

## **Volume 6: Windhoek**

# **Impact Assessment of HIV/AIDS on the Municipalities of Ongwediva, Oshakati, Swakopmund, Walvis Bay and Windhoek**

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**for**

**the municipal authorities of  
Ongwediva, Oshakati, Swakopmund, Walvis Bay and Windhoek,  
on behalf Family Health International (FHI) and USAID/Namibia**

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# Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ALAN	Association of Local Authorities in Namibia
ART	Antiretroviral Therapy
ASO	AIDS Support Organisation
ARV	Anti Retroviral
BTP	Build Together Programme
EAP	Employee Assistance Programme
EPZ	Export Processing Zone
FGD	Focus Group Discussion
FHI	Family Health International
GDP	Gross Domestic Product
GRN	Government of the Republic of Namibia
HEARD	Health Economics and HIV/ AIDS Research Division (University of Natal, Durban)
HIV	Human Immunodeficiency Virus
IEC	Information, Education and Communication
KAP	Knowledge Attitudes and Practices
KII	Key Informant Interview
MOHSS	Ministry of Health and Social Services
MRLGH	Ministry of Regional and Local Government and Housing
MTCT	Mother to Child Transmission
NACOP	National AIDS Coordination Programme
NALAO	Namibia Association of Local Authorities Officers
NHAG	Namibia Housing Action Group
NHE	National Housing Enterprise
NISER	Namibia Institute for Socio-economic Research
NEPRU	National Economic Policy Research Unit
NGO	Non Governmental Organisation
PLWA	People Living with AIDS
SADC	Southern Africa Development Community
SDFN	Shack Dwellers Federation of Namibia
SIAPAC	Social Impact Assessment and Policy Analysis Corporation (Pty.) Ltd.
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SWAG	Story With A Gap
UNAIDS	Joint United Nations HIV/ AIDS Programme
USAID	United States Agency for International Development

# Executive Summary

## Introduction

Namibia has one of the highest rates of HIV infection in the world, and the epidemic is affecting every aspect of Namibian society. The impacts of the epidemic include a reduction in the population growth rate, alterations to the demographic structure of the population, economic losses through a reduction in Gross Domestic Product (GDP), as well as changes in society at large.

Namibia has based its response on the need to involve all sectors, but it is local authorities, as the level of government closest to the people, that play a key role.

However, the ability of local authorities to respond to the epidemic is undermined because it takes place within the context of the epidemic's direct impacts *on local authorities as well*. Municipalities and councils will lose personnel to the epidemic, due to illness, death, or responding to the illness and deaths of family members. Further, HIV/AIDS increases the costs of doing business, effectively undermining efficiency and reducing turnover, with negative impacts on employment potential and the creation of revenue.

Specifically, this investigation considered the impacts on the five Namibian cities of Ongwediva, Oshakati, Swakopmund, Walvis Bay, and Windhoek. This volume presents the findings for the city of Windhoek.

As part of their key role in responding to the epidemic, five Namibian municipalities requested support to commission assessments to determine impacts and plan their responses to the challenge. This initiative signalled one of the world's first local authority impact assessments, and the municipalities deserve credit for their foresight. Specifically, this investigation considered the impacts on the five Namibian cities of Ongwediva, Oshakati, Swakopmund, Walvis Bay, and Windhoek. This volume presents the findings for the city of Ongwediva.

## HIV/AIDS

Antenatal sero-surveillance surveys are routinely used to measure adult HIV prevalence and are undertaken in Namibia by the Ministry of Health and Social Services (MOHSS). All prevalence data in this report is based on these surveys. The last such survey completed by MOHSS was in 2000, when the antenatal prevalence rate for Windhoek was 31%. This rate, the second highest in the country after Katima Mulilo, was close to 9% higher than the national adult prevalence rate of 22.3%

HIV prevalence in Windhoek appears to be close to its peak. If the epidemic continues to follow past trends, HIV prevalence will peak at 38% by 2005 and is presumed to stabilise thereafter. The implication of this HIV prevalence rate is that close to one-third of the adult population in Windhoek (those aged 15 to 49+ years of age) are now likely to be infected.<sup>1</sup>

The data presented in this Assessment are based on projections derived from models of the demographic impact of HIV/AIDS on the general population. The assumptions used to develop the models are fully discussed in Volume 7. It is, however, important to note that the assumptions used are based on official Ministry of Health and Social Services and Central Bureau of Statistics data, and were discussed and agreed at progress meetings held with municipal officials prior to their incorporation in the model.

The projections indicate that some 45,000 Windhoek residents are presently HIV-positive, or an estimated 18.5% of the city's present population. This will rise to 61,000 individuals by 2012 and slightly over 80,000 in 2021.

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<sup>1</sup> Antenatal surveillance is routinely used to measure adult HIV prevalence. This fact is often hotly debated, with the belief often that it over-estimates prevalence. Studies elsewhere in the region indicate that, particularly earlier in the epidemic, antenatal prevalence does roughly equate with adult prevalence in the general population. As the epidemic matures, however, it may become an *under-estimate* of adult prevalence, as HIV reduces fertility.

The data further suggest that close to 10,000 people in Windhoek have already died as a result of AIDS. By 2010 the figure is likely to be closer to 50,000 individuals. The 40,000 AIDS deaths expected between now and 2010 are largely unavoidable, because these will result from existing HIV infections. However, it is extremely important to note that many of the projected deaths from 2010 onward could be avoided *if* future HIV infections can be reduced. By 2021, cumulative AIDS deaths are expected to exceed 126,000, *but many of these can be avoided.*

AIDS deaths can be reduced by implementing prevention programmes, including those that encourage destigmatisation, wellness and positive living for those infected and, should this become more widely available in Namibia, through treatment.

### **Population Growth**

Despite the HIV/AIDS epidemic, the projections indicate that Windhoek will continue to grow, but at a slower rate, mainly because of continued high inward migration from other areas. Currently the population of the city is estimated to be about 243,000 individuals. While the population of Windhoek will continue to grow, its population would have been some 30% larger by 2021 in absence of AIDS. At that time, the projections indicate that there will be some 300,000 residents of the city. This reduction in the town's size and projected growth rate will have implications for planning, service delivery and revenue growth.

The socio-economic impacts of HIV/AIDS on Windhoek are therefore likely to be severe. This is because of the number of deaths, because those who are dying are in the productive or working age groups and because these are the workers and parents serving the community.

### **Economic Impacts**

The economy of Windhoek is a major contributor to the national economy. The impact of HIV/AIDS on the formal, informal and household sectors in the city will have wide-ranging implications. These impacts will also affect the municipality in terms of revenue generation and the way in which money is spent.

The Namibian economy is based on five major sectors: mining, manufacturing, agriculture and fishing, finance and the government sector. The success and growth of each is influenced by a host of variables ranging from the exchange rate to the total allowable catch through to rainfall each year, but each of these will be affected by HIV and AIDS. The net impact on the Namibian economy is likely to be similar to elsewhere in the Southern African region. Studies conducted in South Africa and Botswana estimate that GDP growth rates will decline by between 0.4 and 1.8 percentage points by 2010.

All of the major formal economic sectors will experience an increase in the cost of labour as a result of HIV/AIDS and, for most, this is likely to have already begun. These increases will result in a decline in the profitability of enterprises. This is particularly the case for sectors that rely on skilled labour. The NEPRU business climate surveys have highlighted the shortage of skilled labour as a concern to many Windhoek-based enterprises. The increased cost of labour and the aggravation of existing skilled labour shortages will negatively impact on the economy.

The impact on the informal sector is potentially more damaging than that which will be felt in the formal economy. In many cases, informal businesses are built around one key individual with particular skills and contacts. If this individual dies the business often dies with them and those they employ will be jobless, exacerbating the city's unemployment problem.

The impact on the formal and informal sectors will become more serious over time as AIDS illnesses and deaths increase with the number of households affected also rising. The economic impact at the household level is potentially devastating, which also has implications for the broader economy as patterns and levels of consumption change.

"Breadwinners are dying while families suffer as a consequence. Households are not spending as much as they used to on commodities, while they use up their savings ...for medicine or other essentials." SWAG Participant, Windhoek

The population of Windhoek is responsible for the largest share of final consumption in Namibia, estimated at 35%. A change in the level or composition of household demand could, therefore, have implications for *both* the city and the national economy.

The epidemic will reduce the rate of growth of Windhoek's population. The demographic projections, discussed above, indicate that while the city will continue to grow, the rate will be far lower than it would have been in the absence of AIDS. The size of the market will, therefore, also grow at a slower rate. This will affect various economic sectors, most notably retail and construction.

The net impact of HIV on the economy of the city is likely to be similar to that on the national economy. The city has a fairly diverse economy and, while some sectors will be badly affected, others will not. Collectively the impact will not be enormous, but it will also not be evenly distributed. Some households and small businesses will be devastated by the epidemic, while others will be relatively directly unaffected. Nevertheless, the economic impacts of HIV will be felt not only by those infected but by the entire community.

## **Orphans**

HIV/AIDS profoundly affects families and communities, not only resulting in the loss of labour and assets, but also affecting socio-cultural skills while placing almost unprecedented stress on community and extended family networks. One of the most serious consequence of the epidemic is the increase in the number of orphans. It is estimated that there are over 6,600 children in Windhoek who are currently under the age of fifteen who have lost one or both parents as a result of AIDS. This number is expected to increase to over 30,000 in the next 10 years and reach 43,000 by 2021. It is, however, important to note that these figures may be an *over-estimate* of the scope of the orphan situation in Windhoek. A study of orphans (SIAPAC, 2002) indicated that many children who are orphaned in the western and central regions of Namibia are sent to their extended families in the north on the death of their parent(s).

## Impacts on the Municipality of Windhoek

These impacts will result in demands from the community for expanded or new services to be provided by local authorities, and a lowered ability to pay for these services. However, municipalities are not isolated institutions and will not themselves be immune from the impacts of the epidemic. These impacts result from the sickness and death of municipal personnel infected with HIV, and can include:

- loss of productivity;
- increased absenteeism;
- cost of sick and compassionate leave;
- increased cost of benefits; and
- increased recruitment and training costs to replace lost staff members.

The challenge is that the epidemic erodes the ability of institutions, including local authorities, to provide services, as it reduces *both* efficiency and revenues, while the personnel losses induced by HIV/AIDS affect the quality of services the municipality is able to provide.

It is important to understand that HIV-infection precedes AIDS illness and death by some eight to ten years. In other words, the AIDS mortality presently being experienced within the Municipality of Windhoek results from HIV-infections acquired some six to eight years ago. The full impact of AIDS on the municipality is therefore only likely to be felt between 2008 and 2012 when the numbers of those falling ill and dying will reflect the city's current high prevalence rate. The period 2001- 2012 was therefore selected for projecting the impact of HIV/AIDS on these employees because, while current infections cannot be prevented, it was assumed that *immediate* prevention activities would be put in place to reduce those in future.

Over the projection period Windhoek is projected to lose some 676 staff across all bands due to AIDS-related deaths. These will peak over the period from 2008 until 2012, during which time over 60 employees are projected to die of AIDS each (or some 287 staff over the three years).

The Municipality uses the Patterson Bands (A to F) staff grading system, with band A being lowest level. There are 562 staff in Bands A1 to A3 within the Municipality, or 34% of the workforce. Over the next ten years, AIDS mortality among these personnel will result in some 222 deaths. These will peak in 2009, at over 20 deaths per annum.

There are 639 staff who are Band B employees. This group of personnel will experience the highest AIDS death rate, simply because there are more staff in the B Band. Over the period 2001 - 2012, the projections indicate that some 267 employees in the B Band will die from AIDS-related illnesses. These will peak at close to thirty deaths per annum in 2010 and remain at this level until 2012.

Band C employees form the next largest group of municipal employees, numbering 330 staff. The projections indicate that some 153 Band C employees are likely to die of AIDS-related illnesses by 2012. These deaths are likely to peak in 2008 at an estimated 15 individuals in that year, remaining at this level until 2012. The age and gender profile of these staff means that AIDS deaths among this group of employees will peak in 2008 (as opposed to 2009 and 2010 for the previous two bands discussed).

Finally, bands D through F are those in which senior employees of the municipalities are placed, and there were 86 such staff in November 2001. The demographic projections indicate that some 34 of these individuals may die of AIDS over the period 2001 - 2012, peaking in 2008 at 4 individuals.

These levels of AIDS mortality will impact on the municipality through increased absenteeism (sick leave), productivity losses and the need for increased staff replacement and training. Each of these impacts will have an associated cost and will therefore require management and mitigation, with particular attention being paid to the financial and human resource management implications.

## Human Resources Management Information System

Windhoek municipality maintains detailed human resource records and data, and was able to provide the consulting team with the personnel data needed to complete this Impact Assessment. However, at the outset it should be noted that the system is not user-friendly and considerable difficulty was experienced in obtaining data in the format required. Refinement is needed to improve the type of *monthly* data that should be provided to managers to enable them to monitor and manage the impact of the epidemic internally. It is understood that the human resources management information system in Windhoek is being modified and it is recommended that the data requirements which follow are included in these changes.

Leave data should be collated monthly, by type and length of leave taken by grade of staff (i.e., whether sick, vacation, compassionate, or bonus leave, etc.). The costs of this leave (by type and grade) also need to be calculated monthly.

### Leave

The amount of sick leave taken by staff because of AIDS-related illness is one of the main costs of the epidemic to any employer. Windhoek municipality employees are entitled to 120 days sick leave at full pay over any thirty-six month period, which can be extended by 120 days of sick leave at half pay over a thirty six month period.

The number of staff sick leave absences increased from 12,500 days in 1999 to 15,000 the following year, without any substantial increase in staff numbers. The epidemic will increase the amount of sick leave taken by municipality employees. Analysis indicates that the number of days off taken by municipal employees *as a result of AIDS* will increase from an estimated 5,000 days in 2002 to 10,000 days by 2012. Obviously, the costs of this will be high and programmes that encourage positive living and wellness could assist in reducing these.

## Benefits

Among the benefit entitlements of employees of Windhoek Municipality are medical aid and pension contributions. In both cases monthly contributions by the municipality can be expected regularly to increase because of the epidemic.

