who then forwards the data to BNTP monthly. The DHMT M&E officer provides data to the M&E officer at the DAC in order to complete section 7 of the quarterly *BHRIMS 003B form*.

Learning Activity 2.2.4

Relationship Between TB and HIV

Directions: Answer the following questions to the best of your ability. This is a tool for you to assess your understanding of the relationship between TB and HIV

1. What is the relationship between TB and HIV

2. What can be done to help HIV infected person from developing active TB

Discussion 2.2.4

Relationship Between TB and HIV

1.What is the relationship between TB and HIV?

- *HIV infection weakens the immune system*
- *Due to the weakened immune system an HIV positive person body cannot effectively fight infections including TB bacteria, making it easy for them to have TB*
- *TB facilitates fast progression of HIV to AIDS*
- *AIDS makes it easy for one to develop TB*

2. What can be done to help HIV infected person from developing active TB?

- *HIV positive people have to be screened for active TB disease*
- *If they do not have active TB disease then they should be put on INH to avoid TB reactivation once the immune system declines*
- *Monitor and ensure they complete the IPT*
- *If they have active TB start them on TB treatment*
- *Monitor that they take their treatment and complete it*

2.2.5 Community Home Based Care (CHBC) / NGO Support Program

In Botswana, Community Home Based Care (CHBC) refers to care given to individuals and families in their home environment. The family plays a key role, supported by skilled health workers, social workers and the community at large to meet the spiritual, material, and psycho-social needs of the individual and family[11].

Though the CHBC programme in Botswana was established in 1995 as a response to the HIV & AIDS epidemic, it does not only care for HIV related conditions. During the peak of the HIV epidemic, many patients were discharged from the hospital and sent home while they still needed care and support. This was done in order for the hospitals to make room for other patients in need of care. The approach and strategies of the programme were guided by feasibility studies done in 1995 and 1996. The programme has now been integrated into the existing primary health care structures and health protocols. It focuses primarily on terminally or chronically ill patients, not just those infected with HIV or AIDS, as well as vulnerable children.

Goal of the CHBC Programme

The overall goal of the programme is to ensure the continuation of care and support for PLWHAs and other chronically and terminally ill patients and their families.

Objectives of the CHBC Programme

The objectives of the programme are to:

- ensure optimum level of care for all terminally ill patients, irrespective of disease, in order to avoid the patients being discharged from the hospital and just forgotten about;
- avoid unnecessary hospital admission;
- provide clinical care in the home including medications;
- provide nursing care in the home setting;
- provide ongoing counselling service to both PLWHA and their families;
- refer terminally ill patients to social welfare and other appropriate agencies for material support; and
- establish functional referral system between hospitals, district health teams, clinics, and between districts.

Service Delivery of the CHBC Programme

The CHBC programme adheres to the following strategies:

- provision of comprehensive care to meet physical, psychological, social, and spiritual needs of the patient as well as their caregivers;
- psychological support including, home visits, reduction of stigma and discrimination, and formation of support groups;
- training of care providers including informal caregivers;
- counselling;
- family and community mobilisation and partnership building, or coordinated efforts amongst the civil society organizations in the community with the patient;
- palliative care, which has been adopted to strengthen pain management in home-based care patients; (This is an approach that improves the quality of life of patients and their families with problems associated with life-threatening illnesses, through prevention and relief of suffering by means of early identification, assessment, treatment of pain, and other problems which can be physical, psychological, and spiritual. (WHO 2000). It is a multidisciplinary approach to healthcare, involving volunteers and family members, as well as nurses, doctors, pharmacists, health educationists, M&E officers etc)
- strengthening of the referral system;
- social support through provision of materials support including food baskets for those who are eligible;
- coordination and management; and
- monitoring, evaluation, and research.

District Data Management of CHBC Programme

The CHBC Coordinator at the DHMT provides a monthly report to MOH DHAPC. They also provide the S&CD with the relevant information for individuals in need of CHBC services provided through the District and Town Councils. For CHBC services delivered, the S&CD officer at the District Council receives data from area and village social workers. The district S&CD officers check monthly data and aggregate it to generate quarterly, semi-annual, and annual reports for the district. They send the report on the aggregated data to the MLG DSS. Data are stored electronically at the district level by an S&CD officer. The data are used at the district level to make operational decisions, to source funding from NACA and to observe and correct anomalies[4].

The S&CD officer also provides data to the DAC M&E officer for inclusion in the *BHRIMS 003B Form*, which is sent quarterly to MLG PHC M&E Unit.

Field-based staff from NGOs/CBOs/FBOs providing CHBC services provides monthly reports to district or national coordinators for the NGOs/CBOs/FBOs. Sometimes district level or national level staff go to the village/ward level and collate the data there for monthly reporting purposes. The monthly data is generally checked and aggregated to generate monthly, quarterly, semi-annual, and annual reports for their recipients at the district and national levels. From the district coordinators, the data from NGOs/CBOs/FBOs can move in one or a combination of the following ways depending upon the organization including; to the patron church, to the national headquarters/country office, to the grantor, DAC, S&CD, and/or donor. Data may also be sent directly to BONASO.

2.2.6 Behavioural Change Interventions and Communication

In 1989, the Information, Education and Communication Unit was established within the Ministry of Health. The Unit's approach was aimed at creating awareness about HIV in order to change attitudes of people and motivate people to embrace positive health behaviours. As the AIDS pandemic became more complex a new approach to the disease was became necessary. Therefore, there was a shift to include behaviour change interventions and communication (BCIC).

Behaviour change is the process of adopting and maintaining positive health behaviour and removing harmful or risky practices from one's life.

The premise behind BCIC is that awareness of personal norms, self assessments and continuous reinforcements might lead to positive societal and individual actions. Behavioural change and intervention strategies target different groups in the community, health facilities, workplace, and schools in addition to providing support to the military. Several ministries and private organisations are developing strategies aimed at specific sociological and economic areas, or sectors, within the communities and nation. BCIC strategies address issues pertaining to their organisations focus and scope of work in a determined manner. The implementation of HIV prevention interventions through the various structures is guided by the *BCIC Health Sector Strategy (2006-2009)*.

Goal of the BCIC Programme

The strategic objective of the BCIC Unit is to strengthen behaviour change interventions and communications as well as community empowerment initiatives for prevention of HIV (DHAPC 2010).

Objectives of BCIC Programme

The programme objectives are to:

- facilitate development and implementation through dissemination of HIV prevention strategies;
- strengthen the capacity of DHMTs and Civil Society Organisations for effective implementation of HIV prevention interventions at all levels – village, district, and national;
- strengthen networking with strategic partners for wider participation in HIV prevention efforts;
- guide the development, production and dissemination of targeted BCIC materials/messages for HIV prevention; and
- solicit political and social leadership support for implementation of HIV prevention strategies.

Service Delivery by the BCIC Programme

BCIC approaches are meant to influence behaviours of individuals and communities through targeted psychological positioning of information accompanied by activities such as skills building, marketing, and advocacy to encourage social and cultural changes, as well as to promote the adoption and reinforcement of desired behaviours.

National IEC/BCIC related programmes and campaigns undertaken by different sectors are varied in nature and approach. Some of such campaigns include the Couple HIV Counselling, PMTCT Male Involvement, Testing and Safe Male Circumcision campaigns all of which are aimed at creating awareness and mobilizing communities to participate in HIV prevention efforts and promote positive health behaviour. Other campaigns such as the "Break the Chain (*O icheke - Kgaola Chaene)*" campaign have been conducted, aimed at encouraging people to discontinue multiple concurrent sexual partnerships. A variety of communication methods have been used to sent the message to the public including print, billboard, radio, television, and other forms of memorabilia, such as t-shirts.

Below are some of the ways which BCIC activities try to prevent HIV (NACA 2006).

- Stimulating community dialogue and participation: The BCIC programme endeavours to strengthen community dialogues and to guide community discussions on both positive and negative social norms, values, and risk factors for HIV transmission. The goal of the discussions is to encourage positive social norms and values and to identify strategies to reduce the risk of HIV infection, for example by increasing communication between men and women.
- Promoting collaboration among stakeholders: BCIC strengthens coordination and collaboration among key strategic partners in order to achieve wider participation, provision of services and support of HIV prevention initiatives.
- Promoting advocacy for support of prevention intervention: BCIC recognizes that community and national leaders hold the key to programme success. Their support and commitment are vital to achieve the prevention goals of BCIC and to create a conducive and supportive environment to facilitate behaviour change. The BCIC programme targets policy makers and social leaders at national and district levels to support HIV prevention initiatives.
- Strengthening workplace programmes: BCIC links workplace initiatives to health care services related to HIV prevention, treatment, care, and support. It creates opportunities for peer support in maintaining healthy, low risk lifestyles in the workplace programmes. It integrates communications on community rights, universal precautions, post exposure prophylaxis (PEP), and management of the workplace HIV contaminated waste products.

- HIV Testing: BCIC expands and markets HIV testing and counselling (HTC) services with special attention to men, couples and adolescents while encouraging these targeted groups to make HIV testing a norm before introducing sex into their relationships.
- Sexual Partner Reduction: BCIC promotes faithfulness to one sexual partner and mobilises community institutions to reinforce social norms supportive of faithfulness to one partner.
- Awareness of treatment care and support: BCIC conducts awareness campaigns for programmes such as STI, PMTCT, IPT, TB, VCT, RHT, and HAART, targeting groups with low rates of participation and communities with low rates of awareness.

District Data Management of BCIC Programme

Reports are sent by NGO/CBO/FBO programme officers or M&E officers at the district and regional offices to the DAC M&E officer. Some organizations prepare and present reports at the quarterly District Multi-sectoral AIDS Committee (DMSAC) meetings. These organizations also send quarterly reports to their national headquarters. Some organizations send the information directly to their national offices or to their grantors and thus bypass the DAC completely. The national offices of these organizations may then send the collated data to the DAC, NACA, their national grantors or their international offices[4].

The BCIC information received by the M&E officer at the DHMT and DAC is generally shared with the Technical Advisory Committee (TAC), a sub-committe of DMSAC as well as the DMSAC. The DHMT and DAC then sends the information to MOH and MLG respectfully. NGO/CBO/FBOs at the regional and district level may also send reports direct to NACA as well as BOTUSA and other funding organizations[4].

2.2.7 Sexually Transmitted Infections (STIs)

Sexually Transmitted Infections (STIs) are infections that are caused by bacteria, viruses, or Protozoa (fungi). They are mainly transmitted through sexual contact. All bacterial STIs can easily be treated and cured using specific antibiotics.

There are more than 30 different sexually transmissible bacteria, viruses, and parasites, see figure 2.2.7 for a few. Several, in particular HIV and syphilis, can also be transmitted from mother to child during pregnancy and childbirth, as well as through blood products and tissue transfer.

Seeking healthcare early for treatment of STIs is important to avoid complications. The treatment of sexual partner(s) is of significant importance to avoid recurrence/repeated infections. Treatment of STIs during pregnancy prevents mother to child transmission. Most viral STIs do not have a cure (DHAPC 2010).

Table 2.2.7 Causative Organism of STIs **(DHAPC 2010).**

Causative organism	Infection/disease caused
Treponema pallidum	Syphilis (Rasephiphi)
Haemophyllus ducrei	Chancroid
Nisseria gonorrhoea	Gonorrhoea (Thosola)
Chlamydia trachomatis	Chlamydia
Trichomonas vaginalis	Trichomoniasis
Human Immunodeficiency virus	HIV & AIDS
Herpes simplex virus	Genital herpes
Human papiloma virus	Genital warts(dikakana) , Cervical cancer
Hepatitis B virus	Viral Hepatitis, cirrhosis, Liver cancer (Hepatoma)
Candida albicans	Vaginal candidiasis (vaginitis)

In 1992, the National STI Management and Control Programme was established. The WHO STI Syndromic management was adopted and integrated in all PHC including ANC and family planning services. In 2005 the programme was upgraded to STI Unit under the division of Care and Support of the Department of HIV & AIDS Prevention and Care. The programme has a National STI Training and Research centre in Gaborone. It provides periodic STI training to health care providers and it also conducts operational research related to STIs.

Goal of the STI Programme

The programme goal is to reduce morbidity and mortality due to HIV & AIDS.

Objective of the STI Programme

- The aim of the programme is to contribute to the reduction of HIV transmission through reduction and control of STIs.

Service Delivery by the STI Programme

STI Management has adopted the following strategies:

- Promotion of early care seeking behaviours for STIs to avoid complications
- STI Partner tracing parallel to Multiple Concurrent Partners (MCP) strategy: The strategy targets the strengthening of STI partners tracing and management in order to reduce the pool of STI/HIV infection in the community.
- Reaching out to the most at risk populations (MARPS), including sex workers, in management and control of STIs: Strengthen STI service delivery including outreach services with more focus to reach MARPS, youth, and vulnerable populations including seasonal farm workers and mine workers.
- Safe Male Circumcision: The programme plans to reach out to more men and create awareness on STI/HIV prevention, management, and control through Safe Male Circumcision (SMC) services.
- Prevention: All sexually transmitted infections are prevented in similar ways to control transmission of infection to sexual partner(s) and the spread of infection in the community. Like any infectious disease, STIs can be prevented. Some preventions include:
    - Primary Prevention:
        - prevention of occurrence of infection through safer sex practices "ABC" (Abstinence, Be faithful, Condom use);
        - circumcision of HIV negative men (0-49 years);

- screening of blood, safer injections, and safer blood transfusion;
- regular and routine screening for syphilis, HIV, HPB and HPV-Pap smear; and
- use of vaccine (HBV, HPV) Hepatitis B vaccine which is available in Botswana.

o Secondary Prevention:

- This is prevention of STI complications when infection has occurred. This includes early health-seeking behaviour, early treatment of both patients and sexual partner(s), adherence to prescribed treatment of all STI conditions, abstaining from sex while on treatment, or use of condom until cured.
- Screening and early treatment of STIs for pregnant mothers including Syphilis screening, HIV, and Hepatitis B is very important in secondary prevention.

o Tertiary prevention:

- This is prevention of death when STIs such as syphilis, HIV, AIDS, cervical cancer, HPV, and Hepatitis C have advance to complicate vital organs. Antiretroviral therapy, radiation therapy, surgical treatment, and other palliative care method are used to prevent pain and suffering at this stage[2].

District Data Management of STI Programme

The M&E officer at the DHMT receives the *Out-patient and Preventative Health Statistics Monthly Summary Form (MH 1049)* from facilities and aggregates the data using MS Excel or DHIS. They also receive the *Monthly Report of Notifiable Diseases (MH 2072)* from the facilities. The DHMT M&E officer sends the *MH 1049* and *MH 2072* to MOH Health Statistics Unit (HSU) and the Sexual Reproductive Health (SRH) Unit on a monthly basis (Ledikwe et al. 2010).

The DHMT M&E officer provides the STI data from the *MH 1049* to the DAC M&E officer. The DAC M&E officer enters the data into *BHRIMS Form 003B*, which is sent to MLG-PHC Quarterly (Ledikwe et al. 2010).

The STI Unit also collects data on the quality of care directly through periodic supervisory visits to facilities by STI Unit staff as well as by STI District Trainers. STI District Trainers are responsible for submitting summaries of supervisory visits and STI Partner Tracing Reports to the district (Ledikwe et al. 2010).