Membership of a medical aid plan is voluntary for employees of the municipality. Where employees are members, the municipality pays 50% of the employee's monthly contribution. The cost of medical aid to Council and to its employees is rising as the number of those requiring medication due to AIDS-related illnesses increases.

Similarly, all employees are members of the Retirement Fund for Local Authorities in Namibia. This Fund operated as a defined benefit fund until 1992, when due to the large number of claims it changed to a defined contribution fund. This means that the amount paid to members' families on their premature death was reduced. The current death benefit allows for a lump sum payment of 5.3 times annual salary at the death of a member, with three differing options based on the level of guarantee and investment. The impact of HIV/AIDS has already caused the funds to lower the death benefits and to increase the cost to the members. This trend will continue as more members die from the diseases associated with AIDS and death benefit claims continue to rise.

## Training

The Municipality has a training programme in place on which it has spent N\$4,792,273 on training and development over the past three years. Forty percent of the training budget for 2001/2 (N\$1,894,000) was for succession training as part of the municipal Affirmative Action Plan. HIV/AIDS will increase training needs (and costs) and requires that enhanced attention be given to Succession Planning.

Municipal training policies also need to include strategies for maintaining and developing skilled staff. These have to be based on the provision of more frequent, but shorter-term training opportunities, within affordable cost parameters.

### Critical Functions

Some of the institutional costs associated with HIV/AIDS can be identified and with some difficulty quantified. Many, however, are more difficult to determine and these less obvious costs and consequences may be larger and more important. These include the loss of institutional memory, the impact on staff morale, and the inability to perform critical functions.

Public transportation, sanitation, water and electricity provision were cited by managers as critical functions of the municipality. The Strategic Executive: Planning, Urbanisation and Environment was highlighted as being vulnerable to the epidemic as its divisions are interlinked and all of their functions are necessary for the department to operate efficiently.

Key informants believed that the City of Windhoek is being managed better than at any time in its past and that this promotes the city's ability to respond to the epidemic. Ironically, however, this improved management and efficiency within the municipality as it has promoted leaner and narrower senior management structures and this improved management structure may itself pose a risk.

### Costs

The costs of the epidemic for Windhoek municipality will be high. The main costs lie in increased medical aid contributions, as well as the cost of absenteeism and productivity losses. Over the nine year period (2002 - 2010) the present value cost will be **N\$25,826,261** across all bands. The following table provides data on these increased costs by band. The figures are discounted totals (i.e., are shown at present value):

**Table ES1: Total Increased Costs Resulting from the Epidemic by Band, Municipality of Windhoek (2002 - 2010)**

Band	2002	2003	2004	2005	2006	2007	2008	2009	2010
A	395,084	435,094	467,500	483,780	487,899	484,249	475,526	462,260	447,846
B	839,812	917,811	981,542	1,029,205	1,054,142	1,039,236	1,009,640	984,063	958,280
C	841,085	930,227	994,433	1,040,619	1,060,346	1,055,962	1,042,133	1,017,031	984,528
D - F	427,930	472,271	490,871	509,970	540,957	550,002	524,054	499,171	475,437
All Bands	2,500,912	2,755,402	2,934,346	3,063,573	3,143,345	3,129,448	3,051,353	2,962,526	2,866,091

However, the internal costs arising from the impact of HIV/AIDS on municipal personnel are not the sole economic impact of the epidemic. The performance of the economy and the growth rate of the city may affect the level of demand for municipal services. There is also concern as to the ability to pay for most services as a result of constrained household economies resulting from HIV/AIDS. It is likely that overall electricity sales will be related to the performance of the city, as well as the regional and national economy. Any factor, such as AIDS, depressing the growth of these will depress the growth in demand for electricity and the municipal revenue generated from this source.

Further, while household ability to pay for services will be constrained, their willingness to pay for these remains unknown. This can only be assessed through household level quantitative surveys, which are beyond the scope of this Impact Assessment. However, it may be that those suffering AIDS-related economic shocks would be willing to pay for services because of the importance of these services, sacrificing other items in their household budget.

The sale of land and houses is another important source of revenue for the municipality. HIV/AIDS will affect these sales in a number of ways, complicating the achievement of delivery targets and interfering with revenue flows. If land or property is purchased from the municipality with no financial ties between the buyer and the municipality existing after the sale, these impacts will be minimal. The exception is that house and land prices and the health of the market will be affected by HIV/AIDS via the epidemic's impacts on the local and regional economy. These are likely to result in reduced sales.

The municipality presently sells serviced erven to those who can afford market prices and to low income groups through development projects where the costs of prefinancing service provision is recouped. Sales through these projects are insured against the death of the land or house owner who, in addition, is required to name a beneficiary in the event of their death. However, administrative costs will increase as the number of AIDS deaths rise, as changes in the financial and legal arrangements will have to be processed or repossessions conducted.

Even in cases where outstanding debt is covered by an insurance policy, death decreases the profitability of sales. This is because property sales generate revenue in two ways, firstly through the capital payment and secondly through the interest received. Insurance protects the capital, but early payment following a death means the loss of interest income for the remaining years of the loan.

A related and important issue is the impact of HIV/AIDS on revenue growth. All major sources of revenue are related to the size of the city, in terms of area and population. This reduction in the size of the population has implications for planning of service delivery over the next ten to twenty years. This is particularly important where infrastructure investments, such as electricity substations, water purification plants, etc., are a significant cost item.

Equally, the demand for burial space and cost associated with its allocation, preparation and maintenance will increase as the death rate climbs and will need to be planned for. How great such an increase will be is difficult to estimate. Many residents of Windhoek are migrants from elsewhere in Namibia. They may well opt to return home while ill and die outside of the town. Alternatively, the availability of medical care in Windhoek may draw in patients dying of AIDS.

In addition, the epidemic demands that the Council take the lead in preventing further HIV infections not only among its staff, but also in the community it serves. These new services will require not only additional staff, but also new programmes and materials whose introduction obviously has cost implications. However, the cost of inaction is likely to be greater.

# Chapter 1: Introduction and Background

## Introduction

The HIV epidemic is affecting every aspect of Namibian society. These impacts include, among others, a reduction in the population growth rate, alterations to the demographic structure of the population, economic losses through a reduction in Gross Domestic Product (GDP), as well as broader societal change as the nation comes to terms with its losses, and the need to care for the infected and the affected. Paralleling these national impacts are severe impacts on households and extended families. Food security is being undermined, breadwinners are dying, and household coping strategies are under unprecedented strain.

To respond to this national challenge, Namibia created the National AIDS Control Programme in 1990, which was eventually relaunched as the National AIDS Co-ordination Programme (NACOP) in 1999, underlining the need for a multi-sectoral response to the epidemic. Namibia is currently implementing the second HIV/AIDS plan (1999-2004), which outlines the responsibilities of the various sectors. Coinciding with the launching of NACOP in 1999, a National AIDS Committee was also formed. It is chaired by the Minister of Health and Social Services, and co-chaired by the Minister of Regional and Local Government and Housing. The co-chairpersonship by the Minister of Regional and Local Government and Housing is in recognition of Government's commitment to decentralisation, but is also in recognition of the fact that regional and local authorities are the ones who are closest to the people they are meant to serve.

While the need to respond to the epidemic places considerable burdens on regional and local authorities in terms of implementing effective responses to the epidemic, their ability to do so is undermined because it is taking place within the context of direct impacts *on the local authorities as well*. The local authorities will lose personnel to the epidemic, due to illness, death, or responding to the illness and deaths of family members. Further, HIV/AIDS will

increase the costs of doing business, and will effectively undermine the efficiency of the sector and reduce turnover, with negative impacts on employment potential and creation of tax revenues. Local authorities are therefore playing a central role in preventing and coping with the epidemic, while they themselves are directly affected in a variety of ways.

This volume deals specifically with the results of the assessment as they pertain to the municipality of Windhoek. Data from the Ministry of Health and Social Services (MOHSS) surveillance survey conducted in 2000 indicates that antenatal HIV/AIDS prevalence rates for those aged 15-49 in Windhoek was 31%. In effect, close to one-third of the working age adult population of the municipality may be HIV positive, and will eventually die of AIDS, resulting in productivity, skill and economic losses. These high levels of infection highlight the need to better understand the implications for the city and its council.

## **Background to the Study**

In 2000 the Chief Executive Officer of the Municipality of Windhoek initiated a process to consider the impacts of the HIV/AIDS epidemic on the municipality of that city, as well as the people it served. After discussions with counterparts in Walvis Bay and Swakopmund, the proposed investigation was broadened to include the two coastal towns as well, and was later further expanded to the two northern towns of Oshakati and Ongwediva.

Financing was sought for the impact assessments from the United States Agency for International Development (USAID), and provided via Family Health International, an international non-governmental organisation working in the HIV/AIDS arena. Technical support for the impact assessment was provided by Social Impact and Policy Analysis Corporation (SIAPAC) and was implemented by SIAPAC in conjunction with the Health Economics and HIV/AIDS Research Division (HEARD) of the University of Natal, Durban, South Africa and JTK Associates, a development consulting company located in Mbabane, Swaziland.

## Aims and Objectives

The **aim** of the assessment was to provide detailed insights into the internal and external impacts of the HIV/AIDS epidemic on the five municipalities of Ongwediva, Oshakati, Swakopmund, Walvis Bay and Windhoek, as follows:

### *Internal Impacts*

- the impact of HIV/AIDS on the personnel within the Municipality;
- on the ability of the municipality to meet its mandated responsibilities;

### *External Impacts*

- on the businesses within the city;
- on the health services;
- on the economic and social well-being of residents living within the Municipality;
- on the overall quality of urban life in the city.

Of equal importance, the assessment was intended to 'mainstream' HIV/AIDS into the functions of the municipalities. This was to be accomplished through the development of an HIV/AIDS strategy and action plan following review of this report by the respective local authorities.

Specific **objectives** of the assessment are as follows:

1. Project the demographic impact of HIV/AIDS illness and death on the population of local authority personnel, and indicate needed additional human resources.
2. Project the demographic impact of HIV/AIDS illness and death on the population living in the local authority areas.
3. Project the economic impacts of HIV/AIDS on households in the local authorities' areas and consider the impact this will have on affordability and payment for local authority services and the overall revenue base.
4. Project the economic impacts of HIV/AIDS on businesses in the local authorities' areas and consider the impact this will have on the viability of key business sectors.

5. Qualitatively assess the impact on 'quality of life' for the local authority areas (e.g., ability of households to meet basic livelihood needs, levels of crime, street children, etc.).
6. Consider the costs associated with HIV/AIDS prevention activities for local authority personnel. Compare this to the costs associated with *not* implementing the intervention. Outline possible programmatic interventions.
7. Outline an HIV/AIDS strategy and action plan.

## **Methodology**

The study was divided into four phases: design; implementation; analysis and write-up; and planning/integration.

### Design

#### *Mobilisation*

Start-up was delayed for several months due to various technical requirements, and work on the Assessment only began in September 2001 when all outstanding agreements were in place. Work began with a series of inception visits by the Deputy Team Leader, Mr. Mouton of SIAPAC, to all participating local authorities. The purpose of these visits was to brief local authority executives on the assessment and begin preparations for the Inception Workshop.

#### *Inception*

The Inception Workshop was held at the Safari Hotel in Windhoek on 7 and 8 November 2001. It was attended by participants from each of the participating local authorities, among them Chief Executive Officers and finance and human resource managers. The purposes of the workshop were to:

- introduce participants to the aims and objectives of the project assessing the impact of HIV/AIDS on five Namibian cities (Walvis Bay, Windhoek, Swakopmund, Oshakati and Ongwediva);
- to seek agreement on project aims and objectives with participants, following review and discussion; and
- to plan and agree to a schedule of work with representatives of each local authorities.

These objectives were met. In addition, participants recommended that an Advisory Group be appointed to guide the work of the consultants and local authorities during the Assessment, and suggested the membership of the Advisory Group. Participants also agreed on the nature and type of information and data needed for the Assessment that were to be supplied by the municipalities, and established a schedule for its provision. The Workshop minutes are included in Volume 7 of this report.

Following this workshop an Inception Report was submitted. This contained changes to the propose schedule of work because of the late start of the Assessment, and the difficulties imposed by the pending Christmas break when few officers would be available to collect the requisite information.

Concurrent with data gathering activities was the completion of a detailed literature review. A bibliography is attached to this volume.

Following the literature review, and in addition to long-term dialogue and information gathering activities, qualitative data gathering instruments were developed to conduct interviews with municipal employees. Specifically, *qualitative* discussions were held with small groups of municipal officers. The aim was to gain insights into attitudes about HIV/AIDS and recommendations on how HIV/AIDS prevention activities should proceed within the local authorities. Two qualitative approaches were employed: 1) focus group discussions; and 2) story with a gap. These were supplemented with key informant interviews with municipal managers.

At the end of this Design Phase progress meeting were held (one in Windhoek, one in Walvis Bay, one in Swakopmund, one in Oshakati and one in Ongwediva), at which time Progress Report 1 was submitted.

## Implementation

Implementation consisted of three activities:

- 1) reviewing then information made available and analysing the gaps in the data;
- 2) projecting HIV/AIDS impacts; and
- 3) implementing key informant interviews, focus group discussions, and story with a gap group discussion instruments.

As soon as the relevant data became available from the local authorities on municipal personnel, these were applied to projections of municipal personnel numbers. The 1998 projections of the demographic impact of HIV/AIDS were updated by MOHSS to include 2000 seroprevalence data (using the SPECTRUM group of models), and these were used as the basis for projecting the impact of the epidemic on the five local authorities and the populations they serve.

The model required a great deal of demographic data in order to complete the projections. Data from the Central Bureau of Statistics (CBS) and the Ministry of Health and Social Services (MOHSS) were used, and the assumptions made were, to the extent possible, the same as those used in the national projections on the demographic impact of HIV/AIDS. A more detailed discussion in this regard is included in Volume 7.

The data on local authority personnel and local populations were needed in a format that was both consistent and useable. These requirements were communicated to the local authorities, and during the initial start-up meetings the consultants provided the local authorities with a format for these data and agreed to a schedule for their provision. Most of the municipalities were able to comply but, despite everyone's best efforts, a number of delays were experienced in receiving these data.