Learning Activity 2.2.7

What I Know About Sexually Transmitted Infections

Directions: Answer the following questions to the best of your ability. This is a tool for you to assess your understanding of Sexually Transmitted Infections

1. How can a man and a woman tell that they have an STI?

2. What should a man or a woman do if they notice these symptoms?

Discussion 2.2.7

What I Know About Sexually Transmitted Infections

1. How can a man or a woman tell that they have STI?

The following are the common signs and symptoms of STI that one can notice;

Women:

- *Abnormal vaginal discharge which may or may not be offensive may be yellow or greenish in colour*
- *Lower abdominal pains*
- *Burning sensation when passing urine*
- *Pain during sexual intercourse and sometimes bleeding*
- *Some slight bleeding between the periods*
- *Frequent urination*

Men:

- *Urethral discharge which may or may not be smelly- it can be watery, milky, thick green or yellow*
- *Burning sensation when passing urine*
- *Frequent urination*
- *Lower abdominal pains*
- *Pain and swelling of the testicles*
- *Itchy feeling inside the penis*

2. What should a man or a woman do if they notice these signs and symptoms?

NB. Some STIs may not have obvious signs and symptoms

- *Consult a health care provider without delay if in doubt or suspicious of something especially if there has been some risky behaviours like unprotected sex*
- *Get appropriate treatment*
- *Abstain from sex until cured of the STI*
- *Complete the course of treatment even when the discomfort is no longer there*
- *Inform your sexual partner and encourage him/her to go for examination and treatment*
- *Discuss the STI with your partner and how you will make sure it does not happen again*
- *Decide to use condoms whenever you have sex*

2.2.8 Safe Male Circumcision (SMC)

Safe Male Circumcision (SMC) is recognized by the WHO as an added strategy for prevention of HIV. The results of 3 randomized clinical trials have led to the conclusion that male circumcision is an effective risk-reduction measure for uninfected men and should be used in addition to other known strategies for the prevention of HIV infection in men.

Three SMC clinical trials were conducted in Kenya, South Africa, and Uganda. They provided enough evidence to show that male circumcision reduces the risk of HIV infection from an infected female to male partner by 50-60%. According to the results of the trials in South Africa, reduction of HIV infection among males aged between 18-24 years was 60%; in Uganda the reduction among males aged 15-69 years was 51% while in Kenya the HIV reduction was 53% (See Table 2.2.8 below).

Table 2.2.8 Clinical Trials **(Auvert et al. 2005; Gray et al. 2007;Bailey et al. 2007)**

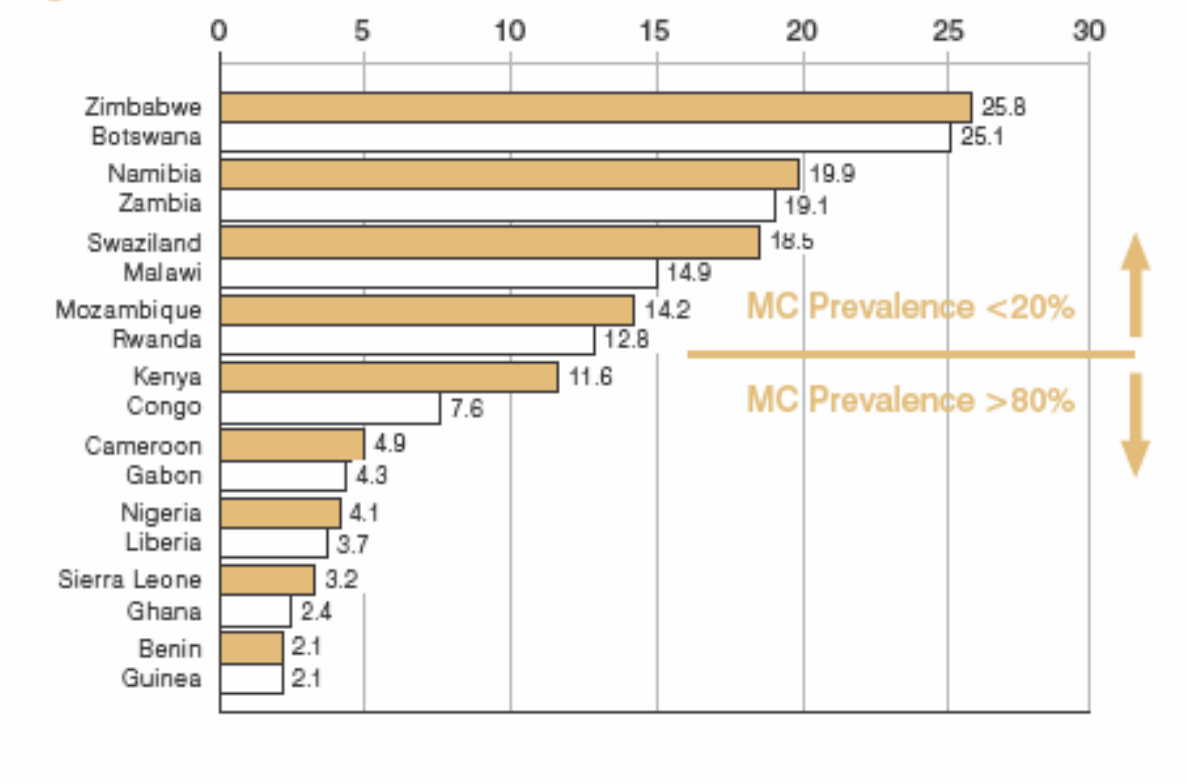
SER	LOCATION	SAMPLE	OUTCOME (HIV Incidence)	REMARKS
1	Orange Farm, RSA	N = 3274 Age: 18 - 24	**60%** Reduction	
2	Rakai, Uganda	N = 4996 Age: 15 - 49	**51%** Reduction	Stopped 2006 MC offered to uncircumcised
3	Kisumu, Kenya	N = 2784 Age: 18 - 24	**53%** Reduction	Stopped 2006 MC offered to uncircumcised

With such compelling evidence, in 2007 WHO/UNAIDS recommended that SMC be an added strategy for HIV prevention. This has prompted many countries in Africa to scale up this component of HIV prevention and develop national policies, strategies, and implementation guidelines.

It has also been observed that in countries where the prevalence of male circumcision is high, the prevalence of HIV is low as shown by figure 2.2.8 for West African countries. Where prevalence of circumcision is more than 80% the prevalence of HIV ranges between 2.1% to 3.7%. On the other hand countries in Southern Africa where male circumcision prevalence is less than 20% the prevalence

of HIV is very high and ranges between 18.5% to 25.8% (see Figure below). The conclusion is that HIV prevalence is generally lower in populations that practise male circumcision than in populations where most men are uncircumcised.

Figure 2.2.8 African Countries HIV and MC Prevalence



Langeni, T. *Male circumcision and sexually transmitted infections in Botswana*. J biosoc sci, 2005. 37(1):p.75-88

(The sections below adapted from the GOB *Safe Male Circumcision Manual*, 2009).

Male circumcision has been adopted in Botswana and approved by the government as an added national HIV prevention strategy. When giving the public information about SMC and its benefits it has to be stressed that circumcised men can be infected and can still transmit the virus to their sexual partners and therefore the usual risk reduction measures still have to be used.

Overall Goal of the SMC Programme

The overall goal of the programme is to contribute to the reduction of HIV infection rates in the country by increasing Safe Male Circumcision (SMC) practices in order to reach circumcision prevalence of 80% among 0-49 year old HIV-negative males by 2016.

Objectives of the SMC Programme

- Strengthen the capacity of health services for scaling up SMC including: training, human resources, outsourcing, infrastructure, standard setting, mentorship, linkages, and referrals.
- Offer comprehensive SMC service package to all men consenting to undergo SMC.
- Strengthen BCIC on SMC for all segments of the population including: circumcised males, women, parents, stakeholders, uncircumcised males, and general community mobilisation.
- Systematically monitor and evaluate SMC programme, including the acceptance, performance, coverage, safety, and impact of SMC services.

Service Delivery by the SMC Programme

SMC is a fairly new programme in Botswana and as such not all aspects of the programme are up and running. The initial phase of SMC concentrates on scaling up SMC in the 34 hospitals, 8 clinics, and 17 private clinics that are currently performing male circumcision.

All stakeholders play a part in the rollout of SMC in the following ways.

- Civil Society: NGOs/CBOs/FBOs and the civil society as a whole play a pivotal role in the implementation of the BCIC component of the *National SMC Strategy* and in the provision of VTC services in addition to counselling for SMC. They are instrumental in educating the public and creating public support and demand for SMC.
- MOH: The MOH mandate is to provide strategic technical guidance to the planning, implementation, monitoring, and evaluation of SMC as an HIV prevention strategy.
- MLG: The rollout of SMC is spearheaded by MLG and together with MOH they ensure that the minimum package of SMC services (see below) for various clinics and health post are defined and provided.
- NACA: NACA provides overall coordination of SMC and ensures that it is integrated with other HIV prevention efforts as defined in the National Prevention Plan.
- Development Partners: Development partners will be expected to provide financial support and technical assistance in the planning, coordination, implementation, monitoring, and evaluation of the scaling up of SMC.

The SMC minimum package should be available at all facilities providing services for SMC. The minimum package includes:

- HTC,
- active screening to exclude of symptomatic STIs,
- provision and promotion of male and female condoms,
- on-going counselling on risk reduction and safer sex practices, and
- Safe Male Circumcision surgical procedures performed as prescribed in the *Botswana Safe Male Circumcision Manual for Service Providers*.

In order for the SMC to be successful it requires that relevant and correct information be disseminated to the targeted audiences (at community level) who are:

- Primary target audience are:
  - sexually active HIV negative men and their partners,
  - men who are not already circumcised,
  - parents/guardians of infants and children potential for SMC,
  - couples or single mothers expecting a baby, and
  - discordant couples where the male is HIV negative.
- Secondary target audiences are:
  - female partners of men who fall into primary target,
  - men other than the above, and
  - children.

Minimum SMC information required by the community

The following information is to be shared with the community as minimum information required on SMC.

- Description of what SMC is, including the benefits and risks of circumcision.
- Emphasize that SMC does not provide complete protection against HIV infection and that circumcised males can become infected and can infect their sexual partners if other safer sex options are not used.
- Importance of knowing one's HIV status , including
  - information on how HIV is transmitted,
  - how to protect oneself from HIV,
  - where support can be found if the test result is positive,
  - the importance of knowing one's status before undergoing SMC, and

- SMC is not recommended for HIV infected men.

- Emphasis on the importance of avoiding HIV infection through different strategies to reduce the risk of acquiring the infection.
- Emphasise that the penis should be allowed to fully heal before resuming sexual activity.
- Emphasise that men should treat women as equal partners in the sexual and reproductive health decision making, including SMC.

(Source: Manual for Service Providers; Safe Male Circumcision: Additional Strategy for HIV Prevention)

District Data Management of SMC Programme

SMC data comes directly from the facilities to the national level. This is because currently the M&E officer at DHMT is not involved in the SMC programme. Plans are in place to involve the M&E officer in the future. In the facilities there are several registers that are used. When a client comes, *The Out-patient Card* is used to capture all the necessary information. If they are interested in getting circumcised they are booked for the procedure using *Operation Booking Register (for all minor Procedures*). After the operation is done, further information is entered in to *Operation Record Book (for all minor procedures)*. In instances where something went wrong with the procedure, an adverse event, the *Safe Male Circumcision Adverse Events Record Book* is used to capture all the necessary information. At the end of each month data is aggregated and sent to MOH using a *Summary Sheet for Safe Male Circumcision.*

Reflection

Based on what you know about male circumcision, take a moment and consider the following questions:

- In the communities that you come from do a lot of families circumcise their young sons?
- Would you have your own male child circumcised?
- What are some of the reasons why people choose to circumcise or not to circumcise?

2.2.9 HIV Testing and Counselling Programme

HIV testing and counselling (HTC) services are an important component of a comprehensive HIV prevention response. In Botswana testing for HIV is recommended as the standard of care and best practice. It is the entry point to prevention, treatment, care and support services, and opportunity for people to access the required post test services.

Objectives of HTC services:

- to increase the number of persons within the sexually active population (15-49) who know their HIV status,
- build capacity for the provision of HIV testing and counselling services,
- develop HTC policy standards and programmes, and
- ensure quality HTC service delivery.

The HTC programme was established in 1989. At the beginning of the epidemic HTC services were primarily voluntary and provided by the Botswana Red Cross Society, hospitals, and clinics on a limited scale. The voluntary counselling and testing (VCT) services were later offered on a larger scale when Tebelopele VCT centres were established in the districts with the support of the US Government to increase counselling and testing services and to facilitate access to other care services.

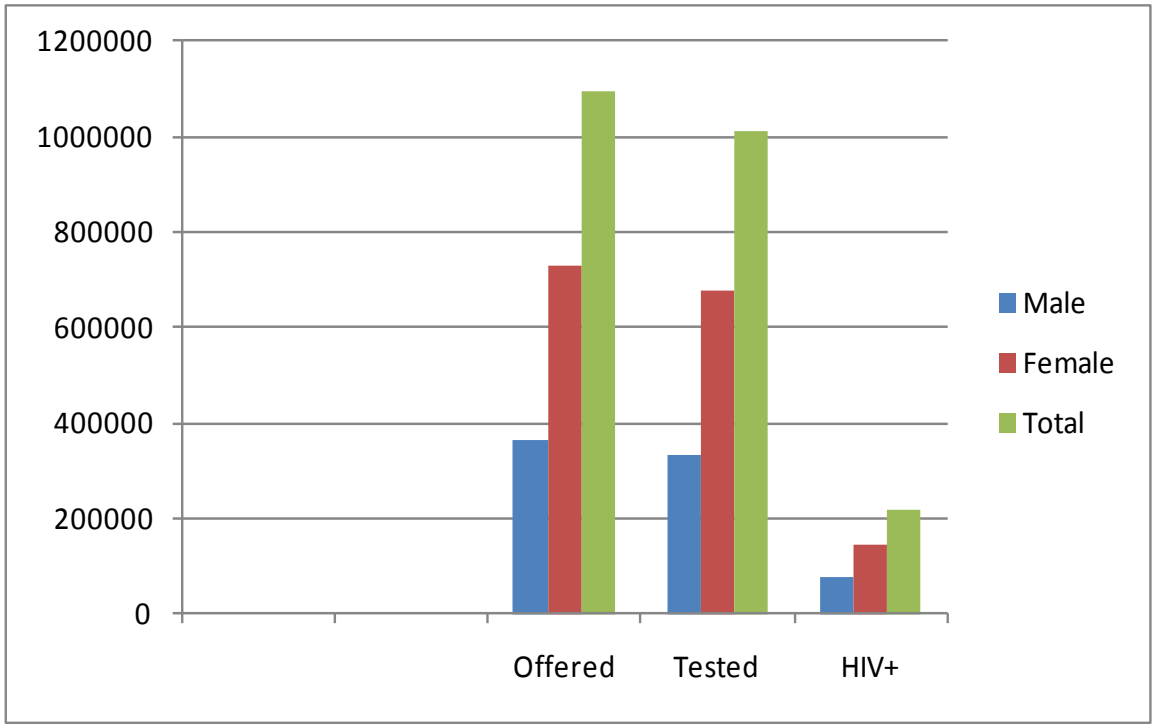
VCT is a client initiated HIV prevention intervention that gives the individual or couples the necessary opportunity to confidentially explore their HIV risks and know their HIV test results.

In 2004 Routine HIV Testing (RHT) was introduced and is now offered in all public facilities. RHT is done primarily to enable all clients visiting the health facilities to know their HIV status early in order to link them to prevention, care, treatment, and support services.

RHT is a form of provider-initiated testing and counselling where health care providers offer and perform HIV testing and counselling for all clients in health facilities. In RHT clients are offered an HIV test and they can opt out or decline to be tested. Since the introduction of RHT acceptance amongst those offered the test has been increased.

With the combination of both VCT and RHT there has been a tremendous increase in the numbers of people seeking these services as well as those enrolling for various treatments.