Once the data became available, projections from the model were applied to the relevant local authority populations. For example, the model allowed the projection of HIV prevalence levels and AIDS-related deaths among municipal staff by cadre. Similarly, it allowed the

investigation of the demographic impact of the epidemic among the populations these authorities served, and allowed consideration of some assumptions about these effects on demands for services and abilities to pay for these.

To supplement the quantitative data and collect information on attitudes important for an understanding of the potential impact of HIV/AIDS on the five municipalities and the people they served, two qualitative approaches were used: 1) Focus Group Discussions (FGD); and 2) Story With A Gap (SWAG). FGDs are particularly useful in collecting detailed insights into sensitive issues such as HIV/AIDS. SWAG is a variation on the FGD approach, and is a useful tool in getting participants to consider their current situation in relation to a desired state, and discussing roadblocks and needed actions to move from their current state to a desired one. For this consultancy, the two approaches were used so that respondents could consider how the local authorities might best respond to the epidemic.

At the end of the Implementation Phase further progress meetings were held (meetings were held in each of the five municipalities), at which time Progress Report 2 was submitted.

### Analysis and Write-Up

As data become available the impacts of HIV/AIDS on the local authorities were modelled. This took some time, given the complexity of the projections, particularly in relation to internal migration within Namibia, and given continued data gaps. The model does not easily accommodate internal migration effects, and assistance was sought from the developer of the model in this regard. In response to requests from the Consultant, Mr. John Stover of The Futures Group kindly developed the bridging formulae needed to allow the model to incorporate internal migration.

Qualitative/participatory findings were compiled using NUD\*IST, a data analysis software package designed to systematically interrogate qualitative findings, and thereafter the key findings were incorporated into the reports.

The report was then submitted for review by the municipalities and comments solicited. A final series of progress meetings was held with each of the five municipalities in order to present the findings from the draft report and facilitate receipt of comments and feedback.

### Planning and Integration

Methodologies to integrate HIV/AIDS into the activities of the three local authorities, and to assist the five municipalities in prepare concise HIV/AIDS Prevention and Response Strategy and Action Plans, were developed at an advocacy workshop with the five local authorities. This was held in Walvis Bay from August 12 - 16, 2002. This planning workshop assisted the five local authorities to review and analyse the findings from the reports. Following this, participants began the process of planning for interventions intended to mitigate the impacts on the municipalities themselves, including prevention programmes intended to reduce infection rates among municipal personnel and the communities they serve.

Following the workshop the reports were finalised in draft form for final circulation, incorporating comments and changes from the local authorities. These now constitute the draft reports, and include the action plan and advocacy strategies developed at the closing workshop.

### **Data Limitations**

Throughout the Assessment participating local authorities were extremely co-operative and helpful in making requested data available to the consulting team. However, in several instances the data required to fully assess the impact of HIV and AIDS on a particular municipality was simply not available. Where this has occurred, the impact has been assessed qualitatively. For example, in Windhoek it has not been possible to obtain detailed data on the economic base of the city by sector (i.e., manufacturing, retail, tourism, etc.). Assumptions have had to be made about their relative importance, and this has made it difficult to more precisely determine the contribution made by these industries to the municipality's revenue base and the potential impact of HIV on this.

While the data gaps vary across the five municipalities, one purpose of the strategic and action planning workshop is to assist the municipalities begin to fill these gaps and each has now included data gathering and analysis in its draft action plan.

## Structure of the Overall Report

This final report is presented in seven volumes. The first volume presents integrated findings across all five cities, including a more detailed discussion of the methodology used as well as background on Namibia, the HIV/AIDS epidemic and local government in the country, while the five subsequent volumes present specific findings for each of the participating local authorities. The volumes are as follows:

This report consists of seven volumes. This Volume presents findings for the Municipality of the City of Windhoek.

- Volume 1 Detailed study description, methodology, background information on Namibia, the epidemic in the country and on local government, as well as integrated findings arising from the Assessment of the Impact of HIV/AIDS on Five Namibia Cities
- Volume 2 Assessment of the Impact of HIV/AIDS on the Town of Ongwediva
- Volume 3 Assessment of the Impact of HIV/AIDS on the Town of Oshakati
- Volume 4 Assessment of the Impact of HIV/AIDS on the Town of Swakopmund
- Volume 5 Assessment of the Impact of HIV/AIDS on the City of Walvis Bay
- Volume 6 Assessment of the Impact of HIV/AIDS on the City of Windhoek**
- Volume 7: Appendices
  - Terms of Reference
  - Projections and Modelling
  - Field Instruments
  - Minutes of Advisory Committee Meetings
  - Inception Workshop
  - Prevention and Response Strategy and Action Planning Workshop
  - Bibliography

The intention is that each volume of this Assessment can be read as a stand-alone report. In order to present readable and comprehensive reports for each participating local authority, there is, however, some duplication between these volumes, in that a brief discussion of background information, the structure of the report, and an overview of the methodology used are included in volumes 2-6. However, a detailed discussion of methodology, particularly that related to the models used to present demographic projections of the impact of HIV/AIDS on each city, as well as the planning and strategy development matrices used, will be found in Volume 1 of this study.

### **Structure of this Volume**

This volume presenting findings for the City of Windhoek is structured as follows:

Chapter 1	Introduction, Structure of the Report, Methodology and Background to the Study
Chapter 2	Windhoek, its community and municipal structure and functions
Chapter 3	The Impact of HIV/AIDS on the City of Windhoek, its population and economy
Chapter 4	The Impact of HIV on Windhoek Municipality
Chapter 5	The Way Forward

## Chapter 2: The City of Windhoek

### Introduction

As the capital of Namibia, the City of Windhoek is the largest and most important urban area in the country. The city is the seat of Government, controls the largest share of Namibia's economy and is the administrative, service, commercial and industrial centre of the country. As such, it plays a key role in the country's development.

The city lies in a 10 kilometre long valley in the central highlands of Khomas Region. The area is a semi arid region having a low human and animal carrying capacity (Windhoek Structure Plan: 1995). The total municipal area is 64,586 hectares, and, in 1996, included twenty proclaimed townships.

This chapter provides information on Windhoek's population and economy, and its municipal structure and functions

### Demographic Profile

In 1991, the national census found that the city's population was 147,000. Between 1991 and 1995, Windhoek's population growth rate was estimated at 5.44% per annum, mostly made up of in-migration (estimated at 3.92%) of individuals from northern Namibia seeking an urban base and employment opportunities.

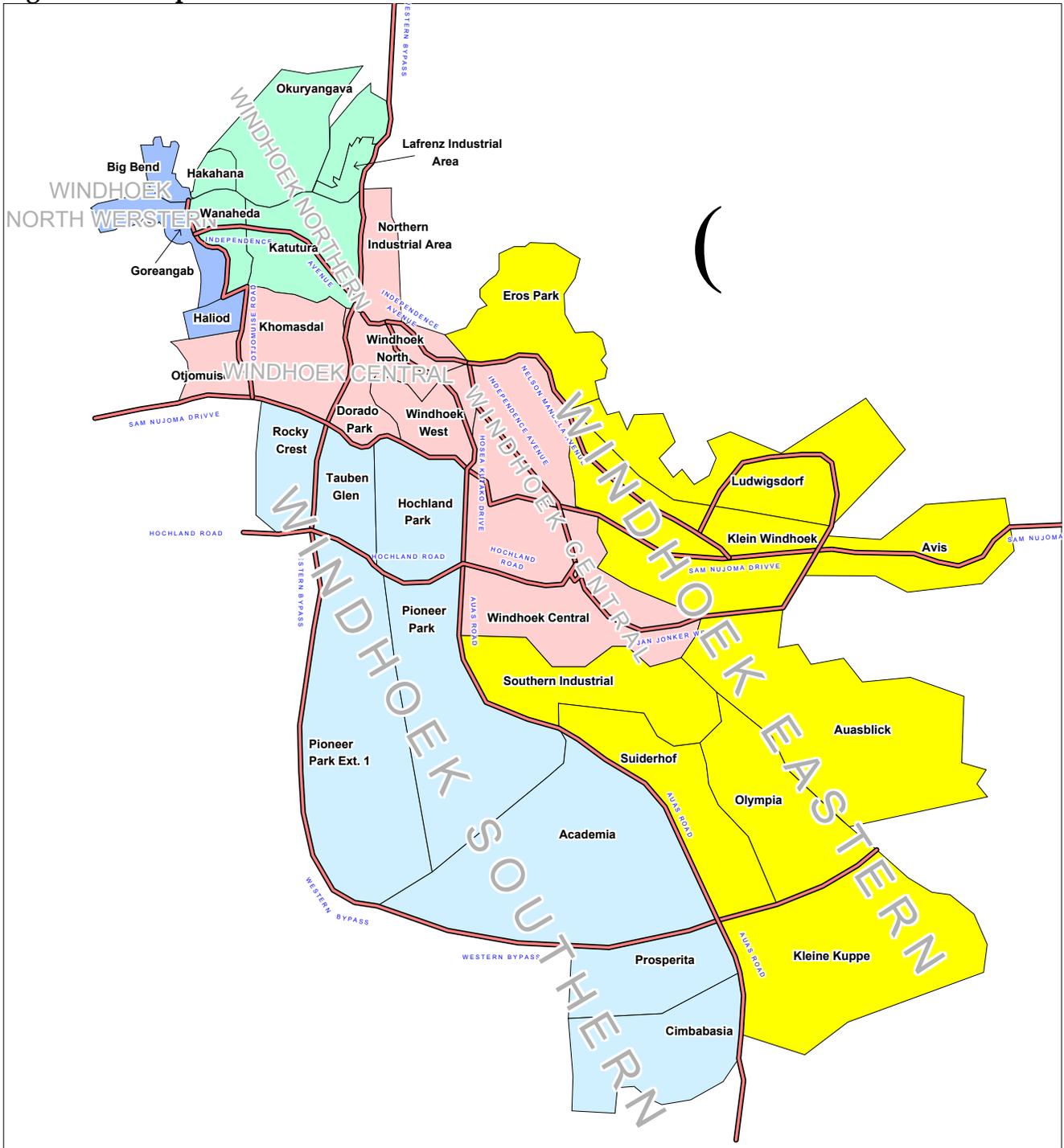
Preliminary 2001 census data reveal that the City's population increased to 243,272 individuals over a ten year period. There are 58,575 households, with an average household size of 4.2 people. Overall, Windhoek contains just over 13% of Namibia's total population and an estimated 27% of the country's urban population.

In 1995 close to 39% of those participating in a survey (City of Windhoek, 1996b) stated they had lived in the city for less than ten years, confirming the high levels of in-migration to the city. Available data suggest that close to 600 individuals move to Windhoek each month. Most migrants (58%) are from northern Namibia and many are young, poorly educated and lack the competitive skills needed to work in the formal sector.

Some 60% of these migrants are from the four north central regions of Oshana, Omusati, Ohangwena and Oshikoto. This constant flow of in-migrants to the city puts enormous pressure on resources and on the Municipality's ability to meet demand for land and services among the urban poor, many of whom are recent arrivals. City planning documents presently estimate that the population of Windhoek could reach 350,000 people by 2008 if this trend continues and the city's Structure Plan indicates that available land in the Windhoek basin will be filled within ten years if migration continues at its present rate. These projections will, however, now be impacted by HIV/AIDS that will reduce the city's population growth, as discussed in subsequent chapters of this report.

According to surveys conducted on behalf of the Municipality of the City of Windhoek, the city can be divided into five main geographic areas on the basis of internal homogeneity in terms of income, density, migration and demographic characteristics. Close to 70% of all migrants to Windhoek settle in the northwest (36%) and northern areas (32%) of the city. The five geographic areas are outlined in the following table and map.

Figure 2.1: Map of Windhoek



A description of locations in Windhoek is offered in the following table:

**Table 2.2: Geographic Areas, Windhoek**

Area	Neighbourhoods
Windhoek eastern	Eros, Erosark, Klein Windhoek, Ludwigsdorf, Avis, Administration Hill, Wireless Hill, Luxury Hill, CBD, Bismarck street area, southern Industrial area, Olympia, Suiderhof and Eros Airport
Windhoek Southern	Area to the west and south of Sam Nujoma Drive and Daan Viljoen road. Includes Academia, Pioneerspark, portion of Windhoek west, Hochland Park, Pioneers park extension 1, Rocky Crest and the UNAM campus
Windhoek central	Most of Windhoek west, Windhoek north, Railway station, northern industrial area, Dorado Park, Khomasdal extensions and Otjomuise
Windhoek northern	All area north of Rand street, to the west of the Bypass, to the east of Otjomuise road, south of the northern boundaries of Hakahana, Okuryangava extensions, 1-4 and the Lafrenze Industrial area
Windhoek North western	North of Burg street, west of Otjomuise road, north of Hakahana and the developed Okuryangava extensions

Source: City of Windhoek, 1996b.

The total population of Windhoek by political constituency is indicated in the following table:

**Table 2.2 : Censused Population by Geographic Area, Windhoek (2001)**

Constituency	# of Households	Total Population	# of Females	# of Males	Average Household Size
Hakahana	15,826	59,546	26,198	33,348	3.8
Katutura Central	4,074	20,988	11,536	9,452	5.2
Katutura East	3,165	17,737	9,536	8,201	5.6
Khomasdal North	5,600	26,621	13,873	12,748	4.8
Soweto	2,553	13,809	7,210	6,599	5.4
Wanaheda	6,578	29,051	13,881	15,170	4.4
Windhoek East	5,627	16,643	8,536	8,107	3.0
Windhoek West	10,005	38,969	20,435	18,534	3.9
<b>TOTAL</b>	<b>53,428</b>	<b>223,364</b>	<b>111,205</b>	<b>112,159</b>	<b>4.2</b>

Preliminary data from the 2001 census found that the average household size in Windhoek had increased to 4.2 members. This contrasts with findings from a 1995 survey undertaken for the municipality (City of Windhoek, 1996b), which indicated that household size at that time was 3.8 members. This is, perhaps, an indication of more permanent settlement by migrants to the city as more of their family move to join the initial migrants who have served

as reception households in the urban area. Some 83% of Windhoek's total population live in the highest density parts of the city. Assuming that the population distribution between the five geographic areas of the city has remained the same, this would imply that some 173,000 people now live in the north and north-western areas of Windhoek.

The age distribution of Windhoek's population, when taken as a whole, had a typical urban pattern in 1996 (2001 census data are not yet available on population breakdown). There were higher numbers of those in the working age cohorts (15 to 40 years of age) in particular and these residents were young, with the average age of city residents being 28 years. There are, however, distinct demographic differences between the five geographic areas of the city, with high proportions of young people (20 to 34 years) in the north western areas, reflecting very high levels of in-migration to these neighbourhoods. In these areas, 72% of the resident population was found to be between 15 and 44 years of age, with an average age of 24 years. Similarly, while 51% of Windhoek's population were males, and 49% females, in the northwestern areas of the City, only 42% of the population were females while 58% were males.

In the eastern, central and southern suburbs of Windhoek, households comprise the head, spouse and children, with few other relatives living with them. In northern areas the typical household comprises the head, children and other relatives, and less than 50% of household heads in this area had a spouse living with them. Other relatives are the second largest group of household residents (29%), followed by children (34%).

In the north western area, households contain an even higher percentage of other relatives (32%) and these comprise the largest group of household residents, followed by household heads (27%), children (23%) and spouses (14%). The data confirm that other relatives in these areas are those in working age groups, again supporting the fact that the households of initial migrants to Windhoek serve as reception points for other family members.

"Windhoek city council has inadequate resources for subsidized town development for the poorer communities". Regional Development Plan 2002.

Some 32% (72,000) of all Windhoek residents live in informal squatter areas, mainly in the northwest of the city (City of Windhoek: 2001). It is in these areas that the municipality is attempting to provide affordable services and where the poorest of Windhoek's residents can be found. However, together with 'pockets' within the northern parts of Windhoek, these areas are likely to be most affected by the HIV/AIDS epidemic, which will result in reductions in residents' abilities to afford even the lowest levels of service.

### **The City's Economy**

The economy of Windhoek represents a major part of the national economy, with the majority of trade, manufacturing, utilities, construction, transport and communication, finance and business services and community and social services located in the city. Most large companies and corporations have their head offices in Windhoek.

Windhoek is also the capital of Khomas Region, which has the strongest economy of all thirteen Namibian regions and receives 22.4% of national expenditure. The city has a sound non-tradable sector (government services) and finance sector (banking and insurance), while manufacturing, transport and agriculture are also well established as indicated in the table below. Further, the population of Windhoek is responsible for the largest share of final consumption, estimated a 35% of total national consumption.

In addition, the city has strong trade links with regional neighbours within the SADC region, particularly South Africa, and exports from Windhoek-based manufacturers are important, particularly beverages (beer) and meat and meat products. Light industries of importance are meat processing, beer, canning, plastics and refrigeration. In 1996 the municipal health list contained 1952 businesses. The following table illustrates the share of each represented in Windhoek.

**Table 2.3: Windhoek's Share of National Economic Activity**

<b>Economic Sector</b>	<b>% based in Windhoek</b>
Manufacturing activity	51
Communications	96
Construction and trade	56
Transport* and communications	94
Finance and business services	82
Community and social services	68

\* Transport may be overstated, as the data do not include Walvis Bay.

As a result, Windhoek's economic growth closely follows that of the national economy. In addition, aside from the large formal sector in the city there exists a substantial and growing informal sector. Results from NEPRU surveys indicate that tourism, financial services and trade are sectors projected for highest growth.

Constraints to the future development of Windhoek's economy are viewed by businesses as being the lack of water and land which can be developed, skilled labour, and bureaucratic red tape (this latter referring to the national level).

### **Socio Economic Status of Residents**

Unemployment, poverty and low affordability levels characterise much of Windhoek's population. These factors are largely driven by Namibia's colonial history, rigid, racially biased *apartheid* era planning controls and, in the years since Independence, the need rapidly to rapidly develop decentralised economic opportunities, particularly to the northern regions of the country, in order to slow migration to the city.

Income levels for most residents are in the low or low/middle ranges. The Primary Household Subsistence Level (PHSL) for Windhoek in 2001 was N\$1,526 for low-income groups, and N\$1,815 for low to middle income groups (Windhoek Municipality, 2001). This had increased some 33% from 1995 levels, when the PHSL was established at N\$860 per month for low-income groups. However, 71% of residents in north western Windhoek and 32% in northern Windhoek earned less than this figure, compared to only 6% of households in central areas, 4% in southern areas with 3% of households in eastern areas earning less than the PHSL.

More recent data provided by the municipality indicate that, when compared to the 1995 survey findings, the financial situation of households in the northern areas has deteriorated, with average incomes not keeping pace with inflation. Seventy one percent and 32% of the households in the northwestern areas and northern areas respectively, earn less than N\$800 per month, thus living below the Primary Household Subsistence Level of N\$860 per month. These data suggest that there are severe income inequalities within low and low/middle income groups in the city.

Further, the low levels of income in the north and northwestern areas of the city limit the level of services that can affordably be provided to these residents. Using a ratio of 25% of household income, indications are that perhaps 30-40% of all households in the city could only afford less than N\$140 per month for housing expenditure (City of Windhoek, 1996b). If this were projected to 2002, with an assumed income growth rate of 8% per annum, this would give a figure of N\$240. These low levels of affordability pose very severe constraints to the provision of land and services to many of Windhoek's residents.

The data attribute this to high levels of in-migration, as most migrants have high illiteracy rates, a high proportion of pre-school children, low incomes and high unemployment rates. Some 59% of Windhoek's population are employed, and 22% are unemployed, with 19% being economically inactive. Close to 67% of males and 51% of females are employed. The level of educational attainment by residents of the city again varies considerably by area and, while low, appears to be rising in the north and northwestern suburbs as a result of improvements in the educational sector since Independence. In these two latter areas, 54% and 69% respectively had attained less than Grade 12 in 1995. This compares to 35% for the southern and eastern areas of Windhoek and 56% in the central area. No more recent data on educational attainment by residents of Windhoek neighbourhoods are available. However, national statistics suggest a marked improvement in the level of educational attainment for all Namibians.

## The Municipality

The City of Windhoek is classified as a Part 1 Municipality under the Local Authorities Act (23 of 1992). The municipality is therefore responsible for the provision of all urban services to residents of the city, on a cost recovery basis. In order to meet this mandate, the city views its mission as being one of having the obligation to ensure the well-being and enhance the quality of life of all citizens.

The functions of the municipality are to ensure that all citizens of the city live in a safe and comfortable environment. This is accomplished through the provision of the following services: land, sewerage, water, roads, refuse removal, health (primary health care), electricity, registration of businesses, shelter, roads and maintenance thereof, markets trading space for the public, recreation facilities, community services, traffic management, ambulance services, disaster control, and employment creation.

In order to fulfil these functions the Municipality of the City of Windhoek maintains a staff of 1,614 individuals and had an operational budget of N\$573,080,415 in 2001/2. The municipality has eight strategic executive divisions in order to implement these diverse functions as indicated in the organisational chart following this page.

### Key Functions

Senior managers interviewed during the Assessment indicated that these Strategic Executives were responsible for the following key functions:

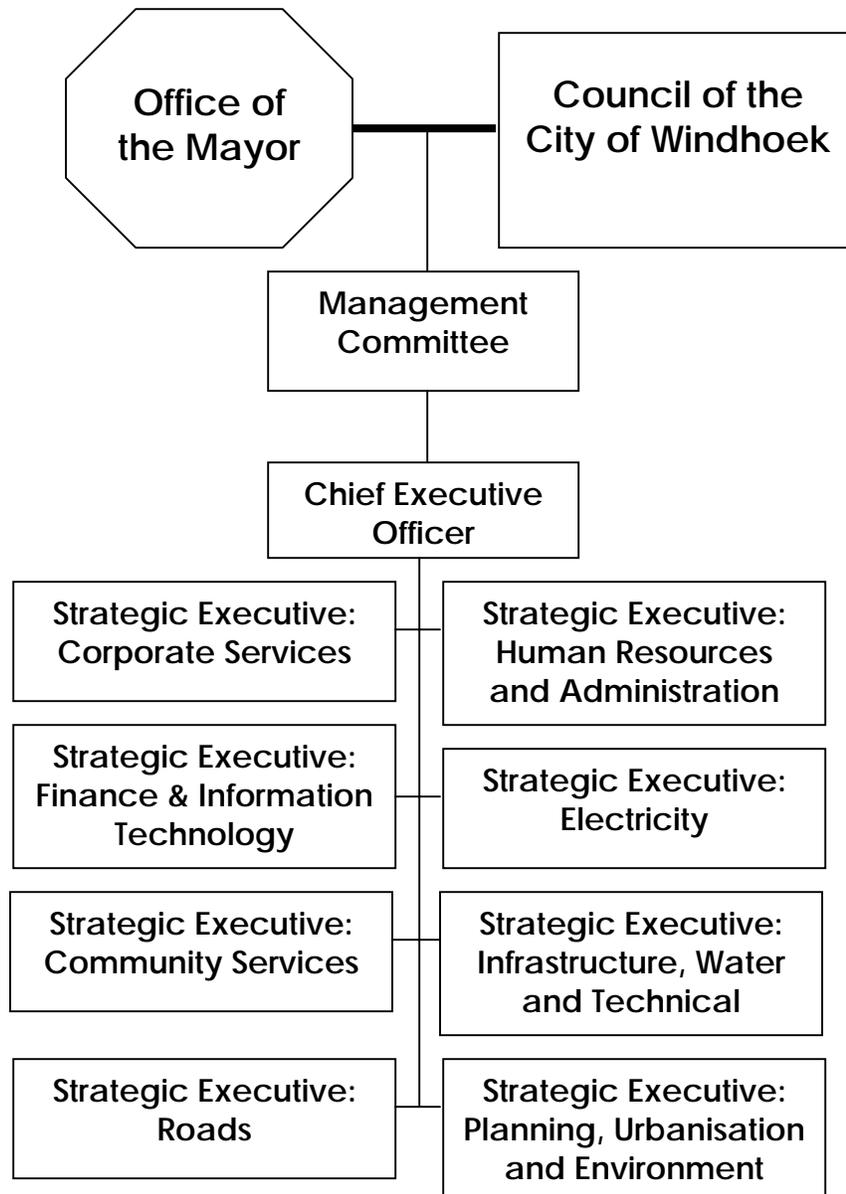
**Table 2.4: Strategic Executive Functions, Municipality of Windhoek**

Strategic Executive	General Key Functions
Infrastructure, Waste and Technical Services	Provision of water, refuse removal, water reticulation. Planning and providing the necessary infrastructure for the city to operate.
Corporate Services	
Roads	Roads, maintenance of vehicles, support services, garage and bus services. Main law and order on roads. Security officers protect all property and assist the police in keeping law and order.

Community Services	Liaison between the city and the community. Public health education, healthy living environs, pest control, etc.
Planning, Urbanisation and the Environment	Planning, environmental impact assessments and implementation of projects. Registration of properties, sale of properties. Initiating and maintaining park and gardens, cemeteries, tourist attractions, sports, arts, culture. Promotion of tourism.
Electricity	
Human Resources and Administration	
Finance and Information Technology	Manage the finances of the city and the information network of the municipality

The structure of the municipality is indicated in the following figure:

**Figure 2.2: Windhoek Organisation Chart**



In order to inform later analysis of the impact of HIV/ AIDS on municipal operations, officials were asked to state which functions could be regarded as core (or key) and those, which could be, viewed as peripheral, or somewhat less essential, to meeting the municipality's mandate. This categorisation is presented in the following table.

**Table 2.5: Core and Peripheral Municipal Functions, Windhoek**

<b>Core</b>	<b>Peripheral</b>
Water	Parks
Electricity	Tourism
Sewerage	Roads
Refuse Removal	
Serviced Land	

Interestingly, no mention was made of housing provision, which in light of Windhoek's rapid urbanisation would seem to be a critical function. Equally, only one participant mentioned the city's responsibility for primary health care provision as a core function of the municipality, and no mention was made of government's plan to further decentralise health care provision. Not only is provision of these services important in the face of HIV/ AIDS, the impact of the epidemic will impose severe burdens on the city's ability to maintain health services, both in terms of the demand for and supply of these.

### Budget

Over the past several years, the city has had an operating budget in excess of N\$500 million. Much of this revenue is derived from assessment rates, the sale of water and electricity, sanitation and refuse removal and land. In the city's 2001/2 estimates, some 83% of operating revenue is derived from rates, water, electricity and refuse removal, etc. The balance is presumably derived from the sale of land and other assets. The following table illustrates the city's operating income and expenditure over the past two years.

**Table 2.6: Overall Operating Budget Figures, Municipality of Windhoek (2000/1 - 2001/2)**

<b>Item</b>	<b>2000/01</b>	<b>2001/02</b>
Total Expenses	521,441,120	567,611,190
Total Revenue	506,983,989	573,080,415

Revenue from service provision is broken down in the following table:

**Table 2.7: Service Revenue, Municipality of Windhoek, (2000/1 - 2001/2)**

Item	2000/1	2001/2
Rates	98,075,00	100,800,000
Electricity	179,180,710	193,238,683
Sanitation (refuse)	23,899,956	24,873,006
Sewerage	28,851,568	29,769,628
Water	97,774,196	129,142,291
Total	329,804,505	477,823,608
as % of total revenue	65.1	83.4

All properties in the formal areas pay assessment rates and also for services provided by the City of Windhoek. In the informal areas where land sales are not contemplated, charges are levied differently (i.e., by communal standpipes provided, etc.).

Staff salaries and benefits accounted for some N\$151 million, 27% of the city's operating budget in 2001/2. Of this amount, salaries accounted for 60% of total expenditure. Of the benefits provided to municipality employees, the housing allowance or subsidy amounted to N\$28 million (18%) and medical aid N\$ 6 million (or 3%) of expenditure on personnel. These latter two benefits are of concern, as they are severely impacted by the HIV/AIDS epidemic.