Figure 2.2.9.a RHT Cumulative 2005-2010



Source: DHAPC Routine Testing Report

Table 2.2.9 Benefits of HTC to Individuals, Couples, and Community

Individual Benefits	Couple Benefits	Community Benefits
1. Empowers the uninfected person to protect himself or herself from HIV. 2. Assists infected persons to protect themselves and others and to live positively. 3. Knowledge of HIV status enables infected persons to seek prevention, treatment, care, and support services such as PMTCT, ART, STIs, family planning, IPT treatment, and prevention of OI and psychosocial support. 4. Reduction of risky sexually behaviours.	1. Supports safer sexual relationships. 2. For couples with discordant HIV test results, knowledge of HIV status can help protect the uninfected partner through condom use, abstinence, or other safer sex practices. 3. Can prevent mother-to-child transmission of HIV if couples learn that they are HIV infected. 4. Guides couples in making informed decisions about future plans including HIV prevention, family planning, treatment, care, and support.	1. Generates optimism when large numbers of persons test HIV negative. 2. Increases community support for those who test HIV positive. 3. Influences community norms regarding HIV testing, risk-reduction, discussion of HIV status and condom use. 4. Reduces stigma, denial, and discrimination as more persons go public about their HIV status. 5. Promotes awareness and community support for appropriate interventions. 6. Supports human rights such as the right to choose.

Source: DHAPC website: www.hiv.gov.bw

Service Delivery by HTC Programme

HTC is routinely offered at all public health facilities around the country including Tebelopele VCT, Botswana Christian AIDS Intervention Programme (BOCAIP), Botswana Family Welfare Association (BOFWA), and other private providers.

HIV Counselling and Testing (HCT) refer to the process by which an individuals or couples receive an HIV test and counselling. In Botswana, two approaches are employed in providing HTC services, namely RHT and VCT. In both RHT and VCT, the universal human rights are respected to meet the requirements of the "3Cs," confidentiality, counselling, and informed consent.

All counselling is tailored to fit the individual or couples needs, based on the results. Those who are HIV infected are provided support and referred to the appropriate HIV care and treatment services, such as PMTCT, IPT, TB screening and treatment, ARV, and other services. Those who test HIV negative are provided with prevention or risk reduction counselling, which are tailored to the risk behaviour(s) and circumstances of the individual.

District Data Management of HTC Programme

When patients are counselled and tested data is recorded in the *Out- patient and Preventative Health Consultative Tally Sheet* (MH1048). Data is then aggregated monthly into *Out- patient and Preventative Health Statistics Monthly Form (MH1049)* and sent to DMHT M&E officer.

The M&E officer at DHMT also receives the *Out –Patient and Preventative Health Statistics Monthly Summary Form* (MH 1049) from facilities and aggregate the data using MS Excel or DHIS. The DHMT M&E officer sends the MH 1049 to MOH Health Statistics Unit (HSU) and the Sexual Reproductive Health Unit (SRHU) on a monthly basis. The M&E officer also provides the HTC data from RHT monthly reporting Form to the DAC M&E officer. The DAC M&E officer enters data into the BHRIMS Form 0038 and send to MLG on a quarterly basis. The M&E officer with MLG PHC then aggregates the data and submits a quarterly to NACA.

Reflection

Take a moment and consider the following questions based on your experiences with the HIV Testing and Counselling (HCT):

- What are some of the things that prevent people from testing for HIV and know their status?
- From a personal experience what did you find most difficult about taking an HIV test?
- What did you find most rewarding about knowing your HIV status?

Sel

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Assessment Quiz

1. True or False

   The TB coordinator will record facility information in the District TB register. This data is then entered into the electronic TB Register.

2. True or False

   The DHMT M&E officer will submit two separate monthly reports, one from the MCH Unit and one from Maternity.

3. True or False

   The DAC M&E officer will receive data from the OVC programme (S&CD Officer) to be included in a BHRIMS form and sent to MLG PHC M&E Unit.

4. True or False

   In the PMTCT programme only HIV infected women need counselling on infant feeding.

5. True or False

   Only clients who agree to have an HIV test can be circumcised according to according to the Safe Male Circumcision guidelines.

6. True or False

   Mother to Child Transmission of HIV has declined from 37.4% in 2003 to 32.5% in 2009 among women 15-29.

7. True or False

   TB is curable even among HIV infected people.

Appendix

WHO Clinical Staging of HIV/AIDS for Adults and Adolescents

REVISED WHO CLINICAL STAGING OF HIV/AIDS FOR ADULTS AND ADOLESCENTS

(Interim African Region version for persons aged 15 years or more with positive HIV antibody test or other laboratory evidence of HIV infection)b

Primary HIV infection

Asymptomatic
Acute retroviral syndrome

Clinical stage 1

Asymptomatic

Persistent generalized lymphadenopathy (PGL)

Clinical stage 2

Moderate unexplained weight loss (<10% of presumed or measured body weight)

Recurrent respiratory tract infections (RTIs, sinusitis, bronchitis, otitis media, pharyngitis)

Herpes zoster

Angular cheilitis

Recurrent oral ulcerations

Papular pruritic eruptions

Seborrhoeic dermatitis

Fungal nail infections of fingers

Clinical stage 3

Conditions where a presumptive diagnosis can be made on the basis of clinical signs or simple investigations

Severe weight loss (>10% of presumed or measured body weight)

Unexplained chronic diarrhoea for longer than one month

Unexplained persistent fever (intermittent or constant for longer than one month)

Oral candidiasis

Oral hairy leukoplakia

Pulmonary tuberculosis (TB) diagnosed in last two years

Severe presumed bacterial infections (e.g. pneumonia, empyema, pyomyositis, bone or joint infection, meningitis, bacteraemia)

Acute necrotizing ulcerative stomatitis, gingivitis or periodontitis

Conditions where confirmatory diagnostic testing is necessary

Unexplained anaemia (< 8 g/dl), and or neutropenia (<500/mm3) and or thrombocytopenia (<50 000/ mm3) for more than one month

Clinical stage 4

Conditions where a presumptive diagnosis can be made on the basis of clinical signs or simple investigations

HIV wasting syndrome

Pneumocystis pneumonia

Recurrent severe or radiological bacterial pneumonia

Chronic herpes simplex infection (orolabial, genital or anorectal of more than one month's duration)

Oesophageal candidiasis

Extra-pulmonary TB

Kaposi's sarcoma

Central nervous system (CNS) toxoplasmosis

HIV encephalopathy

Conditions where confirmatory diagnostic testing is necessary:

Extra-pulmonary cryptococcosis including meningitis

Disseminated non-tuberculous mycobacteria infection

Progressive multifocal leukoencephalopathy (PML)

Candida of trachea, bronchi or lungs

Cryptosporidiosis

Isosporiasis

Visceral herpes simplex infection

Cytomegalovirus (CMV) infection (retinitis or of an organ other than liver, spleen or lymph nodes)

Any disseminated mycosis (e.g. histoplasmosis, coccidiomycosis, penicilliosis)

Recurrent non-typhoidal salmonella septicaemia

Lymphoma (cerebral or B cell non-Hodgkin)

Invasive cervical carcinoma

Visceral leishmaniasis

The UN defines adolescents as persons aged 10−19 years but, in the present document, the category of adults and adolescents comprises people aged 15 years and over for surveillance purposes.

Laboratory services are a key component to many national programmes

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Self Assessment Answer Key

1. **True** or False

   The TB coordinator will record facility information in the District TB register. This data is then entered into the electronic TB Register.

   True - Inputting data into the e-TB register makes data management easier and more accessible to people who are involved in the programme management

2. True or **False**

   The DHMT M&E Officer will submit two separate monthly reports, one from the MCH Unit and one from Maternity.

False - One consolidated report facilitates decision making, and allows programme implementers and others to device strategies to improve programme performance

3. **True** or False

   The DAC M&E Officer will receive data from the OVC programme (S&CD Officer) to be included in a BHRIMS form and sent to MLG PHC M&E Unit.

True - The reports are used at district and national level to make decisions, source funding and improvement of programme performance

4. True or **False**

   In the PMTCT programme only HIV positive women need counselling on infant feeding

False - All pregnant women are counselled on infant feeding to facilitate decision making.HIV negative women are encouraged to breast feed the babies because of the benefits of breast feeding to both mother and baby.

5. True or **False**

   Only clients who agree to have an HIV test can be circumcised according to according to the Safe Male Circumcision guidelines.

   False - Everybody is encouraged to know their HIV status because of the obvious benefits Men who seek SMC services are offered an HIV test routinely but they cannot be denied the services if they do not want to test.

6. **True** or False

Mother to Child Transmission of HIV has declined from 37.4% in 2003 to 32.5% in 2009 among women 15-29

True -Multiple approaches to PMTCT service provision (information, counselling and routine testing and ART have all contributed to the decline)

7. **True** or False

TB curable even among HIV infected people.

True - TB can be cured among HIV infected people if they adhere to their medication monitored closely and supported throughout the treatment period. It usually takes a longer time for patient to be cured because of HIV

Self-Directed Learning Workbook1:
Chapter Three
District- Level M & E Officer's Job Description

M & E Officers complete many important duties to monitor the national response to HIV & AIDS

Chapter 3:
District-Level M&E Officers' Job Descriptions

Estimated time needed for completion: 2 hours

Chapter Overview

In chapters 1 and 2 you were introduced to the primary health care structures in Botswana and the national response to HIV and AIDS. In this chapter we will provide you an overview of your objectives as an M&E officer and outline your duties. We will also give you some tips on how to get started in your new job, describe the communication and relationship-building skills you will need for your job, and discuss professional work ethics.

Learning Objectives

At the end of this chapter, you will be able to:

- describe the main activities of a district M&E officer,
- list expected deliverables for the district M&E officer,
- develop a plan for building relationships with colleagues at your new post, and
- describe appropriate use of communication strategies.

3.1 Your Job Description at a Glance

3.1.1 Objectives of District-level M&E Officers

The overall objective of your position as a monitoring and evaluation (M&E) officer is to monitor and evaluate the response to HIV and AIDS at the district level and provide M&E support for other health programmes. You will learn more about M&E in the next chapter and in other workbooks.

You will receive a full job description and details of your job duties from your employer. Generally speaking, you will measure the progress of district HIV and AIDS programmes and other primary health care programmes as well as analyze data to facilitate planning and decision-making at the facility, district, and national level. You are expected to collaborate with a number of organizations engaged in HIV and AIDS prevention, care, treatment, and support within the district that you are posted. You will be working with the District AIDS Coordination (DAC) office, District Health Management Teams (DHMT), hospitals, clinics, health posts, non-governmental organizations (NGOs), faith-based organizations (FBOs), and community-based organizations (CBOs). All of these groups are stakeholders. That is, they are people who have an interest in the success of HIV and AIDS programmes and other primary health care programmes in the district.

3.1.2 Your Deliverables

As an M&E officer you are expected to produce deliverables which result from your daily activities. These are long-term goals for which you will be evaluated that are outlined in the *Job Effectiveness Description for Assistant Health Officer/ Health Officer I/II (Monitoring and Evaluation). Form No. MSD/10B* (MLG 2009). You will:

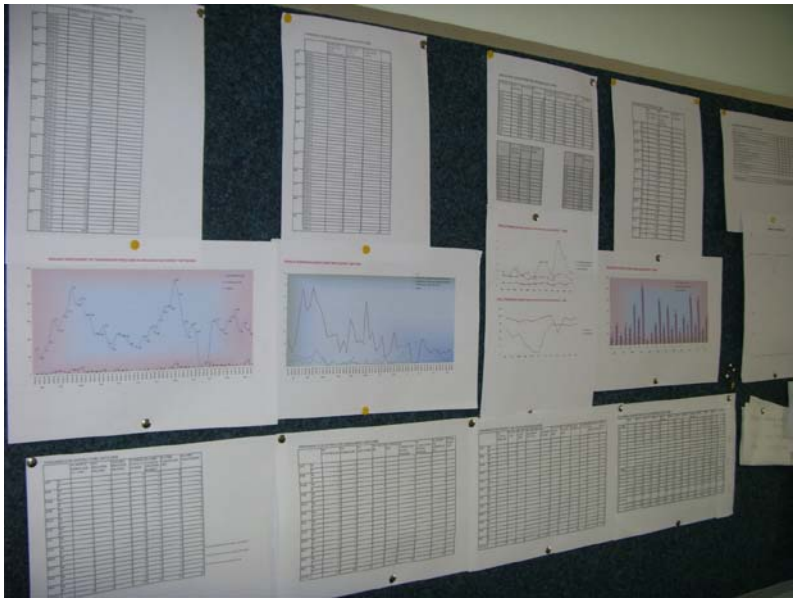
- disseminate monitoring and evaluation data in order to monitor the HIV and AIDS response at the district level;
- participate in the development of an evidence-based planning strategy to provide guidance to the District Multi-sectoral AIDS Committee (DMSAC) on activity planning;
- participate in the development of research action plans for HIV and AIDS and other primary health care programmes at the district level;
- participate in operational research at the district level;
- ensure data collection tools are in place to provide guidance to NGOs, CBOs, and FBOs on the development of HIV and AIDS monitoring, evaluation, and reporting tools;
- compile M&E reports;
- perform routine data audits on district HIV programmes;
- manage database to monitor HIV and AIDS response;
- enhance performance by having reviewed data collection tools;
- project memorandum for HIV and AIDS and other primary health care programme funds;
- monitor proper utilization of HIV and AIDS programme and other primary health care programme funds;
- improve M&E implementation in the district through souring technical support;
- provide feedback to all stakeholders;
- aquire knowledge through workshops, conferences, and publications; and
- disseminate acquired information with others.

3.1.3 Your Duties

The core duties listed below will help you fulfil your job expectations.

Something to keep in mind is that the best way to accomplish your goals is to break them down into small achievable manageable tasks. You should discuss these tasks with your supervisor so that both of you are clear about what is expected of you and by when.

M&E officers have many responsibilities. Your district may have 1 hospital, 15 health clinics, and 45 health posts. You will also be working with individuals from the private sector such as private clinics or traditional healers as well as non-governmental organizations such as FBOs, CBOs, and NGOs. In order to monitor and evaluate the HIV-related activities in your district you will need to work with all of these different partners in the national response initiatives and efforts against HIV and AIDS.



As an M&E Officer you will create graphs monitor progress in your district

Table 3.1.3 Day-to-Day Duties of District-Level M&E Officers

Data Collection	• *Receive data from facilities (clinics, NGOs, CBOs, and workplaces) and systematically track receipt, timeliness, and non-reporting by facilities* • *Develop databases to store data* • *Follow-up by telephone or facility visit when data is not submitted on time or if there is need for verification or clarification of data* • *Document and share with supervisor challenges related to data collection such as lack of reporting by facilities*
Reporting	• *Prepare and present weekly, monthly, and quarterly reports on time* • *Report through the electronic Botswana HIV/AIDS Response Management System (e-BHRIMS) and District Health Information System (DHIS)* • *Compile and submit facility data to the MOH Health Statistic Unit*
Data Quality, Auditing, and cleaning	• *Assess data quality (completeness, accuracy, timeliness, integrity, reliability, confidentiality, validity)* • *When data are received, assess completeness, ensure values are within appropriate ranges, compare it with previously reported data, and (if possible) compare it with data from other sources* • *Conduct regular data audits at facilities by reviewing data entered in registers and by aggregate data from registers and compare it with the data submitted by facilities.* • *Work with programme coordinators or focal persons in organizing meetings, workshops, trainings and support visits for facility personnel and relevant stakeholders on the use of data collection tools and to improve data quality*
Data Entry	• *Enter data in a timely fashion into eBHRIMS, DHIS, or other databases* • *After data is entered, ensure it is cross-checked by a programme officer or another M&E officer*
Data back-up and security	• *Back-up data regularly* • *Use passwords to protect electronic data*
Data analysis and interpretation	• *Conduct simple data analysis using Excel* • *Compare past and present performance of facilities and programmes over time to identify trends* • *Compare data for different facilities within a district* • *Compare district-level data with national and international data*
Data presentation and use	• *Ensure availability of data for annual district evidence-based planning* • *Present data at DMSAC, DHMT, and other stakeholder meetings* • *Use data with stakeholders to assess resource allocation; to examine the quality of healthcare; to determine the need for service modification to improve care, treatment, and support; and to strengthen funding proposals* • *Conduct programme evaluations*

Operational Research	• *Identify research areas in line with the national research agenda* • *Develop research proposals and conduct research projects* • *Disseminate findings to relevant stakeholders and facilitate implementation of recommendations*
Feedback	• *Provide feedback to facility staff on data quality (completeness, accuracy, timeliness, integrity, reliability, confidentiality, validity)*
Team work	• *Conduct weekly working sessions with the other district M&E Officer* • *Work closely with programme focal persons* • *Share learning experiences and exchange ideas with fellow M&E officers in other districts*

3.2 Getting Started at Your New Job

It is common to feel stressed when starting a new job. The following nine tips will help you manage your time and efforts.