### Services

The municipality presently provides services to some 37,000 rateable properties in all five of its geographic zones. Almost all developed areas are able to connect to water, sewage and electricity. Windhoek's housing and services shortfall is primarily in the north and northwestern areas of the city. The 1996 survey (City of Windhoek, 1996b) estimated that over 82% of these needs were in the north and northwestern areas of Windhoek and in 2001 an erven backlog (shortfall) of 8,000 plots in informal areas was noted. It is in these areas that

"Colonial history and socio economics established a rigid and particular land use pattern on Windhoek, which impinge on the extent to which it is able to respond to present growth and planning demands." (Frayne 1992).

the municipality intends to deliver 3,766 low income erven for upgrading and 3,351 low income erven for resettlement over next three years (2001-2004). This is being accomplished through differing development levels, depending on assessments of affordability in these communities. These development levels range from 1 to 5, with the latter being the highest level of service offered. Development levels 1 and 2 are intended for those in very low income categories, and, generally provide land for lease with communal services. The municipality funds provision of service networks into these areas, while central government's "Build together Programme" funds the construction of top structures.

The municipality's erven delivery targets until 2011 are as follows:

- high income 50 erven/ annum;
- medium income 300/erven/ annum;
- low income - unknown not stated; and
- ultra low income - 2,600 erven/ annum.

In 2001 the municipality estimated that it was providing services to some 74% of the city's residents. Approximately 26% receive communal water but no electricity and 16% have no sanitation services.

**Table 2.8: Percentage of Windhoek Residents by Service Availability**

No Services	No Individual or Communal Water	No Communal Water	No Electricity	No Communal or Individual Sanitation
26%	0.3%	26%	26%	16%

Despite the demands of this service provision backlog, central government's plan to decentralise other services to local authorities will place an added burden on the municipality. It is planned that responsibility for primary health care and social service delivery (including primary education) will be fully handed to the municipality of the City of Windhoek by 2005/6 (Regional Development Plan, 2002). Government's decentralisation policy does state that funding will be provided by central government to the regional and local authority levels, but implementation plans are not yet in place for the devolution of these responsibilities. Decentralisation is regarded as a major development challenge to the

municipality. HIV/AIDS will further increase this, as it will impact on the demand for these new services *and* the municipality's ability to supply these.

The City of Windhoek provides municipal land for sale. All land defined as open space (i.e., now owned under title or allocated to specific functions such as parks, schools and churches; it is worth noting that AIDS Support Organisations can acquire this latter category of land) is within the municipality's purview for sale or development. This can include institutional land made available for churches, schools, crèches, etc., as well as residential land and industrial land.

The sale of land is an important source of municipal revenue, therefore pre-financed development costs must be recovered. In low income areas, however, land is sold at development cost, while in other areas the sale price includes pre-financing costs as well. However, if an individual cannot afford to acquire land by way of land for sale, leasehold under Development Levels 1 and 2 is possible.

In ultra low income areas buyers can acquire the unimproved land through an erf loan repayable over a period of 96 months at an interest rate of 15% pre-financed by the City of Windhoek. For these unimproved land sales no municipal or group insurance is available and buyers are advised to take out their own life insurance policies. However, provision is made for the substitution of purchasers through the identification of approved beneficiaries who are then assumed to be in a position to take over the loan in the event of the buyer's death.

Two housing schemes (Build Together and Windhoek Housing) provide finance for top structures with repayment over a period of 20 years in incremental loan amounts. No financial institutions are prepared to provide housing loans into ultra low income areas, therefore the City of Windhoek pre-finances these.

## Chapter 3: The Impact of HIV/AIDS on Windhoek

### Introduction

This chapter describes the HIV/AIDS situation in Windhoek, its likely impacts on the demography of the city, its economy and community, as well as the local response to the epidemic.

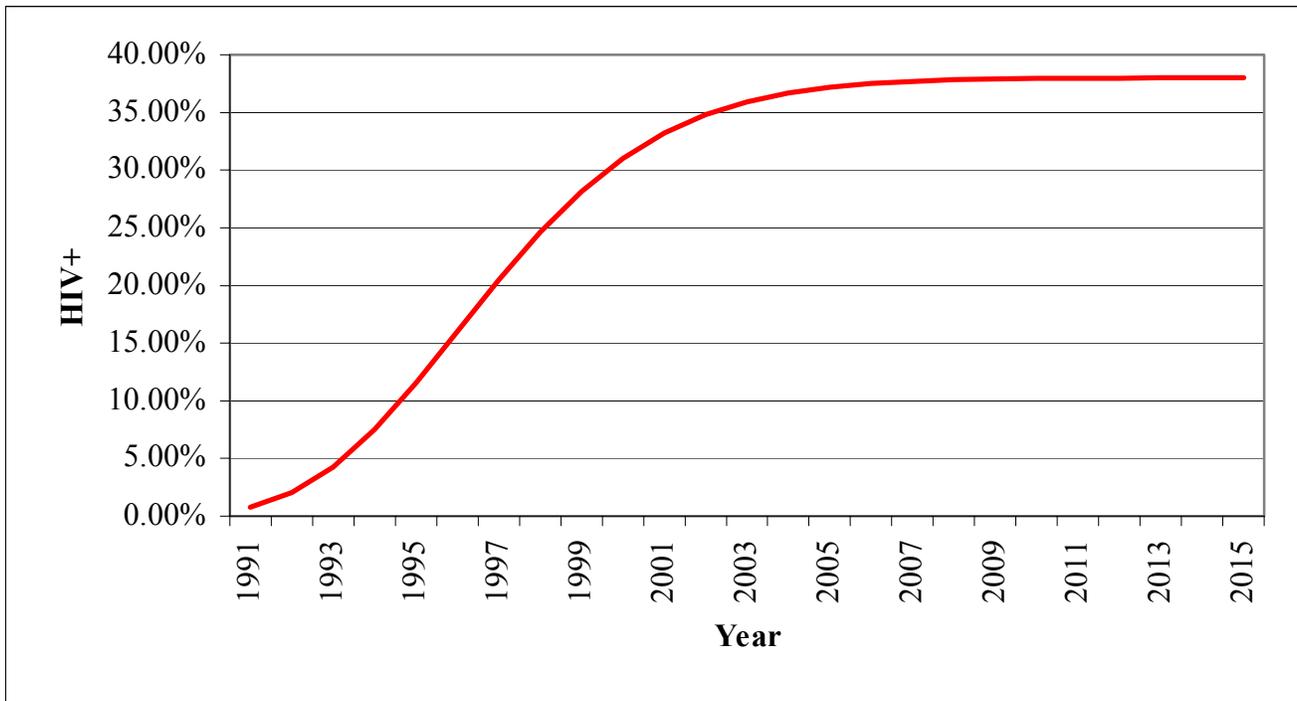
### HIV Prevalence

Namibia undertakes antenatal sero-surveillance surveys to establish the HIV prevalence rate every two years. The last such survey was completed in 2000, and the antenatal prevalence rate in Windhoek for that year was 31%. This rate, the second highest in the country after Katima Mulilo (in Caprivi Region), was close to 9% higher than the national adult prevalence rate of 22.3%

HIV prevalence in Windhoek appears to be close to its peak. If the epidemic continues to follow past trends, HIV prevalence will peak at 38% by 2005. We do not, however, know what will happen after the peak, as nowhere in the world has the epidemic yet run its course. However, for the purposes of this study it has been assumed that HIV will remain stable after this peak.

HIV prevalence is shown in the following figure:

**Figure 3.1: Projected HIV Prevalence, Windhoek (1991 - 2015)**



This high prevalence rate implies that close to one-third of the population aged 15-49 in Windhoek are likely to be infected. Unfortunately, Namibia's sero-surveillance data do not provide information on prevalence by socio-economic or educational status, and it therefore becomes difficult to assess who is infected and affected by the disease.

The HIV/AIDS prevalence rate is at this high level because Windhoek, as the primary city in Namibia, attracts high numbers of internal migrants in search of employment. This results in a highly mobile population with more single males in the economically active age cohorts (15 to 49 years of age) than is the norm elsewhere. In addition, as the demographic data presented in the previous chapters indicate, many of these migrants are younger and poorly educated males. Further, as is known from studies elsewhere, these factors result in riskier sexual behaviours making it more likely that they will become infected with sexually transmitted infections, including HIV.

While HIV/AIDS affects everyone *regardless* of their economic well-being and status in society, the disease is known to co-vary with poverty and educational status. Poverty is

associated with HIV for a number of reasons, primarily related to access to information and medical care. Better-educated individuals have more access to information as to the risks of unprotected sex and frequent partner change and are therefore more likely to change their behaviour. Infection with a sexually transmitted infection (STI) increases an individual's risk of being infected with HIV. Poor people tend to have higher rates of STI because they have less access to medical care. In addition to these factors, poor people, and particularly women, may be placed at risk of HIV infection because of behaviours motivated by poverty, such as commercial or transactional sex work. The relationship between HIV and poverty is, however, not a simple one. Many wealthier individuals are also likely to be infected. Higher income leads to greater access to resources that can lead to more sexual partners and eventual HIV infection. Infection may therefore occur across income groups, but the ability to cope with infection is more problematic for the poor.

### **The Demographic Impact of HIV/AIDS on Windhoek**

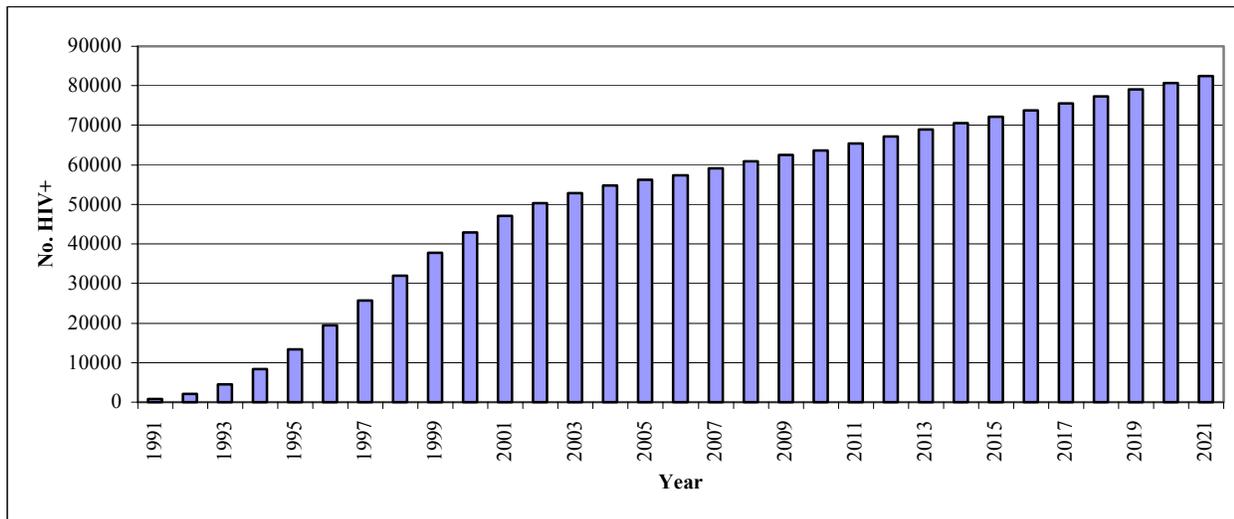
This section discusses the demographic impacts of these high rates of infection on the population of Windhoek over the next several years. As mentioned previously, we do not know a great deal about what will happen to HIV prevalence after it peaks. Therefore, while we have a high level of confidence in the number of deaths over the next 10 years, which will result from infections that have already occurred, estimates further into the future must be treated with caution.

The data presented below project the impacts of AIDS on Windhoek's population. They are based on projections derived from models of the demographic impact of HIV/AIDS on the general population. The SPECTRUM group of models was used for this purpose and the assumptions and methodology upon which the projections are based are discussed in Volume 7 (annexes). It is important to note that these assumptions were discussed and agreed to at progress meetings held with the Municipality and with the Working Group prior to their incorporation in the model.

## Number of People Infected with HIV

While HIV prevalence is a useful and important measure of the level of HIV in a community, it is sometimes more meaningful to convert prevalence into the number of people infected. Figure 3.2 displays the number of people infected with HIV given the present prevalence rate in Windhoek. As can be seen from the figure, some 45,000 people in the city are presently HIV-positive, rising to 61,000 individuals by 2012 and just over 80,000 in 2021:

**Figure 3.2: Number of People HIV+, Windhoek (1991-2021)**



The figure illustrates the flow of HIV infection, with the number of people infected in the early stages of the epidemic increasing rapidly. This is because, at this stage of the epidemic, most of those who are HIV positive are newly infected and the mortality (or death) rate is low. There are, therefore, many new infections and few exits from the population. Gradually, the rate at which people are infected slows. The reason for this decline in new infections is because a greater proportion of those vulnerable to the disease are already infected with HIV.

In practical terms, this means that, at the beginning of the epidemic, when only one person in the City was infected, whoever they had sex with ran the risk of infection. In the later stages of the epidemic, an infected person may well have sex with another infected person, and as there is then no chance of a new infection, this results in a slower rate of growth in the

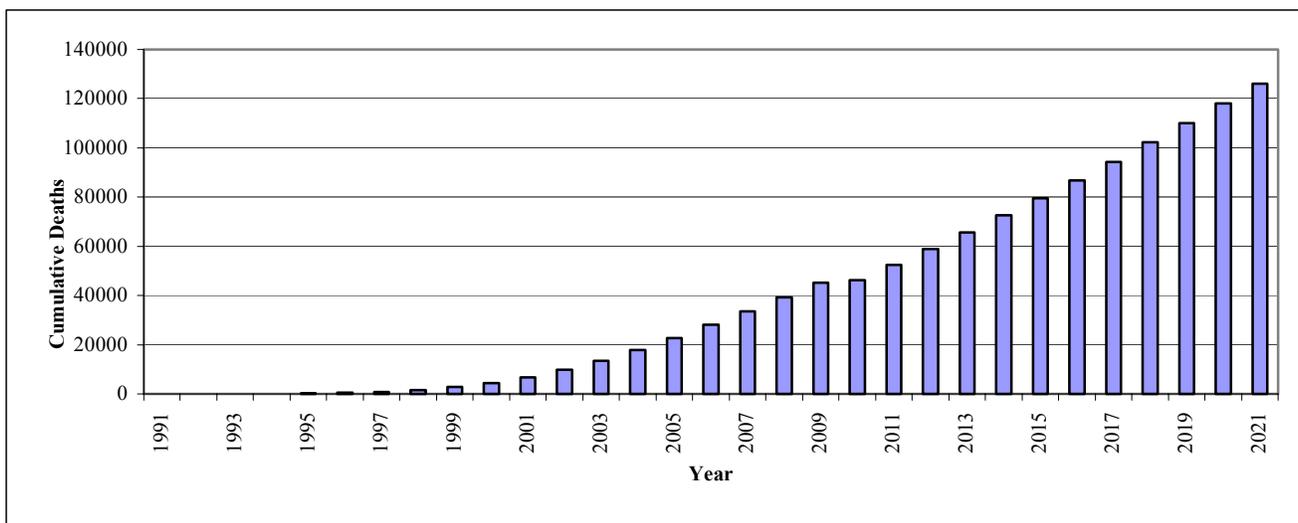
epidemic (although the asymptomatic phase of HIV is shortened for two HIV positive sexually active partners because viral loads are increased).

However, as the rate of HIV infection declines the mortality rate increases as more of those who are HIV-positive progress to AIDS and die. At this stage of the epidemic these two factors combine and HIV prevalence stabilises. The number of HIV infected people, however, will continue to increase despite a constant prevalence rate because the city's population will continue to grow. The prevalence rate thus remains constant although the number of infected people increases.

This is illustrated in Figure 3.2 above. The number of people infected grew rapidly from the beginning of the epidemic until 2004/5. The growth rate then slowed, when prevalence was projected to stabilise, but the number of people infected continues to increase as the population of the city grows.

The HIV rate in Windhoek means that mortality rates in the city will dramatically increase. While HIV prevalence is close to its peak, the lag between infection and death means that the AIDS epidemic is a number of years behind. The AIDS death rate is likely to peak only eight years *after* HIV has peaked. Figure 3.3 displays number of people who have or are expected cumulatively to die of AIDS in Windhoek.

**Figure 3.3: Cumulative AIDS Deaths, Windhoek (1991 - 2021)**



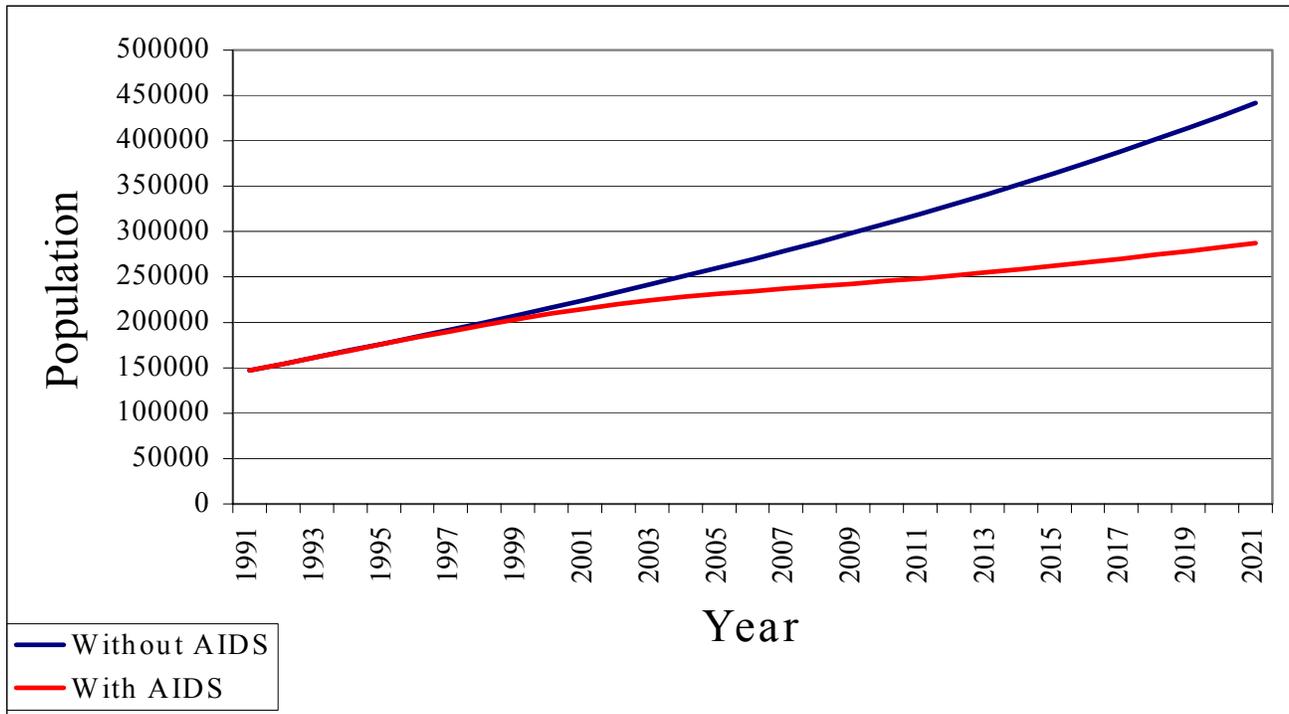
The graph suggests that, given the level of infection to date, over 10,000 people in Windhoek have died as a result of AIDS. By 2010 the figure is likely to be closer to 50,000. The 40,000 deaths expected to occur between now and 2010 are largely unavoidable (without access to anti retroviral treatment), because these will result from existing HIV infections. Deaths from 2010 onward could be avoided *if* future HIV infections can be reduced. By 2021, cumulative AIDS deaths are expected to exceed 126,000, but it is important to stress that *many* of these can be avoided.

These AIDS-related deaths will decrease the population of the city in two ways. First, the deaths will directly affect the size of the city's population as individual residents die. Secondly, HIV/AIDS affects young adults. The death of young adults reduces the number of children born. This is because parents die before giving birth to all the children they would have if they had remained uninfected. The population of the city is, therefore, smaller than it would have been because of AIDS as its citizens die and others are never born.

Encouraging destigmatisation, wellness programmes and positive living for those infected may reduce AIDS deaths, and should this become more widely available in Namibia, through treatment (antiretroviral therapy- ART). Treatment options include the prevention of Mother to Child Transmission (MTCT) which is relatively inexpensive, and now being put in place in many countries in the Southern Africa region with high levels of infection (e.g., Botswana and Swaziland). ART for adults, which although less expensive than previously is unlikely to become widely available in the short to medium term due both to its cost and delivery problems as this therapy requires consistent monitoring by health professionals.

While the natural growth rate of Windhoek's population will continue to decline, the city's population will continue to grow, in particular as a result of continued inward migration from other areas. The following figure presents the projected population of Windhoek without AIDS and what this is now likely to be in the face of the high rates of infection and expected deaths.

**Figure 3.4: Population With and Without AIDS, Windhoek (1991 - 2021)**

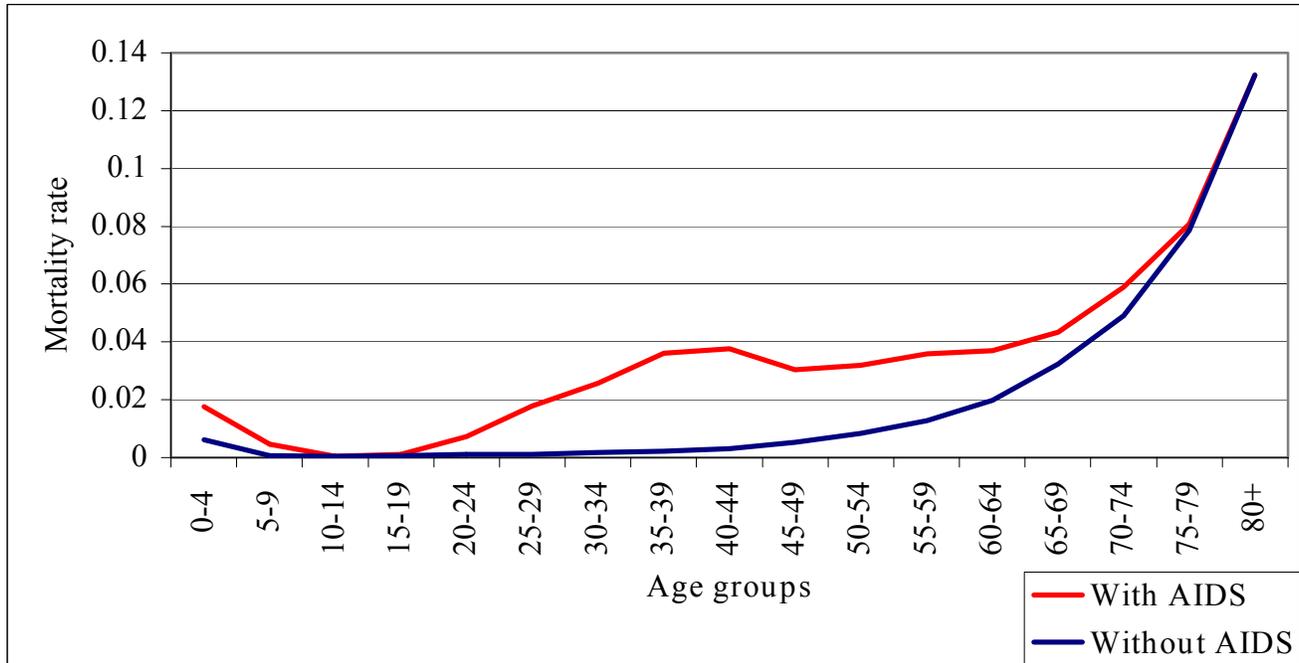


Currently the population of the city is estimated to be about 243,000 individuals. While the population of Windhoek will continue to grow, Figure 3.4 illustrates that the population would have been some 30% larger by 2021 in absence of AIDS. At that time it is estimated that there would have been over 450,000 residents as opposed to a population of some 300,000 individuals under the 'with AIDS' scenario.

### Mortality Rates

The socio-economic impacts of HIV/AIDS are considerable. This is not only because of the number of deaths and the resultant reduction in the rate of population growth, but because those who are dying are in the productive or working age groups. Unlike epidemics of the past that targeted the weak, the very young and old, HIV infects the sexually active population, with infection rates highest in the 25-35 year old age group. It is therefore, not only the mortality rate that increases, but also its distribution between age cohorts. Figure 3.5 displays the mortality pattern of Windhoek with and without AIDS:

**Figure 3.5: Mortality Rates With and Without AIDS, Windhoek**



The 'Without AIDS' line demonstrates a typical mortality pattern. Between 0 and 4 years of age mortality is relatively high as a result of child illnesses. Mortality then remains low for many years, as few people between the ages of 5 and 30 die, and subsequently increases with age.

The 'With AIDS' line shows how this pattern changes as a result of HIV. Infant and child mortality will be higher as children are infected at birth. Mortality rates for those between the ages of 10 and 15 will be much the same as 'without AIDS' as very few young children are infected with the virus. AIDS mortality then increases dramatically from the age of 20, peaking at between 40 and 45 years of age. What this means is that 40 year-old individuals experience a mortality rate typically associated with 70 year-olds.

It is this change in mortality patterns which results in the socio-economic impacts discussed below. The age groups with the greatest increases in mortality as a result of AIDS are those most responsible for economic production and social care. They are the workers of Windhoek and the parents of children living in the city.

## **Economic Impact of HIV/AIDS on Windhoek**

The economy of Windhoek is a major part of the national economy. The impact of HIV/AIDS on the formal, informal and household sectors in the city will have wide-ranging implications. These impacts will also affect the municipality in terms of revenue generation and the way in which money is spent.

The Namibian economy is based on five major sectors: mining, manufacturing, agriculture and fishing, finance and the government sector. The success and growth of each is influenced by a host of variables ranging from the exchange rate to the total allowable catch through to the rainfall each year, but each of these will be affected by HIV and AIDS. The net impact on the Namibian economy is likely to be similar to else where in the Southern African region. Studies conducted in South Africa and Botswana estimate that GDP growth rates will decline by between 0.4 and 1.8 percentage points by 2010. That is to say if the GDP growth rate would have been 3%, as a result of HIV/AIDS it will be reduced to between 1.2 and 2.6%. However, at the same time that the rate of economic growth is dampened, the rate of population growth is also reduced. These two factors have opposite impacts on GDP per capita and the net outcome is difficult to determine.

While a detailed examination of the macroeconomic impact of HIV/AIDS is beyond the scope of this study, it is important to understand the implications of this on municipalities. While the economies of different areas of Namibia have different characteristics they are all inter-linked. The expected decrease in the macro economic growth rate will have negative implications for the economies of all municipalities and therefore reduces municipal revenue.

The economy of Windhoek represents a major share of national economy, with the majority of trade, manufacturing, utilities, construction, transport and communication, finance and business services and community and social services located in the city. The most important activities in terms of size are trade, transport and owner-occupiers. There is also a substantial and growing informal sector for which there is little economic data.

All of the major formal economic sectors will experience an increase in the cost of labour as a result of HIV/AIDS and, for most, this has already begun. These increases will result in a decline in the profitability of enterprises. This is particularly the case for sectors that rely on skilled labour. The NEPRU business climate surveys have highlighted the shortage of skilled labour as a concern to many Windhoek-based enterprises. This is a concern despite the high level of unemployment, which was estimated by the 1997 labour force survey to be in the region of 30%. Although a pool of potential labour exists, appropriate skills and experience are in short supply, and 55% of the unemployed in the city are first time job seekers. The increased cost of labour and the aggravation of existing skilled labour shortages will negatively to impact on the economy.

An additional problem that may be faced by the formal sector in the city is associated with bureaucratic procedures. Already companies in the region have cited 'red tape' as a barrier, some of which are cited as being the responsibility of the municipality. The HIV/AIDS epidemic will increase deaths among municipal employees, causing reductions in efficiency, thereby exacerbating existing problems.