1. Introduce yourself and learn about the people you are going to be working with.
2. Spend some time learning about the culture of your organization.
3. Familiarize yourself with the *DMSAC Terms of Reference*.
4. Understand what is expected of you at your job.
5. Ask for help when needed.
6. Learn about HIV and AIDS and other health programmes in your district.
7. Learn as much as you can about the M&E tools that are used in your district.
8. Learn as much as you can about your district.
9. Read previous reports.

Tip 1: *Introduce yourself and learn about the people you are going to be working with*

Building good relationships with your new co-workers is one of the most important things you can do when you arrive at your new job. You will be working with a variety of individuals and groups. Your supervisor will introduce you to these people. Some of the people you will want to meet include; the District AIDS Coordinator (DAC), Assistant DAC, members of the DHMT, the matron and staff at the clinics, and programme officers. Knowing your co-workers can make your work environment more enjoyable and make you feel more involved in the effort to reduce the impact of HIV and AIDS in Botswana. These individuals can also help you learn more about your job and help you access the skills, training, and support you need to do your job. Therefore, it is important for you to be proactive when you get to your district; go out and meet people, explain your skills, find out what their needs are, and how you can help. It is useful to identify someone approachable who will be helpful and willing to answer your questions.

Here is a checklist of questions you could ask your new colleagues to get to know them better:

- How long have you worked here?
- Where are you from?
- What are your job duties?
- What do you like most about your work?
- What do you like least about your work?

Tip 2: ***Spend some time learning about the culture at your new workplace***

Unwritten rules based on shared values and beliefs influence how work is conducted. You will be expected to adapt and accomplish your work in accordance with the culture in your district. To help you learn more about the GOB work culture, familiarize yourself with the *Government of Botswana's General Orders* which is a document governing the conditions of service of the public service of the Republic of Botswana.

Here is a checklist of questions to ask to learn about your organization's culture (Attridge 2008):

- What is it really like to work here? What are the realities of working "our way"? What behaviours and attitudes are expected?
- How are co-workers expected to communicate and deal with each other?
- How are decisions made and problems solved?
- How are employees and clients expected to be treated?

Tip 3: ***Familiarize yourself with the DMSAC Terms of Reference***

As part of your job you will be expected to provide data to be used for planning purposes during the annual district evidence-based planning process at DMSAC and DHMT. You will also be expected to present district data at DMSAC and DHMT meetings. Therefore, familiarizing yourself with the *DMSAC Terms of Reference* will orient you to the DMSAC and the Village/Ward Multi-sectoral AIDS Committee's (V/WMSAC) functions. The *DMSAC Terms of Reference* highlights the importance of planning, monitoring, and evaluation of HIV and AIDS activities at district and sub-district level. It also provides you with guidelines for DMSAC meetings. This will help you understand how you can support the DMSAC.

Tip 4: ***Understand what is expected of you at your job***

Understanding what is expected of you will help give you direction in the weeks and months to come. Your job expectation tells you clearly where you fit in the fight against HIV and AIDS in the district. Speak with your supervisor to clarify your roles and responsibilities as an M&E officer in your district.

Tip 5: ***Ask for help when needed***

It is not a sign of weakness to ask for help. If you do not know how or where to find the information you need, ask your supervisor or other co-workers. If they do not know the answer they might be able to point you to someone who does.

Tip 6: ***Learn about HIV and AIDS and other health programmes in the district***

Refer back to the previous chapters to remind yourself of various health programme objectives. This will help you make sure that your efforts are aligned with theirs. Programme mandates and structures change. Ensure that you regularly touch base with leadership and programme focal persons to stay informed of any changes in health programme information.

Tip 7: ***Learn as much as you can about the M&E tools that are used in the district***

You will be using tools to collect, aggregate, and report data. The M&E tools used in the district are often used nationally. These data collection tools include registers in which patient information is documented, monthly summary forms where aggregated data is reported, as well as several other forms where health information is tallied.

Example: For reporting of HIV testing and counselling (HTC) data, you will need to be familiar with several tools. Clinic information about each client receiving an HIV test is entered into the *HTC Register*. Information from that register is summarized in the facility-level *HTC Monthly Reporting Form* by healthcare works. As an M& E officer you will complete a district-level *HTC Monthly Reporting Form*.

Being familiar with M&E tools will be a critical part of being a successful M&E officer. It will help you to determine which data reporting tools you should expect from the health facilities on a monthly basis, and therefore, know which ones to follow up when they have not been submitted by particular health facilities.

When compiling data, it is important to understand the definitions and interpretations of the variables/items in the tools. This will help to keep the information standardized. Knowing exactly what the question is asking and understanding it the same way as your health colleagues will help in ensuring standardization of monitoring and evaluation of programmes in your district.

Example: If you ask how many people live in the house – are you interested in the number of people who eat and sleep in the house daily or are you interested in the number of people who are part of the primary family that live in the house?

Tip 8: *Learn as much as you can about the district*

You are the local voice for your district. The information you give policymakers can impact their understanding of the HIV and AIDS response in your district and what it means for communities in your district. Your role is not only to provide this information but give a face to the hundreds of communities that are impacted by HIV and AIDS and other public health care programmes. Therefore, you need to be knowledgeable not only about health components of the district but also of the structures and make-up of the district as well.

Tip 9: *Read previous reports (monthly, quarterly, and annual)*

You can model your reports on previous well-written reports. Reading previously written reports will also help you understand the current prevalence and response to HIV and AIDS in the district. This will help you identify some questions that need to be answered. Getting the answer may be as simple as asking questions or as complex as developing a research project or anything in between.

Learning Activity 3.2.1

New Employee Orientation Plan

Directions: Devise a plan for what you will do when you get to your district using the 9 tips for getting started in your new job. Try to create a timeline for your plan. Use the table below as a framework for developing your plan.

Tip	Action Step	Date
Example: *1*	*I will meet with my supervisor to discuss the data flow for the different programmes in my district.*	*By the end of my first week*

Discussion 3.2.1

New Employee Orientation Plan

See a sample plan below. Compare your plan to the sample plan. Are there action steps in the sample plan that you might also include in your plan?

Tip	Action Step	Date
1, 7, 8	Schedule a meeting with the matron to find out who the programme officers are for the different programmes	*Within the first week on the job*
1, 6	Meet with facilities to find out who you will be getting data from	*Within the first 3 months*
9	Review old reports	*Within my first month on the job*
2	Interview colleagues about your organization's culture	*During my first week*
7, 8	Meet with DAC to better understand district activities	*Within my first two weeks*
4	Meet with programme officer to discuss division of responsibility in terms of data-related activities	*Within my first month*
4	Present expected roles at management meetings so it is well understood what the officer will be doing	*Within my first two months*
4	Find out expectations from others in terms of roles and responsibilities	*Within my first two weeks*
1	Develop and maintain a network with other M&E officers, especially within the district, including those at NGOs	*Within first 3 months*

3.3 Communication

In the previous section we discussed useful strategies for starting a new job. We noted that building good relationships with your co-workers is one of the most important things you can do when you first begin a new job. Communication skills are essential in building these good relationships. In this section we will discuss what communication is, different types of communication, and effective communication strategies.

3.3.1 What is Communication? *(PACT 2008)*

Communication is a two-way exchange of information which takes the following forms; verbal, non-verbal, and paraverbal. While most people think of verbal communication as the primary form of passing on information, non-verbal and paraverbal communication are very important and have a greater influence on whether someone understands the message being communicated. Table 3.3.1.a shows the different types of communication whereas table 3.3.1.b shares with you a few common communication tips.

Table 3.3.1a Forms of Communication (PACT 2008)

Types of communication	Forms of communication
Verbal - communication through language	• Written or spoken language
Non-verbal - communication other than through spoken language. Messages conveyed through non-verbal cues are usually more powerful than verbal messages Non-verbal communication cues can by cultural. What may be normal in one culture could be considered rude in another.	• Body language such as folded arms posture, tense neck or jaw muscles, clenched fists, etc • Eye contact • Mannerisms such as fiddling with hair, biting nails, etc • Proxemics (how people stand when talking)
Paraverbal - communicating not by what you say, but how you say it. These can also vary based on cultural norms.	• Voice qualities/ tone such as changing the pitch, tone, or inflection of voice • Rate of speech such as speaking fast or slow • Cadence or rhythm of voice • Volume

Table 3.3.1b Communication Tips (PACT 2008)

Type of communication	What to do	What not to do
Verbal	Follow 3 steps: 1. Introduce what you are going to say, 2. say it, and 3. summarize it.	• Use slang or offensive words.
Non -verbal	• Look the person you are talking to in the eyes (if acceptable) • Nod your head to acknowledge you are listening • Be presentable	• Fold arms • Hands in pocket • Chewing gum • Nail biting • Fiddle with hair • Stand too close or too far from the person you are talking with
Paraverbal	• Vary pitch of voice • Use short sentences rather than long complicated ones	• Talk fast • Shout

3.3.2 Effective Communication

Effective communication means that the correct message goes from the sender to the receiver successfully in the way the sender intended. Just because a message is sent does not mean that it was received accurately.

Effective communication requires the ability of both the sender and the receiver to listen, pay attention, and perceive what the other is trying to communicate and to respond verbally or nonverbally. It is more than just providing information or giving advice. It involves asking questions, listening carefully, trying to understand a co-worker's concerns or needs, demonstrating a caring attitude, and helping to solve problems.

Techniques for effective communication include:

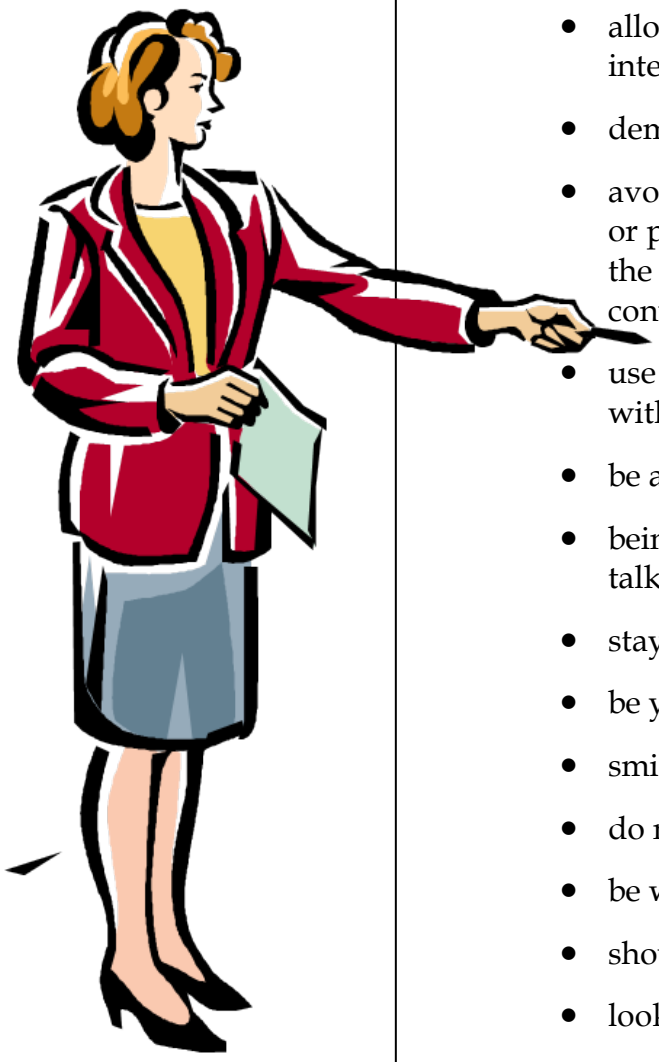
- active listening,
- reflecting, and
- summarizing.

 **Reflection**	*Take a moment to think about a time someone else communicated effectively with you* • What made the communication effective? • How did it make you feel? • What was the end result of your interaction? • What are the benefits of good communication at work?

3.3.3 Active Listening

Active listening is an essential component of good communication. Often, instead of truly listening to what another person is saying, we are thinking about what our response will be to what they are saying, what we want to say next, or something else entirely. Active listening is a way of listening that focuses entirely on what the other person is saying. It confirms understanding of both the content of the message and the underlying emotions and feelings included in the message to ensure that understanding is accurate.

Some helpful strategies for active listening include:



- make eye contact;
- face the speaker;
- concentrate on the speaker and what he or she is saying;
- allow the speaker time to speak without interrupting them;
- demonstrate interest in what is being said;
- avoid distractions, like phone calls, other people, or paperwork (note that this is a factor related to the environment in which you are holding a conversation);
- use attentive body language: sit slightly forward with a relaxed, easy posture;
- be aware of your gestures;
- being on the same level as the person you are talking to;
- stay on the topic;
- be yourself;
- smile or nod appropriately;
- do not monopolize the conversation;
- be warm and enthusiastic;
- show interest;
- look alert; and
- ask open-ended questions.

3.3.4 Reflective Listening

Reflective listening builds on active listening. It is the process of verbally reflecting back what someone has said. Reflective listening helps you check whether you understand your colleague or not and helps your colleague feel understood and respected as a health care worker.

You can confirm that you have understood your co-worker by using statements such as:

- "So you feel like you have not been properly trained in data collection."
- "It sounds like you are concerned about other staff members entering the data correctly."
- "You are wondering if the clinic staff should receive further training on data entry."

It is important to note that the sample statements include the word "you," which emphasizes that you are actively listening and reflecting back what your colleague has said. This helps to check for understanding.

3.3.5 Summarizing

Summarizing is another skill that may be useful for communicating with your co-workers. Summarizing is the process of synthesizing or stating what a colleague has said in order to capture key concerns and issues. Summarizing helps make sure the message that is sent is the message that is received accurately.

Use summarizing

- to check that you have understood the co-worker's story or issue,
- when changing topics, closing discussion, or clarifying something,
- to collect your thoughts, and
- to show your colleague that you have heard and respect his or her point of view.

Learning Activity 3.3
Identifying Communication Strategies

Directions: *Read the case study below. For questions 1-3 determine which communication strategy is being used (active, reflective, or summarizing)*

You have noticed that the data from the PMTCT programme at "facility Y" are consistently late and incomplete. You have called a meeting with the Principal Registered Nurse (PRN) of "facility Y" to try to change this. The conversation is as follows:

M&E officer: Thank you for meeting with me today, as the PRN, I know you are quite busy.

PRN: Yes. What can I do for you?

M&E officer: I have noticed that for the last several months the data from the PMTCT programme is often incomplete and late.

PRN: Yes, well I am a busy person. Do you have any idea how many forms I fill out with data? I can tell you, it is too many. And they are complicated. I don't have the time to review each form. (***PRN crosses her arms and frowns).***

M&E officer: I hear you saying that you are busy and you feel like you have too many forms to fill out. Is that correct?

1. What communication strategy is being used here by the M&E officer?

_____

PRN: Yes. That is exactly what I am saying.

M&E officer: I see. ***(nodding and pausing for a few seconds)***

2. What communication strategy is being used here by the M&E officer?

_____

M&E officer: Maybe you can tell me a little bit more about your process for filling out the form?

PRN: O.K. Well, the data is usually due the first of each month for the preceding month. I usually have to gather data for several programmes at the same time. So, I usually do not get to the registry in order to obtain the PMTCT information until 1-2 days before the form is due.

M&E officer: So, you usually go to the registry 1-2 days before the form is due to transcribe the data. And, you have to submit data for several programmes at the same time as the PMTCT data, is that correct?

PRN: Yes, that is correct. But once I go to collect the information, the registry is often not there. I think that since the maternal and child health (MCH) data is also due by the end of the first week for the preceding month, the midwife has taken the registry to fill out her forms. So, I have to wait until she is done and brings the registry back in order to fill out my forms. Sometimes that takes several days. So, that is why you do not get my data until the second week of the month.

M&E officer: Yes, it sounds like the registry is in high demand that first week of the month and that can make it difficult to get access to the registry. Well, I have some ideas about how you might be able to get the information without having to wait until the second week of the month. What do think about making a plan?

3. What communication strategy is being used here by the M&E Officer?

_____

PRN: Well, you can share your ideas. I am not sure they will work, but say them anyway.

District-level M&E officer: What if you collected the data from the MCH registry first, early in the week. That way you will be done with the registry by the time the midwife comes to collect her information. Or, you could make a plan with the midwife. You and she could identify one day each during the first week of the month when each of you could use the registry. That way you both have your designated time to gather the information you each need from the registry.

PRN: That might work. I guess I would have to go talk to the midwife to see if that would work.

District-level M&E officer: Yes. That might make gathering data for the monthly reports easier for both of you!

Discussion 3.3

Identifying Communication Strategies

1. What communication strategy is being used here?

The communication strategy being used is summarizing. Summarizing is used to verify that the message sent is the same message that is being heard. Here, the M&E officer is verifying that they understand why the PRN finds it difficult to get the necessary forms filled out completely and on time.

2. What communication strategy is being used here?

The communication strategy being demonstrated here is non-verbal communication. Non-verbal communication can be used to reinforce or emphasize what is being communicated verbally. In this case, the M&E officer is using silence and gestures (nodding) to convey that they empathizes with what the PRN is saying.

3. What communication strategy is being used here?

The strategy here is reflective listening. Here the M&E officer is confirming why the PRN finds it challenging to get the registry when she needs it.

3.4 Professional Work Ethics

Using effective communication strategies can help build strong working relationships as does having a professional work ethic. Work ethic is defined as a set of values that shape an employee's feelings and guide their actions with respect to their work or job. There is no doubt that in order to complete university and get a job as a district-level M&E officer you have had to demonstrate your work ethic. However, you may now be entering a professional work environment for the first time in your life. What does it mean to have a good work ethic in the professional setting?

Reflection

Take a moment and consider the following questions:

- What does 'good work ethic' mean to you?
- How do you think 'good work ethics' in a professional environment might differ from an academic environment?

3.4.1 Attributes of Professional Work Ethics

An employee with a professional work ethic can be described as having the right attitude, being respectful of others, and communicating effectively. Specifically, there are several attributes that are associated with work ethic.

Attributes of Work Ethic:

- Honesty
- Integrity
- Dependable
- Efficient
- Initiative
- Humility
- Good teamwork
- Positive attitude
- Sense of humour

The first of these is **honesty**. As an honest employee you will not lie, cheat, or steal. You will be sincere, fair, genuine, and truthful. Similar to honesty, **integrity** is also a virtue of a good work ethic. To act with integrity means to act honourably and with a set of morals as your guide. Good work ethic also means that you are **dependable**. As a dependable employee you are reliable and worthy of trust. You will consistently do your best to not only get the job done, but work to do the job well. You can be held accountable for your work. As an **efficient** employee you will not only get the job done well, but will do so with a minimum expenditure of energy and resources. As an employee with a good work ethic, you will want to take the **initiative** to get work done. This means that you will take the lead in doing work, rather than wait for a supervisor or co-worker to ask you to do something. Acting with **humility** is also a sign of a good work ethic. By acting with humility you will hold a modest opinion of yourself and your own importance. A humble

person is not arrogant, but rather, values the opinions and ideas of others. Valuing the opinions and ideas of others is also contributes to good **teamwork**. This means choosing to do what is good for your co-workers, not just for yourself. And lastly, having a **positive attitude** and a **sense of humour** are virtues of a good work ethic. Whether you know it or not, your colleagues are affected by your mood. Remaining positive will help to motivate others to get the job done. A sense of humour will help reduce tension and stress for both you and your co-workers. It is important be careful with humour as not everyone has the same sense of humour. Therefore, you should work to ensure that your humour is not offensive and is directed at yourself and not others.

Please refer to the *GOB Codes of Conduct in the Public Service* for more information on work ethics.

Chapter Summary

M&E officers have a variety of responsibilities and expectations. You must be skilled communicators and have a professional work ethic in order to build the relationships that are necessary for your success. In this chapter you were provided with an overview of your objectives as M&E officers, outlined your duties, and gave you some tips on how to get started. We described a professional work ethic, discussed effective communication skills, and stressed the importance of building relationships at your new job.

M & E Officers complete many important duties to monitor the national response to HIV & AIDS

Self Assessment Quiz

1. True or False
   As a district-level M&E officer you will be required to provide guidance to local NGOs in their activity planning.

2. Which of the following is ***not*** considered a tip for getting started in your new job?
   a. Read previous reports.
   b. Get to know the people with whom you will be working.
   c. Assume that you know all that you need to know. Do not ask for help.
   d. Understand your job expectations.

3. True or False
   As part of your role as a district-level M&E officer you will need to be adept at communicating and collaborating with a number of organizations, both governmental and non-governmental.

4. Write a brief definition of the following communication strategies:
   a. Active listening

   b. Reflective listening

   c. Summarizing

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Self Assessment Quiz Answer Key

1. **True** or False
   As a district-level M&E Officer you will be required to provide guidance to local NGOs in their activity planning.

2. Which of the following is ***not*** considered a tip for getting started in your new job?
   a. Read previous reports.
   b. Get to know the people with whom you will be working.
   c. *Assume that you know all that you need to know. Do not ask for help.*
   d. Understand your job expectations.

3. **True** or False
   As part of your role as a district-level M&E Officer you will need to be adept at communicating and collaborating with a number of organizations, both governmental and non-governmental.

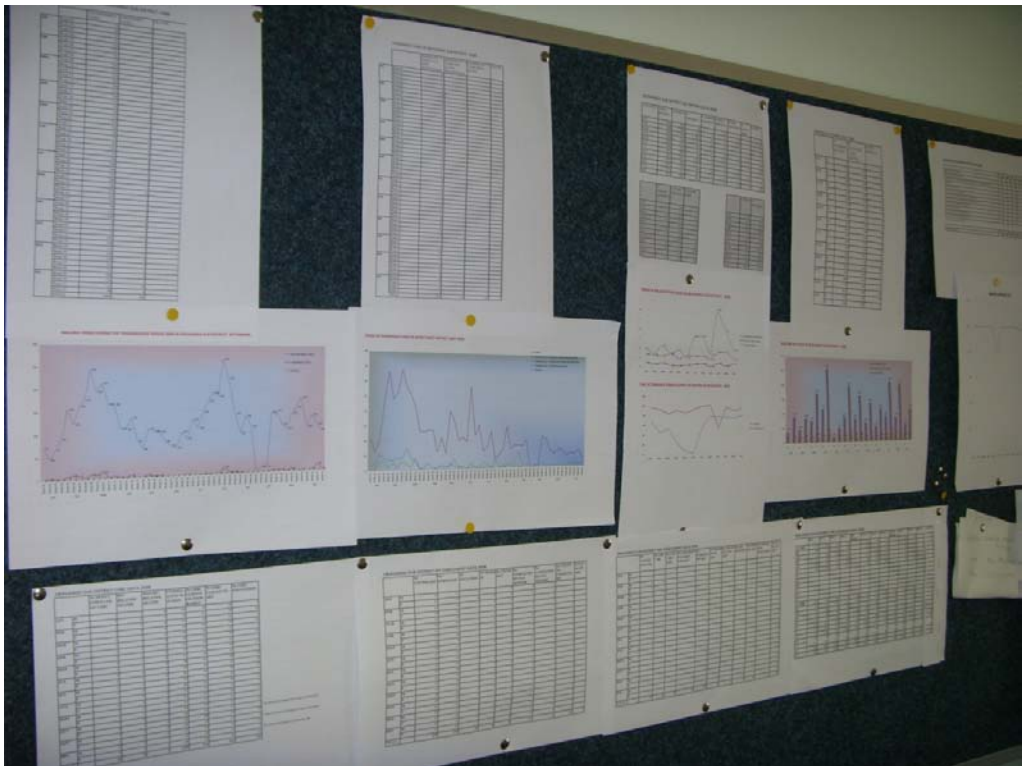
4. Write a brief definition of the following communication strategies:

   a. **Active listening-** *a way of listening that focuses entirely on what the other person is saying and confirms understanding of both the content of the message and the underlying emotions and feelings included in the message to ensure that understanding is accurate.*

   b. **Reflective listening -** *the process of verbally reflecting back what someone has said.*

   c. **Summarizing-** *the process of synthesizing and stating what a colleague has said in order to capture key concerns and issues.*

Self-Directed Learning Workbook 1:
Chapter Four
Introduction to Monitoring & Evaluation



Graphs created by M & E Officers to monitor progress in their Districts

Chapter 4:
Introduction to Monitoring & Evaluation

Estimated time needed for completion: 2 hours

Chapter Overview

In the previous chapters, you learned about the HIV and AIDS situation in Botswana and the Government of Botswana's (GOB) multi-faceted national response strategy. You are part of this national response. As a monitoring and evaluation (M&E) officer you will be tracking various activities that are a part of this national response (monitoring) and determining the extent to which this response is lessening the burden of HIV and AIDS (evaluation). In this chapter you will learn the basics of M&E and how to use M&E to improve programming. You will get an overview of the core activities for which you will be responsible as an M&E officer. More detailed concepts of M&E will be discussed in depth in Workbooks 2 and 3.

Learning Objectives

At the end of this chapter, you will be able to:

- differentiate between monitoring functions and evaluation functions,
- describe how data can be used to improve programming, and
- explain the basic tasks involved in completing the core district-level M&E activities.

4.1 Introduction to Monitoring and Evaluation

As an M&E officer you will collect, process, and analyze data at several points during a programme. You will use the data to look at the progress of programmes towards meeting its objectives and to help the programme stay on track. This process is called *monitoring*. When *monitoring* a programme, you will collect data before a programme is implemented, during the programme, at the end of a programme, or potentially a few years after a programme has ended. You will then compare the data collected at two or more time intervals to determine if the programme has made an impact in your district and country of Botswana as a whole. This process is called *evaluation*.

M&E officers must meet deadlines and maintain a timeline for programmes. This means that you must work with health care facilities to get the data you need with sufficient time to process and analyze the data by your given deadlines.

4.2 Monitoring

Your main job as an M&E officer is to *monitor* the health programmes in your district. This means that you must regularly track a programme or activity to see if the programme is being conducted as intended. You must ensure that the data are systematically collected and analyzed during the implementation of a programme.

4.2.1 Characteristics of Monitoring

Monitoring can be described (Abraha & Nigatu 2009) as:

- A routine tracking process carried out to note the progress of a programme towards achieving a goal or reaching a higher standard. It also reveals the absence of progress.
- An ensuring process that checks whether programme implementation is happening as planned and comparing what was planned against what is actually being done.

Monitoring is a systematic process that can be applied to many situations and purposes. Although mostly associated with programmes and projects, monitoring can be applied at the individual, family, organization, community, or societal level.

4.2.2 What to Look for When Monitoring

You will receive district level data from several programmes every month. You will examine these data to determine: if there have been any changes from what was previously reported, if the data has the values you would expect it to, and if any missing or unexpected data needs to be accounted for.

Example: You will receive counselling and testing data every month. This data includes the numbers of people who test for HIV at the site for the month. When you receive the data, you will check to see if it differs from the previous months' data. As you review the data from the current month and the previous month, you might ask yourself:

- Are all the spaces on the form filled in?
- Is there any missing data?
- Have the number of men, women, couples and children counselled or tested changed?
- Is the change what you expected, based on what you know about activities conducted in the district that month, or are the numbers more than or less than expected?
- Can you analyze the data by gender and by age?

These are all monitoring questions, designed to help you track the progress of the counselling and testing programme in your district.

4.2.3 Summary of Monitoring

Monitoring is a regular process that helps us answer the following questions: *what is being done and how is it being done*? As an M&E officer, you will need to track programme activities and operations. Tracking programme progress will allow you to determine if activities are being carried out as planned, if there are sufficient resources available, and if the resources are being used appropriately. By providing this information, monitoring can help you create strategies for improving performance.

Learning Activity 4.2

Monitoring in Daily Life

Directions: Most individuals do some type of monitoring in their daily lives. Write down examples of when you've used monitoring in your daily personal life.

Discussion 4.2

Monitoring in Daily Life

Possible examples:

- ***Home budgeting*** *– tracking what we spend money on and how much is left at the end of the month*
- ***Weight loss*** *– weekly weight checks*
- ***Household food purchasing****– While keeping track of the cost of food in the market or stores, you notice that guavas are a lot less expensive than pears, so you may buy more guavas and fewer pears.*
- ***University student*** *– As a student, our progress and comprehension is routinely measured through quizzes, papers, reports, practical work, and exams.*

4.3 Evaluation

(Adapted from Shapiro n.d.)

The other component of your job as an M&E officer is to evaluate the health programmes in your district. Evaluation refers to the systematic collection of data to see if a programme is achieving its intended results. While monitoring is designed to answer the questions *"Are we carrying out activities as planned?"* Evaluation is designed to answer the question *"As a result of carrying out our activities, are we seeing the change we expected?"*

Example: Let us say a programme was created to prevent Mother-to-Child transmission (PMTCT) by providing additional PMTCT-focused health education sessions at the health facilities every morning. As M&E officers we would ask if this was accomplished. If it was not accomplished, an evaluation might give you ideas on why it was not accomplished.

We might look at whether the number of infants born to HIV-infected women shows a decrease from the beginning to the end of the intervention. We would also want to know whether the health education sessions were in fact carried out every day and maybe what topics were covered during these sessions.

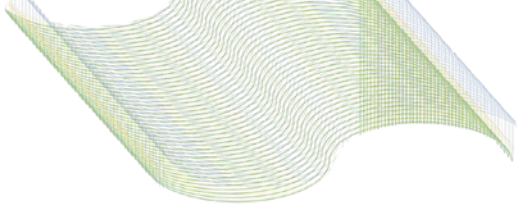
The primary questions asked in evaluation are:

- What changes did the program bring about?
- Were there unintended changes that occurred due to the program?
- Are the benefits of the program likely to be sustained?

4.3.1 What to Look For When Evaluating

In evaluation we want to see if changes have occurred as a result of our programme activities. The types of changes that evaluation addresses can be divided into four categories: 1) programme efficacy, 2) effectiveness, 3) impact, and 4) process.