"Breadwinners are dying while families suffer as a consequence. Households are not spending as much as they used to on commodities, while they use up their savings ...for medicine or other essentials."  
SWAG Participant, Windhoek

The impact on the informal sector is potentially more damaging than that which will be felt in the formal economy. In many cases, informal businesses are built around one key individual with particular skills and contacts. If this individual dies the business often dies with them and those they employ will be jobless, exacerbating the city's unemployment problem.

The impact on the formal and informal sectors will become more serious over time as AIDS illness and death increase, with the number of households affected similarly rising. The economic impact at the household level is potentially devastating. Studies elsewhere in the region have examined how the double impact of reduced income and increased costs affects households. Impacts at the household level also have implications for the broader economy as patterns and levels of consumption will change.

However, the degree to which household impacts will translate into negative influences on the regional and national economy is to some extent a function of who is infected, and the wealthier the affected household the greater the impact. This is because wealthier households both consume more and save more than those that are less well off. Thus, when wealthier households are affected consumption patterns alter and savings are likely to be reduced resulting in larger impacts on regional and national economies.

The population of Windhoek is responsible for the largest share of final consumption in Namibia, estimated to be in the region of 35%. A change in the level or composition of household demand could, therefore, have implications for both the city and more generally for the national economy. Further, many households in the city are owned by their occupiers and are mortgaged. The figure is close to 52%, according to labour force surveys. The death of breadwinners within these households could constrain the ability of families to continue these mortgage payments. Even when the mortgage holder is covered by life insurance, and the mortgage is paid off completely in the event of their death, such early payment reduces the profit to the bank or building society and the insurer.

The epidemic will reduce the rate of growth of Windhoek's population. The demographic projections, discussed above, indicate that, while the city will continue to grow, the rate will be far lower than it would have been in the absence of AIDS. The size of the market will, therefore, also grow at a slower rate. This will affect various economic sectors, most notably, retail and construction.

The net impact of HIV on the economy of the city is likely to be similar to that on the national economy. The city has a fairly diverse economy and, while some sectors will be badly affected, others will not. Collectively the impact will not be enormous, but it will also not be evenly distributed. Some households and small business will be devastated by the epidemic, while others will be relatively unaffected. It is important to understand these variations in the design and implementation of mitigation strategies.

## The Social Impact of HIV/AIDS on the Community

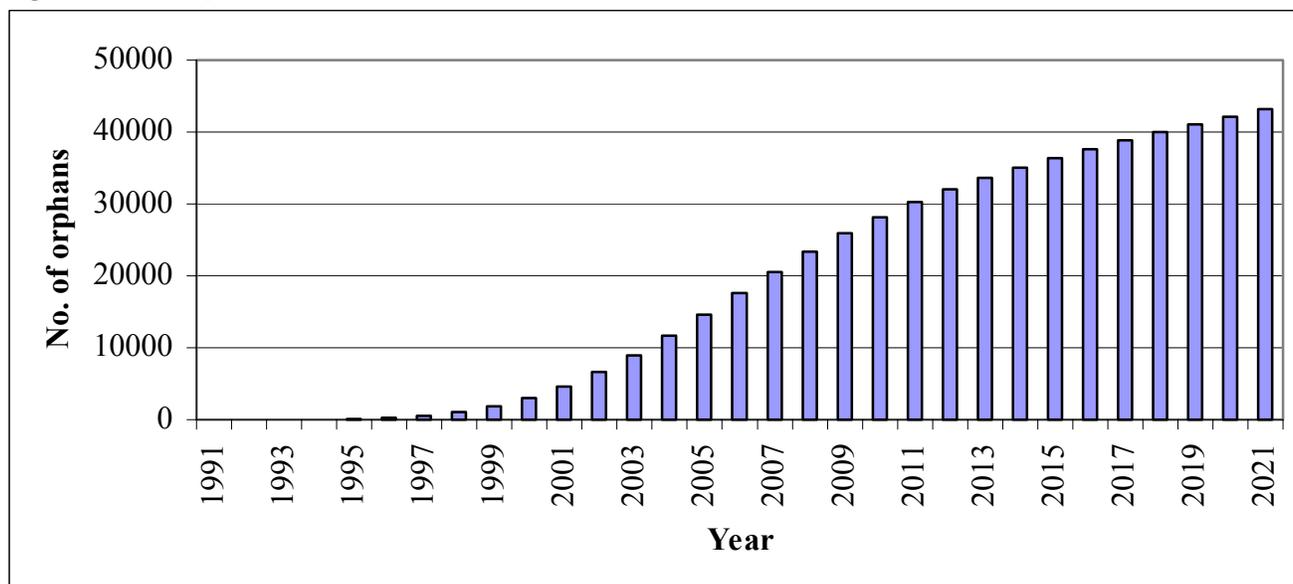
HIV/AIDS profoundly affects families and communities, resulting in the loss of labour and assets, as well as socio-cultural skills, and places almost unprecedented stress on community and extended family networks.

"Some of the most striking images of the HIV epidemic are of families, but of unfamiliar families: a grandparent surrounded by grandchildren, child-headed families, often brothers and sisters and cousins bonded together, dying adults tended by their children and communities of children without parents." Peter Piot, Executive Director, UNAIDS

### AIDS Orphans

The nature of HIV/AIDS is that it impacts communities and households over many years, and as the rate of illness and death increases, so the structure of these families and communities alters. As noted previously, the age groups most affected by the increase in mortality are the worker and the parents. Losses in these age groups will leave many children in the city without parents. The following figure displays the rise in the number of children orphaned as a result of AIDS in Windhoek:

**Figure 3.6: Orphans as a Result of AIDS, Windhoek (1991 - 2021)**



It is already estimated that there are nearly 6,600 children in Windhoek who are currently under the age of fifteen and have lost one or both of their parents as a result of AIDS. This number is expected to increase to over 30,000 in the next 10 years. By 2021, the projections indicate that the epidemic will have orphaned 43,000 children in Windhoek. The ability of extended families and communities to absorb and care for children who have lost their parents will be strained by the rapid increase in the number of orphans.

The impact of HIV/AIDS on children is arguably the single biggest long-term development impact. Failure to provide appropriate and adequate care for children who have lost their parents has serious implications for their development and their long-term growth towards becoming productive, responsible members of any society.

The impacts of HIV/AIDS will change the demand for and type of services needed. Service providers, primarily governments and municipalities, will be expected to provide increased health and social welfare services, home-based and community care, and meet changing housing and education needs.

At the same time as there is an increase in demand for services, the ability to provide these services is eroded as key staff are lost. Nurses, teachers and social workers are not immune from infection and their mortality rates will also increase. The impacts of HIV/AIDS on services will have an impact on the entire community infected or not, orphaned or not.

### **The Local Response to HIV/AIDS**

As the capital city, many of the national AIDS support and care organisations are based in Windhoek. These national organisations provide a range of services that include education, counselling, orphan and home-based care programmes as well as workplace interventions. In addition, a number of smaller community-based organisations, such as Khomas Women in Development, provide home based care. A list of organisations indicating that they provide AIDS support services in the Windhoek area are included in Annex A.

Among businesses in Windhoek, an undated survey conducted by NEPRU for the Namibia Chamber of Commerce and Industry (NCCI) found that 69% of those interviewed perceived HIV/AIDS as a threat. 41% indicated that "none of their workers were infected" or that they were "sufficiently responsible and did not engage in relationships that made them vulnerable". Most (78%) of the companies interviewed had an HIV/AIDS programme in place with the most common activities being condom distribution (39%) and posters providing information (28%). Of these companies, 57% believed that these efforts were inadequate. Only 28% of the companies spent money on these programmes but 54% had assigned responsibility for workplace prevention to an individual within their Human Resources or Occupational Health Divisions.

## Chapter 4: The Impact of HIV/AIDS on the Municipality of Windhoek

### Introduction

This chapter reports on the impact of HIV/AIDS on the Municipality of the City of Windhoek. First, the ways in which HIV/AIDS affects municipalities are outlined. This is followed by a discussion on the internal impacts that are subsequently costed.

The next section of the chapter examines the external impacts of the epidemic in more detail, those affecting the Windhoek community, the quality of life in the town, its economy and the impacts on the demand for and ability to pay for Municipal services, affects the municipality itself.

### Impacts of HIV/AIDS on the Municipality of Windhoek

HIV/AIDS results in demographic, social and economic changes in society, changes that will continue to affect both the public and private sectors in Namibia for the foreseeable future. The Municipality of Windhoek will not be exempt from these impacts.

At the outset, what needs to be understood is that HIV infection precedes illness and AIDS death by some six to eight years, and for much of this time the disease remains invisible in those who are infected. It is only over the last several years of the individual's life as HIV progresses towards AIDS that the frequent bouts of increasingly more severe illness are experienced. In other words, the AIDS mortality presently being experienced within Windhoek Municipality results from HIV-infections acquired some six to eight years ago. The full impact of AIDS on the Municipality is only likely to be felt between 2008 and 2010 when the numbers of those falling ill and dying will reflect the currently high

“Employees at the municipality should not think that their work is more important than HIV/AIDS.” SWAG Participant, Windhoek.

prevalence rate. This is what makes the immediate implementation of planning for the impact of AIDS illness and death within the municipality so important so as to prevent future infections, mitigate the impacts of the disease on the functioning of the Municipality and reduce the costs of the epidemic.

The challenge is that the epidemic erodes the ability of institutions, including local authorities, to provide services, as it reduces *both* efficiency and revenues, while the personnel losses induced by HIV/AIDS affect the quality of services provided. These impacts result from the sickness and death of municipal personnel infected with HIV, and can include:

- loss of productivity;
- increased absenteeism;
- cost of sick and compassionate leave;
- increased cost of benefits; and
- increased recruitment and training costs to replace lost staff members.

Studies (in West Africa) have demonstrated that HIV-positive individuals generally lose some four to six months of work time prior to the onset of AIDS, following which s/he is often absent from work, until death (Carr-Hill, Katabaro and Katahoire, 2000). The reality in Southern Africa appears to be increasingly frequent of bouts of illness and thus the loss of productive work time until death. There is thus a system-wide loss of experience and professionalism as the replacement and managerial stock, if available, becomes increasingly under-trained and under-experienced over time.

Other losses are less easily quantified, such as those relating to the loss of experience (including institutional memory) and the effect of the illness and death of colleagues on staff morale.

Further, more managers and other skilled personnel will need to be trained within a given period of time than would otherwise have been the case. This results in increased expenditure on training (and recruitment) without an expansion in the supply of personnel overall, with less funding available for quality and service improvements. Similarly,

recruitment costs increase. However, the largest costs to any system remain those from increased benefit payments and absenteeism due to illness, caring for sick family members and funeral attendance.

The epidemic will also impact on revenue generation within the Municipality as discussed in the previous chapter. Households infected or affected by HIV/AIDS will be less likely to be able to pay assessment rates and for services received. The demand for some services (e.g., water) is likely to increase over the short to medium term, but decrease over the longer-term, but with lowered ability to pay. As the numbers of these impacted households increase, the town's revenue base is eroded.

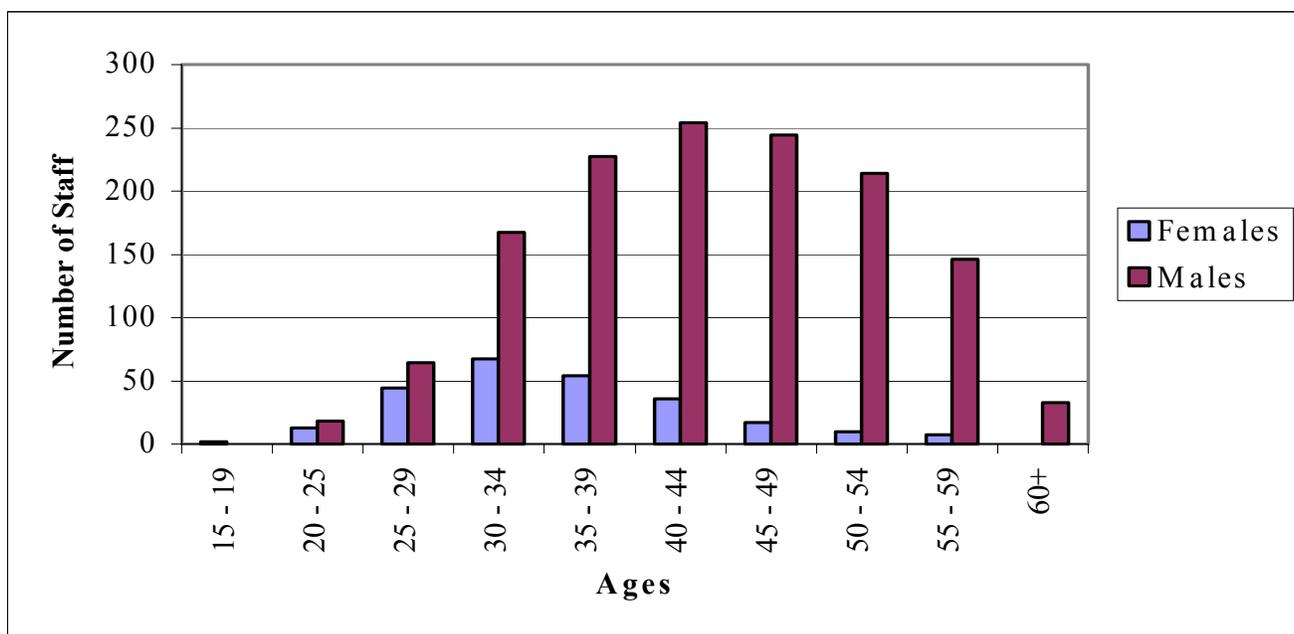
Simultaneously, AIDS affects the national economy (through the loss of skilled labour, reduced productivity as well as declining savings and investment, etc). In countries where prevalence rates are 20% or higher, such as Namibia, the GDP growth rate is expected to decline by some 2.6% per annum solely as a result of the disease. By 2020, GDP would thus be 67% less than it would have been (Bonnell, 2000). While no detailed studies have been done on the macro economic impacts of HIV and AIDS in Namibia, the Government of Botswana has commissioned such a study. It concluded: "AIDS is a development of such proportions that it will inevitably have an impact on government revenues and spending, and therefore on the budget balance and government saving or borrowing. AIDS will have direct effects on some key areas of government spending, most obviously the health budget, but there will also be a range of indirect effects as the ability to raise tax revenues is affected." (BIDPA, 2000).