1. ***Programme Efficacy*** is the degree to which a programme achieves the desired result in a controlled setting. For example, if we want to know how well a certain dose of a TB medication works on patients we would "control the setting" by having nurses administer the medication in a hospital to ensure that the patients take the medication correctly. This will help reduce patient error that could skew the data.
2. ***Programme Effectiveness*** is the degree to which a programme or its component achieves the desired objective in real world settings. For example, we know that the TB medicine worked in the hospital. However, we cannot keep people in the hospital for each month that they need treatment. So, we decide to implement a programme where we send patients home to take the



medication themselves. We must then evaluate whether this type of programme is effective in meeting the objective of curing TB patients. If the programme does meet this objective it is considered effective.

3. ***Programme Impact*** is the degree to which a programme or its components achieve the desired outcomes. Taking the example of TB, we want to see if giving patients medication and the support they need to take the medication at home reduces the number of new people who get ill with TB (incidence) and also reduces the number of people who are currently ill with TB (prevalence) through treatment. Impact tells you the extent to which the programme made a difference.
4. ***Process Evaluation*** looks at how we achieved our goals. It is important to understand how we achieved our goals so that we can use the same processes to achieve these goals in other places. It is also important to ensure that these processes did not result in unintended consequences. For example, we may succeed in our objective of bringing in couples for HIV counselling. However, if as a result men had to lose a day's worth of pay to attend the counselling or if intimate partner violence increased, then we would have to change the way in which we encourage couples to come in for counselling. We also look at associated costs. Is the cost of delivering a service proportional to the benefit it brings? We may want to consider the cost of delivering two services and see which is more effective. For example, do we get the same number of people to use condoms if we simply distribute condoms, offer education about using condoms, or by combining condom distribution with education? Should funding for condoms be increased based on the increase in condom use in the district.

As the district M&E officer, you might find yourself involved with certain evaluation types more than the others. For instance, in your current position, you will not do programme efficacy. Process evaluation is the most common.

4.3.2 Summary of Evaluation

Evaluation asks the bigger questions about a programme. When evaluating, you want to know if a programme works in a controlled clinical setting (efficacy). After you determine efficacy in the clinic, then you can test the programme in uncontrolled or real-world environments. This will allow you to determine if the programme is effective. Finally, evaluation measures programme impact, or the extent to which a programme produced intended outcomes.

4.4 Key Differences between Monitoring and Evaluation

(Adapted from the Global Program Management & Evaluation Course (UW 2010)

Table 4.4.a Comparison of Monitoring and Evaluation

Monitoring	Evaluation
Ongoing regular/routine process	Periodic process
Tracking process: tracks progress of programme	Formal assessment: determines effectiveness of programme
Tracks inputs, activities, and outputs	Assesses outcomes and impact
Measures progress towards achieving programme objectives	Compares impact against agreed strategic plan or programme objectives
Answers question: What are we doing?	Answers question: What have we achieved? Is the impact sustainable or able to last a long time?
Can lead to adjusting work plans	Can lead to improving future programming

Key differences in monitoring and evaluation are outlined in the table above. One of the main differences is that monitoring tracks progress while evaluation assesses the results, or outcomes, of programme activities. M&E complement each other. Monitoring sends signals about the status of the programme or activity, and evaluation examines several data sources to assess the results of the activity as a whole.

Example, if you were to present yearly performance information without the context and benefit of the programme evaluation, then there is a danger that programme managers will make the wrong decisions and conclusions about a programme (Kusek & Rist 2004).

Examining trend data alone is usually not sufficient to determine the effectiveness of our health programmes (Kusek & Rist 2004).

Example: If presented data showing a decline in the number of people reporting condom use in your district, this data would raise questions about why there has been a reduction in condom use. If you support this data with other data that explains this reduction then programme managers can make informed decisions. Using this example, if the data suggested that there was a reduction in the number of condoms distributed during the same time period, it could be likely that the problem of decreased condom use was a condom distribution issue and not an issue of people choosing not to use condoms.

Exercise 4.4

Is it Monitoring or Evaluation?

Directions: Refer back to the monitoring activities as part of your daily life that you listed for Learning Activity 4.2. Think about what could be evaluation activities for each, and write them down.

Discussion 4.4

Is it Monitoring or Evaluation?

See below possible examples distinguishing between which activities can be classified as monitoring and which as evaluation in daily life offered in Learning Activity Discussion 4.2 Possible examples:

Home budgeting – track what we spend money on and how much is left at the end of the month *(monitoring)*. Make adjustments in our spending based on this information *(evaluation)*. Reflect on our lifestyle and make decisions based on our observations *(evaluation)*.

Weight loss – Weekly weight checks *(monitoring progress)* determine whether a particular diet plan is working *(evaluation)*.

Household food purchasing– While keeping track of the cost of food in the market or stores, you notice that guavas are a lot less expensive than pears, so you may buy more guavas and fewer pears *(monitoring)*; or noting your family's consumption of fruit and notice that you are throwing out pears every week, so you buy fewer the next time you go to the market *(evaluation)*.

University student – as a student, our progress is routinely measured through quizzes, papers, reports, practica, exams. These activities are considered *monitoring* when conducted periodically throughout the learning process (quizzes or homework). These activities are considered *evaluation* when they are conducted at the end of a learning process (final exam or final report).

4.5 Why do M&E?

There are four main reasons for doing M&E.

1. To provide useful feedback to a variety of audiences including sponsors, donors, client-groups, administrators, staff, etc.
2. To inform decision-makers about programme management and service delivery.
3. To learn from our activities and provide information to design future projects.
4. To ensure that resources are appropriate (used for the original intent) and are used efficiently (not wasted), hence, ensuring accountability.

M&E officers:

- monitor resources and how they are spent on a programme,
- make sure that resources are spent on the intended aspect of a particular programme only, and
- make sure resources are not being used for illegal or personal uses.

For example, if we have money to buy ART, we cannot use it to build a pharmacy to store and distribute ART. We are held accountable to the people of Botswana and programme donors.

Examples of M&E activities:

1. An M&E officer is supposed to visit various HIV and AIDS programmes in the district to help with data and programme-related issues. It would be *inappropriate* for the M&E officer to use this visit to examine a dam-building project.
2. An M&E officer visits the various HIV and AIDS programmes. He or she talks only to the prevention of Mother-to-Child transmission (PMTCT) group and not to the group that provides maternal and child care. This officer will likely be *ineffective* in improving data and programming for PMTCT.
3. The M&E officer visits the various HIV and AIDS programmes but talks only to the maternal and child health care group. Not only is the officer being ineffective, the officer is also being *inefficient*, i.e., wasteful of resources (time, transport, knowledge, and skills).

Scenario:

The following scenario illustrates how the data you collect can affect your work as an M&E officer and be used to make programme improvements:

In your job as a district M&E officer, you collect PMTCT data on the number of babies testing HIV positive who were born to HIV infected mothers. After analyzing this data for 2010 you find that the HIV transmission rate in this group rose to 4%.

This is higher than the transmission rate in 2009, which was 3%. After making this discovery, it is your job as an M&E officer to find out what caused this rise in the transmission rate and what can be done to bring it down.

Monitoring: One monitoring approach could be to check if the PMTCT programme activities in your district are being implemented as planned. If not, then you need to identify the gaps in the programme to develop an intervention. For example, you may find that the women in an antenatal clinic are not getting HAART or counselling on infant feeding. Your job is to present this information to the programme leadership so that they can work with the district facilities to integrate antenatal and HIV clinic activities for pregnant women with HIV.

Evaluation: It is possible that your monitoring data shows that the programme was implemented in the manner it was supposed to be implemented. Women who needed it, were given HAART. They were also educated about safe infant feeding practices. This means that you need to know why the programme was not effective (why things that work in a controlled setting do not work in real life). You may find that women are taking their HAART but are unable to follow safe infant feeding practices (i.e. they are using both breast milk and formula during the first six months of life) because of cultural norms about what babies should eat. This tells you what worked and what did not work about the programme. Policy makers and programme planners and managers can use this information to improve the programme.

4.6 Core M&E Activities

Below we introduce you to some of the core activities of an M&E officer. These core activities are common for all programmes you will be monitoring and evaluating. You may notice there is a similarity between the core activities listed here and the day-to-day activities listed in the previous chapter. .

4.6.1 Data Collection

You will receive aggregated programme data collected at hospitals, clinics, health posts, and in communities. You will be required to systematically track the receipt, timeliness, and non-reporting of data by the service delivery sites. You will verify the aggregated monthly data you received from all programmes and all service delivery sites. The data should reach your office by the 5th of each month. This deadline is in the M&E plan for the districts.

Tips for Data Collection in M&E

"The purpose of monitoring is not just to answer the questions, but to produce answers that can be used to improve future performance." (Abraha & Nigatu, 2009: page 7)

Take the time to think through these questions when you are on the job:

- What is the programme?
- Who is the programme serving?
- What are the goals, objectives, and deadlines?
- What is being monitored?
- What needs to be evaluated?
- What data do I need?

Golden Rule for M&E: Do not collect data that are not useful for decision-making or from which no lessons can be learned

4.6.2 Data Entry and Analysis

You will enter the aggregated programme data you received into an electronic database. Then you will analyse the data to determine if the different programmes are reaching their intended results. Chapters 4 in workbooks 2 and 3 explain the different types of analysis you can perform on the data you receive. There are software programmes to assist with analysis of data and these programmes may be available in your district.

4.6.3 Data Use

You will use the data you receive to explore trends over time and compare data across health facilities in your district. Also, you will compare district-level data with national and international data. For example, you might want to track how many women die due to pregnancy and birthing-related causes (maternal mortality) in all the health facilities in your district. How does this compare with the national statistics? Is your district doing better, the same as or worse than other districts? How does this compare with other countries? Are the statistics from neighbouring countries better? What about in countries at the same income level as Botswana? There are many uses for data, below are a few examples.

Other Data Uses

- Quality care assessment at health facilities. For example, your data shows that the CD4 count is missing for many people living with HIV (PLHIV) in a facility. This will prompt you to ask why these are missing and to work with the facility to remove barriers to taking CD4 counts for PLHIV at the nationally recommended periods.
- Advocacy for additional resources. Continuing with the CD4 count example - maybe the reason for not having CD4 counts is the lack of blood collection equipment or staff in the facility. You can use the information on lack of CD4 counts to ask for equipment or staff.
- Programmatic recommendations to improve care and treatment. Another possible reason why the CD4 counts are missing is that though the equipment and staff are available, they do not know the national guidelines regarding when and how to perform CD4 counts. You can then recommend that staff should be periodically trained on national guidelines.
- Annual programme planning processes. You can take the data that you receive on CD4 counts to the planning team. It will help them plan for any training, equipment, resources and support necessary for providing quality care to PLHIV.
- Funding proposals. You can use the data that you receive to identify priority programmes and make recommendations to the funding organizations on where to place their resources.

4.6.4 Data Auditing

As you can see, much of your work is related to data. This means that you must ensure quality data since it will inform many decisions related to health care programming. Auditing confirms that the service delivery sites are providing quality data. Data audit tools will be provided where available to use as a checklist when conducting the data audits. For example, you could audit data in the maternity register to check that information is properly documented by midwives. You can determine if the dataset is complete by checking that all the register data are entered. You will want to be sure that the data that are entered are the same as the information that was written in the register (accuracy). You will also want to know that you can trust the data (integrity). You can check for this by looking at data consistency. For example, if the data show that a pregnant woman was not HIV positive but was sent to the PMTCT programme, you know that there has been an error. If the data show that the pregnant woman has two other children but her age is 10 years old, you know that either this woman did not have two children or that this woman is older than 10.

4.6.5 Data Cleaning

Before you can use your data (for example, before analysing it) you need to make sure that there is no missing or inaccurate information captured during the data collection process. To do this you will need to check the data you received and look for any incomplete, inaccurate, or irrelevant parts of the data. After identifying these, you will then need to contact the facility where the data came from so that you can make corrections to your data by replacing, modifying, or deleting where required. This is called data cleaning, and it will ensure that the data you present is more accurate and complete.

4.6.6 Feedback

You will present your data analysis, aggregated data, and findings from surveys to give feedback to the health facilities, NGOs, CBOs, FBOs, and district leadership on programme performance. It will also be important for you to give feedback on the quality of the data you receive from facilities to the facilities. You will obtain this information when you conduct data audits and/or data cleaning on data you receive from the health facilities. Giving feedback on data will allow programme planners to make improvements to produce better results and impact in your district as well as act as a training and motivational tool to facilities.

4.6.7 Reporting

You will also be required to submit electronic and/or hard copy reports on the aggregated data you produce. You will learn more about producing these reports in chapter 5 of this workbook.

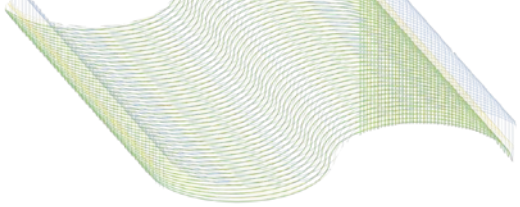
4.7 The Lifecycle Approach to Understanding Your Data

A lifecycle approach considers the stages in a person's life in health programme designs. For example, birth, education, employment, marriage, becoming parents and then grandparents are stages in people's lives. Programmes consider the well-being of people in each of these stages of life to keep them healthy and active in their communities and the nation over their lifetimes. Considering lifecycles can help design programmes that stop the spread of HIV and AIDS over the long-term.

Understanding the human lifecycle helps you understand the data you receive from your health centres. In the table below, we present the standard stages in a person's lifecycle and what determines good health in each stage. The determinants of health can be seen as factors that must be present to ensure that someone moves to the next stage in the lifecycle. Also, in this table we present the potential types of data you can expect to receive from programmes designed for each stage. As an M&E officer, it is good to know what type of data you should expect to receive and not receive from a health centre.

Table 4.7 Lifecycle Table **(Adapted from Loewensen et al. 2009)**

Life Stage	Determinants of Health	Data (Examples)
Birth	• Mother and child health during pregnancy and labour • Safe delivery • Breast feeding	• Number of pregnant women with HIV, • Number of pregnant women with HIV who are given HAART, • Number of HIV infected mothers who are breast feeding and on ARVs.
Infancy	• Immunisations, • Family nurturing, • early childhood development, and • nutrition	• Number of infants who complete their 1 year immunisations, • Number of infants being breastfed, number weaned, number on mixed feeding • Number of infants with HIV
Childhood	• Water and sanitation, • educational access, and • family/social nurturing	• Number of children at school age attending school regularly, • Number of children who have water-borne illnesses and childhood diseases such as pneumonia • Number of vulnerable children • Number of orphaned children
Adolescence	• Sexual decision-making, • freedom from violence, • peer support, • employment	• Number of adolescents working to support their families • Age of first sex (sexual debut) • Number of adolescents are sexually active in a district • Proportion using condoms



Early Adulthood	• Educational access, • employment, • savings opportunities, • family planning, • employment and • self-worth	• Number of early adults who completed Form 5 or some form of higher education • Number of early adulthood couples who use family planning
Mature Adulthood	• Access to shelter, • community networks, • opportunities for ownership of assets, • child education and • social needs	• Number of mature adults who are homeless and of these how many are pregnant women, how many pregnant women are not in the community they were raised
Old Age	• Access to old age pensions, • access to medical care, • mobility, • health, and • social inclusion	• How many women over the age of 55 accessed the medical centre and what were the reasons for the visit, • How many people over the age of 55 are HIV infected and HIV negative that visit a district hospital over the last 6 months

People in different stages of the lifecycle in our communities require specific programmes. Understanding a lifecycle will help you think about whom the programme is serving and what data you should expect from programmes designed for these life stages.

Reflection

Can you think of other examples of data you may want to get for each of these lifecycles?

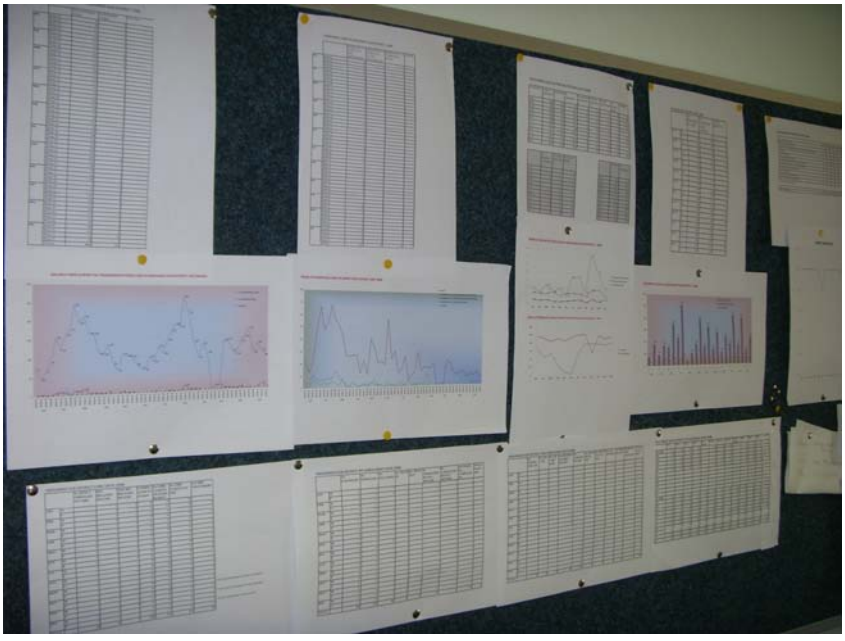
- *Birth*
- *Infancy*
- *Childhood*
- *Adolescence*
- *Early Adulthood*
- *Mature Adulthood*
- *Old Age*

Chapter Summary

One of the key messages from this chapter is the importance of knowing what data you need to complete the task at hand. This begins with determining who the programme is serving and their specific needs. Next, you need to ask what are the goals and objectives of the programme. Then, you need to find out if you are monitoring or evaluating. These pieces of information will help you determine what data you need and when you need it. As the rule states, '*do not collect data you do not need*'. Collect data only for the specific purpose of your task as an M&E officer.

In this chapter, we introduced you to monitoring and evaluation. We outlined the distinction between monitoring and evaluation. Monitoring is concerned with what is happening now and evaluation is concerned with the impact of the programme overall. Although monitoring and evaluation ask different questions and have different goals, each activity complements the other. Monitoring data will inform the programme evaluation and the evaluation will inform future programme design that will need to be monitored.

In your job as an M&E officer, you will be tasked to do both activities and work with data from different health care facilities. Understanding the lifecycle approach can help you understand who is being served by the programme and the data that you are collecting. You are encouraged to ask key questions to learn more about the programme or activity you will be examining. The information here will be elaborated on in subsequent workbooks.



Graphs created by M & E Officers to monitor progress in their Districts

Self Assessment Quiz

1) What is the purpose of evaluation?

2) What are the characteristics of monitoring?

3) Why is the lifecycle important for your job as an M&E officer?

4) What does M&E measure?

References & Bibliography

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Self Assessment Answer Key

1. What is the purpose of evaluation?

The purpose of evaluation is to measure efficacy, effectiveness, and impact. It is designed to inform future programmes and the impact of programmes on communities and clinics to reach public health goals.

2. What are the characteristics of monitoring?

*Monitoring is a **regular** process that **tracks** a programme over time to support progress. It ensures **process** so that programmes carry out objectives at the designated time and place. Finally, monitoring is **general** because it can be found in any context like families and programmes. The characteristics are regular, tracks, process, and general.*

3. Why is the lifecycle important for your job as an M&E officer?

Lifecycle outlines key stages that people go through and what is needed in their health to support them during and into that next stage. There are 7 stages to the lifecycle: 1) birth, 2) infancy, 3) childhood,4) adolescence, 5) early adulthood, 6) mature adulthood, and 7) old age. The lifecycle tells you who is involved in the programme, what kind of programme, and what data to expect (and is available) to collect for monitoring and evaluation.

4. What does M&E measure?

M&E measures accountability, effectiveness, and fidelity. A programme is accountable if it stays within the perimeters set by the goals, objectives, and plan. From a budget perspective, the funding is not spent on personal uses but spent on programme plans. A programme is effective if it accomplishes the goals within the planned activities, budget and staff assigned. A programme is measured to have fidelity if it implements the programme without any undocumented changes.

Self-Directed Learning Workbook 1:
Chapter Five
Introduction to Reporting

Sharing of data is a key responsibility of M&E Officers

Chapter 5:
Introduction to Reporting

Estimated time needed for completion: 1.5 hours

Chapter Overview

Thus far, we have discussed national health programmes as well as your specific duties as an M&E officer. This chapter will focus on one of your core duties, reporting of the data from your district to the national level. The aim of this chapter is to introduce you to the main electronic reporting systems you will be using as an M&E officer. These are known as the electronic Botswana HIV and AIDS Response Information Management System (e-BHRIMS) and the District Health Information System (DHIS). These systems are used to transfer data the Ministries of Health and Local Government.

Learning Objectives

At the end of this chapter, participants will be able to:

- describe how e-BHRIMS and DHIS are used by M&E officers to manage and report district-level data, and
- demonstrate how to use DHIS to:
  - enter data,
  - import and export data, and
  - produce a report.

5.1 Introduction to e-Reporting

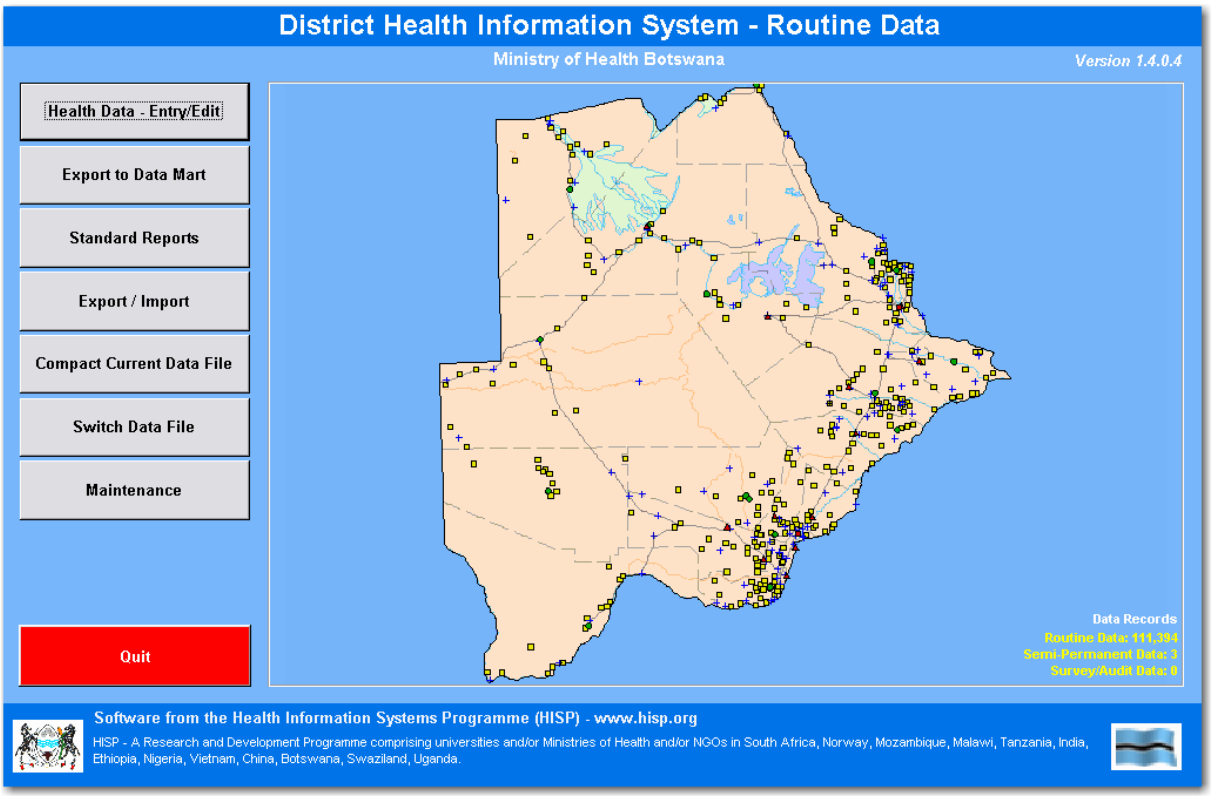
(Information in sections 5.1 to 5.4 was adapted from the *e-BHRIMS Version 2.2 Manual* (GOB 2008), the *Botswana National Strategic Framework for HIV/AIDS 2003-2009* (NACA 2010), and the 2008 *Progress Report of the National Response to the United Nations General Assembly Special Session (UNGASS) Declaration of Commitment on HIV/AIDS* (NACA 2008))

Reporting data from your district to the national level is one of your core duties as a District M&E officer. In Botswana, there are over 600 public health facilities throughout the country, including hospitals, clinics, health posts, and mobile stops. There is need of an information management system to ensure that quality data from all of these facilities is collected and reported to the national level. The vast amount of data generated throughout the country, necessitated the use of electronic systems to manage national HIV and AIDS related data. This chapter discusses these systems.

5.2 The District Health Information System (DHIS)

DHIS is an information management and data storage system utilized by universities, Ministries of Health, and NGOs in a variety of countries, such as Botswana, China, Ethiopia, India, Malawi, Mozambique, Nigeria, Norway, Swaziland, South Africa, Tanzania, Uganda, and Vietnam (GOB 2008). You will use DHIS for data entry as well as for data analysis. In this section, you will learn more about how to use DHIS. Figure 5.2 below depicts the DHIS Home Page that will be displayed when you open DHIS.

Figure 5.2 DHIS Home Page



Now let us review some of the key points of DHIS, including DHIS terminology and the DHIS files you will be using. For detailed information on any of these and other topics, please refer to your DHIS manual or the instructions in the program.

5.2.1 DHIS Terminology

Below are useful terms that you will come across when using DHIS.

- **Org Unit**: An *org unit* is the short name for an organisational unit. Organisational units are any administrative or physical health unit. For instance, the Ministry of Health is an *org unit*, each district is an *org unit*, and each clinic and each hospital is an *org unit*. Facilities reporting data and administrative units such as the District Health Management Teams (DHMT) and the Ministry are also *org units*. These *org units* are linked together in DHIS so that each facility is a sub-unit of the appropriate district.

  Example: Extension 2 Clinic and Gaborone district are both *org units*, but Extension 2 Clinic is a sub-unit of Gaborone district since this is a facility within Gaborone.

- **Data Element**: A *data element* is the name of a diagnosis or condition that is recorded at the facility. Examples are "Malaria with severe anaemia < 1 year" and "Infants tested HIV-positive." Data elements can also be things other than medical conditions, like an address or a telephone number, which might be useful to store for each org unit.

- **Data Sets**: A *data set* in DHIS is a collection of data elements that are usually contained in a health data summary form. It is a selection of data elements that are related and make sense to collect together.

  Example: The monthly PMTCT Mother and Child Health (MCH) reports are known as the PMTCT Monthly MCH data set in DHIS. Other data sets have also been named in DHIS, such as the Monthly Out-patient and Preventive Health Statistics data set.

- **Health Programmes**: A *health programme* is a programme with a specific focus, made up of several data sets. Remember, each data set is a collection of data elements.

  Examples of different health programmes are PMTCT, Tuberculosis (TB), and Surveillance. The PMTCT health programme includes multiple data sets for MCH and Maternity. Each of these data sets has multiple data elements.

5.2.2 Ministry of Health File and the District AIDS Coordination File

Within the DHIS, there are two main data files, the Ministry of Health and the District AIDS Coordination File (commonly known as e-BHRIMS). The e-BHRIMS system is used for the management of district level data and is used primarily by the AIDS Coordination Units within the districts. On the other hand, the Ministry of Health File is used for the management of facility level data and is mostly used by M&E officers placed at the DHMT.

5.2.2.1 Ministry of Health File

In your district, you will find that facility-level health data from the national programmes is entered into the DHIS databases primarily within the DHMT, generally by the M&E officer. After data is entered into DHIS there a number of things that M&E officers can use DHIS for, including:

- generating data summaries or reports,
- analyzing data using pivot tables,
- creating graphs,
- exporting district-level data for entry into e-BHRIMS, and
- exporting facility level data to the national level.

5.2.2.2 District AIDS Coordination File (e-BHRIMS)

The Botswana HIV and AIDS Response Management System or BHRIMS was "set up to facilitate the flow of information, provide linkages between stakeholders, as well as to institute a national database across the national response" (NACA 2008). Its development came about due to "the recognized need to gain better understanding of the HIV and AIDS interventions in the country, generate adequate information on the response, and improve the utilization of generated information for program planning, policy formulation and appropriate allocation of available resources" (NACA 2008).

The mission, goal, and objectives of the BHRIMS systems, as listed in the *e-BHRIMS v2.2 Manual* are listed below (GOB 2008).

- **Mission**: To collect information on the national response to HIV and AIDS in order to "ensure accountability, appropriate policy formulation and review, program improvement, and social justice through the direction of resources to the most vulnerable groups".

- **Goal**: "To reduce the spread of HIV and mitigate its impact through effective and efficient monitoring and evaluation of the national multi-sectoral HIV and AIDS response".

- **Objectives**:
  - "to establish a monitoring and evaluation infrastructure,
  - to support the storage and analysis of all available HIV and AIDS data at district and national levels in the country,
  - to improve the accessibility of HIV and AIDS information and data,
  - to increase the utilization of available reports and data for action, and
  - to maintain institutional memory of the HIV and AIDS National Response."

Over the years BHRIMS, a paper based system was transitioned into e-BHRIMS, the electronic system. In 2005, e-BHRIMS, was launched to monitor and evaluate the implementation of the national response to HIV and AIDS (GOB 2008). Unlike the electronic data systems you learned about in chapter 2, such as the Patient Information Management System (PIMS) used for the ARV programme, e-BHRIMS does not capture patient-level data. Instead, e-BHRIMS is used to capture and report facility level and district level aggregated.

e-BHRIMS is primarily used at the AIDS Coordination Office in each district. M&E officers placed within the District AIDS Coordination (DAC) Office will use e-BHRIMS to enter data they received from Social and Community Development (S&CD) for orphans and vulnerable children (OVC) and from government health facilities for community home based care (CHBC) programmes. They will also use e-BHRIMS to enter or import data that they received from the DHMT on the national health programmes such as the prevention of mother-to-child transmission (PMTCT) programme and the anti-retroviral (ARV) programme.

When you open e-BHRIMS on your computer, you will see the switchboard. The e-BHRIMS switchboard can be used to:

- **Enter data.**
  - M&E officers in the DAC Office enter data using the "**DATA ENTRY**" tab.
  - Data from health facilities, non-governmental organizations (NGOs), faith-based organizations (FBOs), and community-based organizations related to OVC, CHBC, and condom distribution are entered here.
  - District level data on the national programme received from the DHMT is entered here.

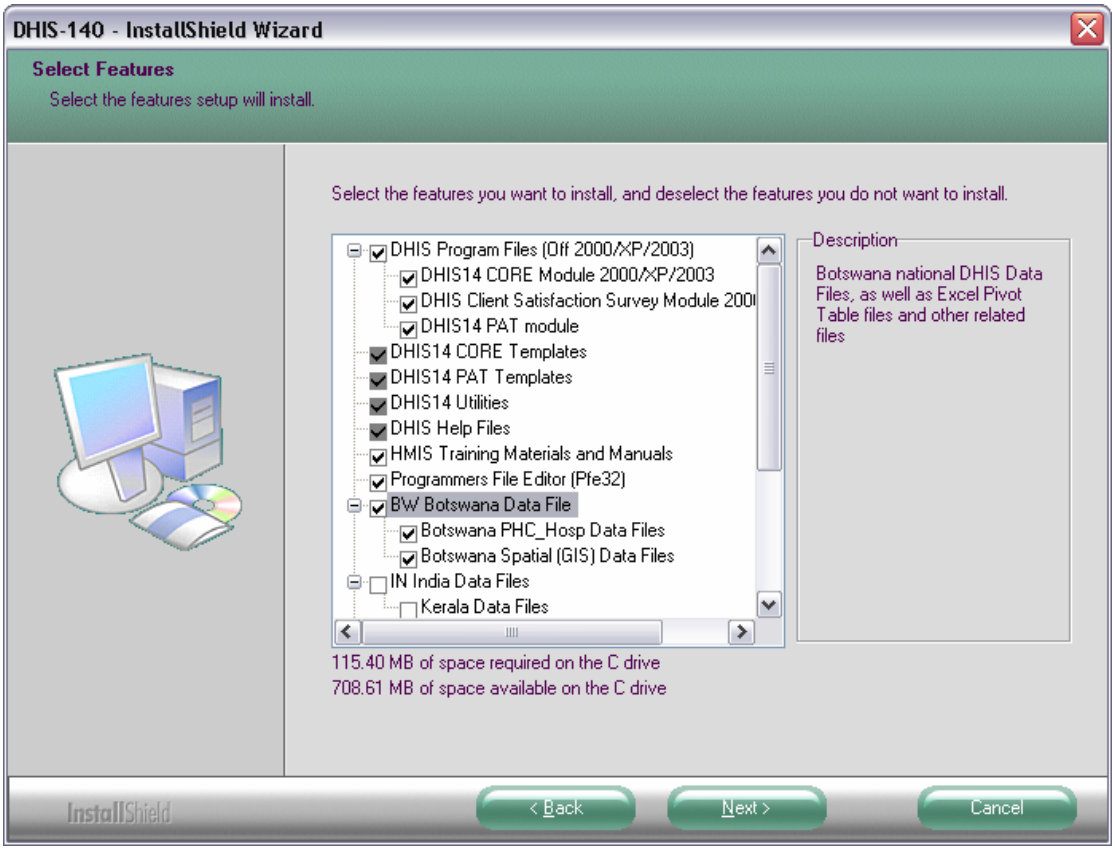
- **Generate reports.**
  - M&E officers in the DAC Office use the "**REPORTS**" tab to generate the reports that they send to the national level.

- **Import and export data.**
  - Instead of entering district level data on the national programmes into e-BHRIMS, data from DHIS can automatically be imported into e-BHRIMS using the "**IMPORT/EXPORT**" tab.
  - M&E officers in the DAC Office use the export function to generate databases that are sent to the national level. Further information on e-BHRIMS can be obtained from within the e-BHRIMS itself.

5.3 Getting Started in DHIS

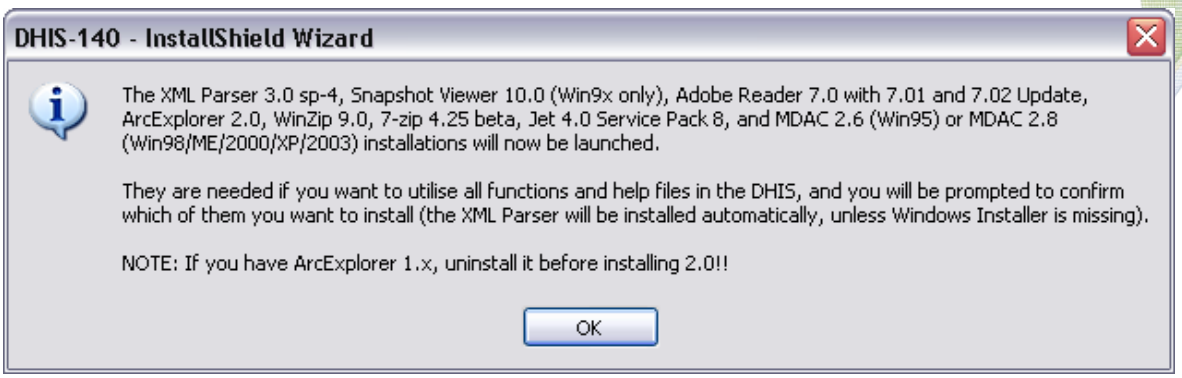
5.3.1 Installing DHIS

1. Insert the DHIS 1.4 CD in your CD drive.
2. Open the content of the CD, often this will be done automatically, so that you can see the different files there.
3. Double-click the file "Setup". This will start the installation process.
4. You will be asked to select the features you want to install. As default, all the DHIS modules are selected, but none of the Data Files.



5. Tick the box next to BW Botswana Data File. This is very important. If you do not install the data file for Botswana, you will not be able to use DHIS. The installation window should look like the one above before you click "Next"
6. The DHIS and the Botswana data file will now be installed. This may take several minutes, depending on the speed of your computer.

7. When finished installing DHIS, the installation wizard will install extra applications you need. A message will inform you of this, as shown below.



8. You will be allowed to install Adobe "Acrobat" Reader version 7 with the latest Service Packs. This is used for reading PDF (Public Document Format) documents, a common format for publishing documents.
9. You MUST install the Free and Open Source compression/archiving utility "7-zip" - it is used by the XML/TEXT export and import functions in the DHIS 1.4.x.

A sequence of steps will guide you through the installation process. You must tick the "I accept the licence agreement" button to complete the installation.

You will then be asked for a destination folder, where the DHIS will be installed. The default folder will be C:\Dhis14.

NB. If you are using the latest version of DHIS, please refer to the instructions provided.

5.3.2 Accessing DHIS

Prior to using DHIS, you need to create your own username and password. Use the following guidelines to create your username and password. Then you will be able to access your account.

Learning Activity 5.3.2

Creating a Username and Password

Directions: Create a username and password using the guidelines below. ***Keep your username and password in a secure place for future reference.***

Username *(example):* jsdoe
Your username should be one word that you can easily remember. For example it might be your first initial and surname.

Password *(example)*: gaborone201!
Your password should be 5-8 characters long and include at least one symbol and one number.

Please be aware that usernames and passwords may be case sensitive.

To be able to do data entry, you have to create your own username and password. Below are the steps to follow in creating a DHIS account with your username and password.

1. On the desktop, there is a folder named "DHIS 14 Start-up Folder." Double click the folder to open it. Then double click the shortcut named "DHIS14 Core." This will load up the DHIS application.
2. Log on using the default username (admin) and password (district)
3. Click on "Maintenance"
4. Select "Housekeeping"
5. Select "User and Groups"
6. In the spaces provided, type your new username and password
7. Then click on "Add New Local User"
8. A pop-up note will then be displayed indicating the username and password have been successfully created
9. Your name will be listed on the list of names in the table
10. Quit and logon using your new account. When you are logged in your username will appear just below the version type in the top right of the screen

5.4 Using DHIS

After creating the username and password, you will be able to access the DHIS folder (using your newly created username and password. Do not use the default from this point forward. You can now enter data and perform other functions within the system. Below is a step-by-step guide on how to enter data, export/import data, and print reports. For more functions, including data validation, refer to the *DHIS Training Manual.*

5.4.1 How to switch data files

To switch between the MOH and the DAC data files, simply click on the "**Switch Data File**" button. This will give you an opportunity to switch between the MOH and the DAC data files, depending on which office you are reporting from.

5.4.2 How to enter data in DHIS

1. Log in using your username and password
2. Click the "**Data Entry/Edit**" button
3. Select the district you are in
4. Select the reporting period
5. Select the data set in which you are entering the data
6. Begin entering the data

5.4.3 How to export data

1. Double click on the "**Export/Import**" button on the left hand side
2. Double click the "**Export to XML/Text**" button
3. Select the data set(s)
4. Select the relevant district
5. Select the reporting period
6. Click on the "**Export/Import**" button. The file name for the data to be exported will be created
7. The data will automatically be saved in the "**Transfer**" folder, which is located in the C-drive, within the main DHIS folder, not the DHIS back-up folder.
8. Attach the file and send it to the recipient by e-mail

Remember! Name the export file according to the standard "District Month Year"

Examples:

- Okavango August 2010" is August 2010 data from Okavango
- "Kgatleng March-April 2010" is March and April 2010 data from Kgatleng

5.4.4 How to import data

Once you receive an attachment:

1. Copy the file into the "**DHIS 14**" folder under "**C**" into the "**Transfer**" folder.
2. Double click on the "**Export/Import**" button on the left side
3. Double click the "**Import from XML/Text**" button
4. Click on "**Select the file**". This will automatically open all the exported files under the "**Transfer**" folder.
5. Select the one you want to import into DHIS
6. New records will be highlighted in green
7. Click on the button "**Add**"
8. Always click on "**Control Centre**" at the top, right corner to return to the home page
9. When closing/quitting the DHIS application, always click on the RED "**QUIT**" button on the bottom left and ensure that you select the option to run a back-up after capturing any new data.

5.4.5 Printing Reports

With DHIS, you can print reports on paper. There are three types of standardized reports. From the Control Centre, click "**Standard Reports**."

- **Routine Raw Data Report**: Select the corresponding data set, org unit, source level and period to view a Raw Data Report. This will show the same as the reporting forms currently in use to collect data. The "**org unit**" is the organizational unit you want to report to. If you choose Botswana MOH, data will be aggregated so you get the national totals. "**Source level**" is where you will take the data from.

- **Outstanding Input Forms**: This report shows all missing reports for a health unit. Select the corresponding data set, organizational unit, period, and all months missing for the health units under this organizational unit will be shown. This is useful to check which data are not reported to and imported at the districts and MOH.

- **Data File Setup Reports**: This shows all reports that are made for this Data File. A range of reports may be customized to each district. Select the corresponding data source to see which reports are made for those data.

Further information on DHIS can be obtained from the DHIS manual that is included as a component of the DHIS software.

5.5 Reporting Data to the National Level (Data Transfer)

Both e-BRHIMS and DHIS can be used to generate data summaries or reports as well as data files that need to be transferred to the national level. The most common methods of transferring data from one level to the other are through faxing, courier, post, hand delivery, and the internet. As listed in table 5.5, each of these methods has advantages and disadvantages.

Table 5.5 Comparison of Data Transfer Methods

Data Transfer Method	Advantages	Disadvantages
Fax	• Saves time	• Equipment breakdown • Compromises confidentiality
Courier	• Reliable • Saves time	• Potential for loss of documents if wrong address provided • May compromise confidentiality • Costly
Post	• Cost effective	• Potential for loss • May compromise confidentiality
Internet	• Saves time • Low cost	• Unreliable internet connectivity • Computer viruses
Hand delivery	• Reliable	• May compromise confidentiality • Potential loss of documents • May take a long time

The M&E officer should utilize the preferred method of sending data as requested by the receiving organization or office. Always remember to retain copies of what was sent, be it in electronic or paper format. Have a record of what, when, how, and to whom the reports are sent. This can be documented in an electronic spreadsheet or notebook. It is also helpful to call to confirm whether the documents you sent have been received. Document whom you spoke with and the date of this confirmation.

Reflection

Take a moment to think about all the methods you use to share information with someone: SMS, email, fax, phone, letters, in-person conversations, etc.

- Which of those methods do you use most frequently?
- Which method is the most convenient to use?
- Which methods do you find the most reliable?

Learning Activity 5.5

Practicing with DHIS and e-mail

Directions: Now it's time to practice! The following is a list of the skills that you learned in this chapter. To practice the skills you learned (and test your knowledge) you should use the instructions above to apply each of the following skills using the computer and the actual programs. Use the following checklist to keep track of the skills that you practice.

- ☐ **Create a username and password**
- ☐ **Create your DHIS account**
- ☐ **Data entry in DHIS**
- ☐ **Export data**
- ☐ **Import data**
- ☐ **Printing Reports**
- ☐ **Attach a Document or File to an Email Message**

Troubleshooting: *The best way to troubleshoot problems is to talk them over with someone that is familiar with the system you are using. You can also work together with other new M&E officers to see if you can troubleshoot the problem together. It is best to identify people that may be available to troubleshoot prior to having a problem. The following lines provide space for you to write down the names and contact information of two people that you could contact for troubleshooting problems with DHIS or e-BHRIMS.*

Person 1

Name:

Contact:

Person 2

Name:

Contact:

Self Assessment Quiz

1. True or False

   All DHIS electronic forms will match the paper form exactly.

2. True or False

   When printing reports from DHIS you may only print the standardised reports as they exist in DHIS.

3. Matching: DHIS Terminology

   Write the letter of the definition next to the matching term

   Org Unit _____

   Data Element _____

   Data Sets _____

   Health Programmes _____

   A. a name of a diagnosis or condition that is recorded at the facility

   B. a programme with a specific focus, made up of several data sets

   C. any administrative or physical health unit

   D. a collection of data elements that usually reflect a health data summary form

4. List some of the advantages and disadvantages for each of the data transfer methods listed below.

   1) USB Memory Stick

   Advantages

   Disadvantages

   2) Fax

   Advantages

   Disadvantages

   3) Internet/E-mail

   Advantages

   Disadvantages

References & Bibliography

GOB 2008. *e-BHRIMS Version 2.2 Manual* used at the District M&E Training Workshop on Data, held 17-19April 2008 in Gaborone

NACA 2003. *Botswana National Strategic Framework for HIV/AIDS 2003-2009.* Gaborone. Available from: http://www.ub.bw/ip/documents/2003_Botswana%20National%20Strategic%20Framework%20for%20HIVAIDS.pdf

NACA 2008. *Infrastructure and Systems: The eBHRIMS structure*. Gaborone, Available from: http://www.naca.gov.bw/node/38

NACA 2008. *2008 Progress Report of the National Response to the UNGASS Declaration of Commitment on HIV/AIDS,* Gaborone

Self Assessment Quiz Answer Key

1. True or **False**

   All DHIS electronic forms will match the paper form exactly.

   False- While the forms may look similar and will require the same data, it is essential to pay close attention to the column and row headings to make sure that the data is transferred correctly.

2. True or **False**

   When printing reports from DHIS you may only print the standardised reports as they exist in DHIS.

   False: You can use standardized reports or define your own ones in the Report window

3. Matching: DHIS Terminology

   Write the letter of the definition next to the matching term

Org Unit	***C*** *administrative or physical health unit*
Data Element	**A** *name of a diagnosis or condition that is recorded at the facility*
Data Sets	***D*** *collection of data elements that usually reflect a health data summary form*
Health Programmes	***B*** *a programme with a specific focus, made up of several data sets*

4. List some of the advantages and disadvantages for each of the data transfer methods listed below.

   1) USB Memory Stick

   Advantages: *They are highly portable, can hold relatively large amounts of data, they are durable, and they are reusable.*

   Disadvantages: *can become infected with a virus, not secure (if lost or stolen the data can be retrieved by anyone.*

   2) Fax

   Advantages: *Data can be transferred very quickly. Faxes are not affected by computer viruses.*

   Disadvantages: *Data is not confidential; anyone who intercepts the fax will have access to the data.*

   3) Internet/E-mail

   Advantages: *Extremely fast, convenient.*

   Disadvantages: *can transmit viruses. The email could be intercepted and thus the data would no longer be confidential, must have reliable computer.*