Thus at the macro level, the epidemic will reduce Government's ability to commit funds to local government, in the form of subsidies, grants and development loans, as AIDS-related demands from all sectors on available resources increase while revenues themselves decrease.

## Demographic Impacts

In 2001, the City of Windhoek Municipality employed 1,614 individuals. The majority (1,367) were males between the ages of 30 and 44, with only 247 (or 15%) were female staff. The following figure illustrates the age and gender breakdown of municipal staff. Of concern, is that many Municipal staff are in the age ranges most likely to become infected with HIV - 20 to 30 years of age for females, and 30 to 45 for males.

**Figure 4.1: Personnel by Age and Gender, Municipality of Windhoek (2001)**

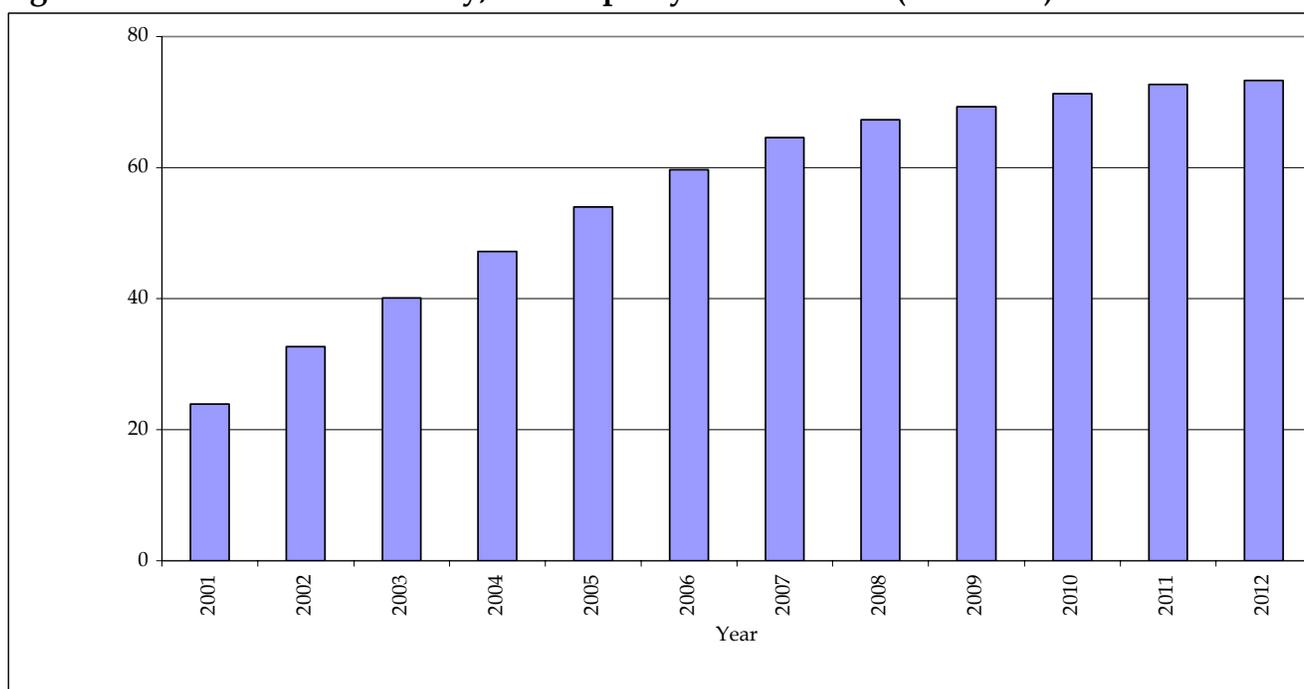


The demographic impacts of the epidemic were then projected on this sub-population of municipal staff using the SPECTRUM data developed for the overall population of Windhoek. The period 2001 - 2012 was chosen for these projections, as it is assumed that the Municipality will strengthen its efforts to prevent further infections and thus prevent increased mortality over time.

## AIDS Death Rate

Over ten-year period until the period, 2012 Windhoek is projected to lose some 676 staff across all bands because of AIDS. These deaths will peak over a three year period from 2009 until 2012, during which period over 60 employees are projected to die of AIDS each (or some 287 staff over the three years). The AIDS mortality rate for the Municipality is illustrated in the following figure:

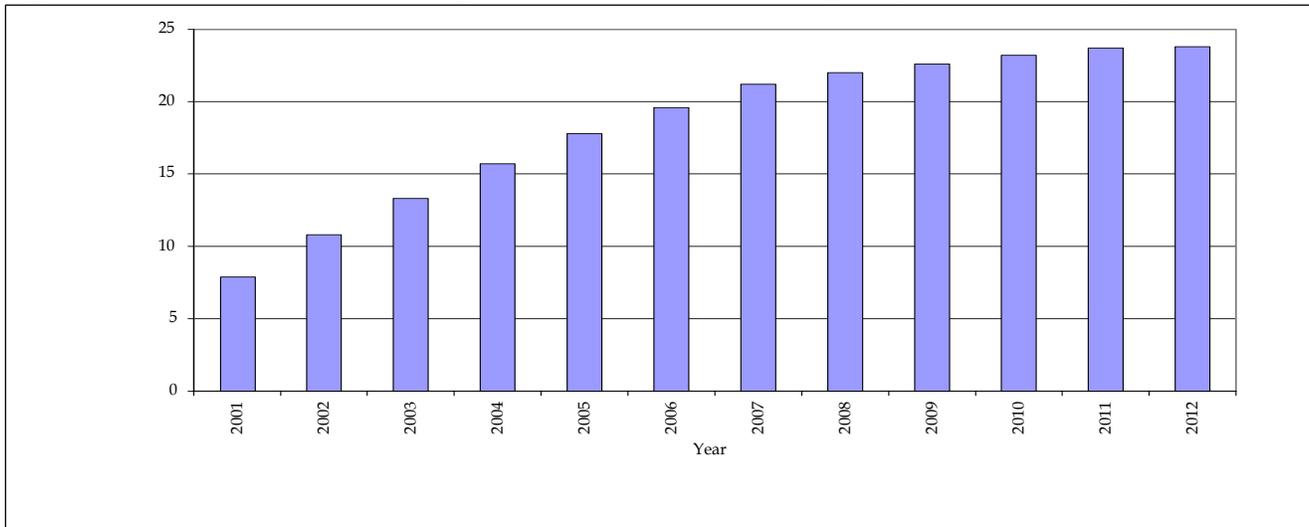
**Figure 4.2: Total AIDS Mortality, Municipality of Windhoek (2001-2012)**



The Municipality uses the Patterson Bands (A to F) staff grading system, with Band A being lower level, unskilled labourers. Because the municipality employs a large number of individuals it has been possible to estimate staff losses to the epidemic by band.

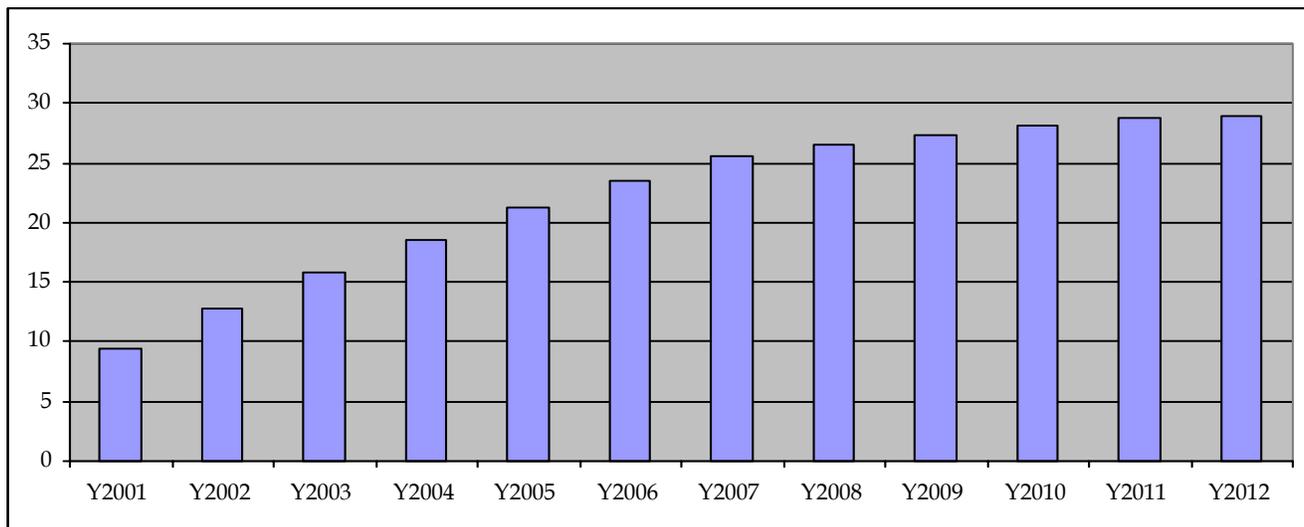
There are 562 staff in Bands A1 to A3 within the Municipality or 34% of the workforce. Over the next ten years, AIDS mortality among these personnel will amount to some 222 deaths, or close to one-third of all projected AIDS deaths, for Windhoek Municipality. Similarly, these will peak in 2009, at over 20 deaths per annum. These findings are shown in Figure 4.3 below.

**Figure 4.3: Total AIDS Mortality, Band A1 to A3, Municipality of Windhoek (2001 - 2012)**



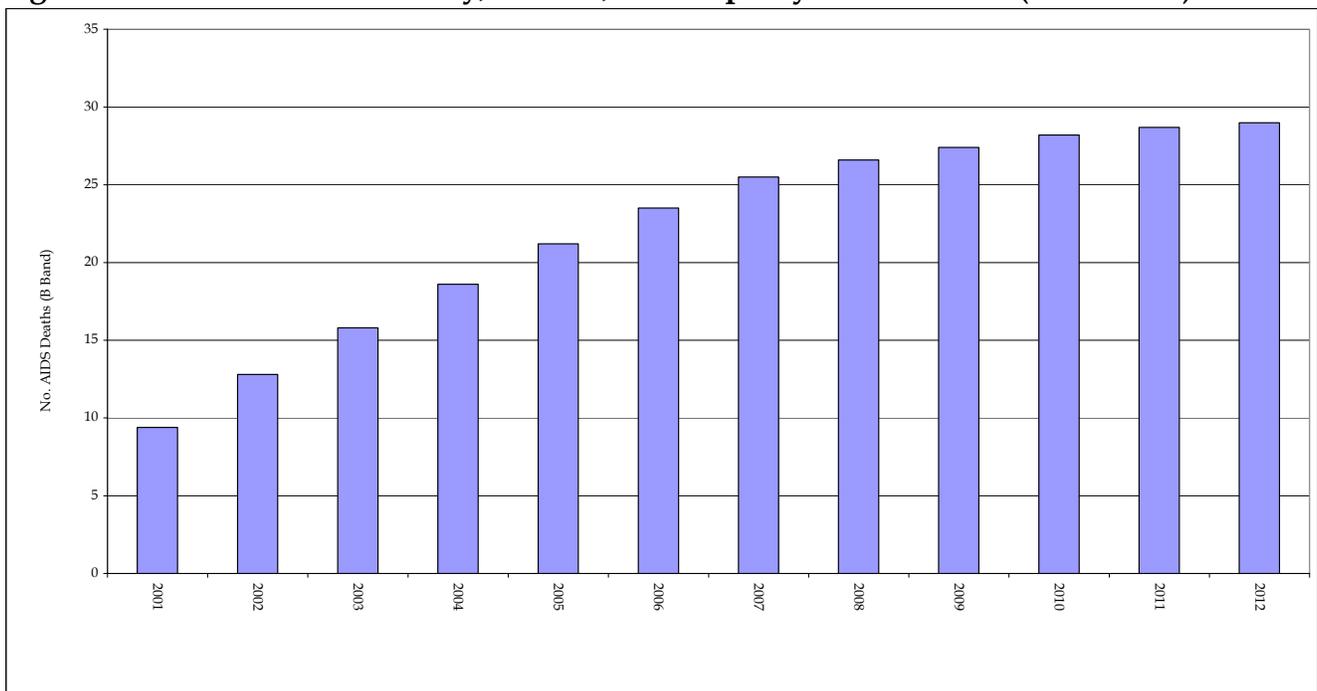
According to information provided to the consultants by the municipality there are 639 staff who are Band B employees. This group of personnel will experience the highest AIDS death rate, simply because their number are high. Over the period 2001 - 2012, the projections indicate that some 267 employees in the B Band will die from AIDS related illnesses. This will peak at close to thirty deaths per annum in 2010 and remain at this level until 2012. Figure 4.4 presents these findings. It should be noted that these deaths are projected to peak later than those for employees in Band A, because of the age and gender profile of staff among Band B.

**Figure 4.4: Total AIDS Mortality, Band B Personnel, Municipality of Windhoek (2001 - 2012)**



Band C employees form the next largest group of municipal employees, numbering 330 staff. The projections indicate that some 153 C Band employees are likely to die of AIDS related illnesses by 2012. These deaths are likely to peak in 2008 at an estimated 15 individuals, remaining at this level until 2012. Again, the age and gender profile of these staff means that AIDS deaths among this group of employees will peak in 2008 (as opposed to 2009 and 2010 for the previous two bands discussed). Figure 4.5 presents these findings.

**Figure 4.5: Total AIDS Mortality, Band C, Municipality of Windhoek (2001 - 2012)**



Bands D through F are those in which senior employees of the municipalities are placed, and there were 86 such staff in November 2001, according to municipal data made available. The projections indicate that some 34 of these individuals may die of AIDS over the period 2001 - 2012. These deaths are projected to peak in 2008 at four individuals and remain at that level for the remainder of the projection period.

These high levels of AIDS mortality will impact on the Municipality through increased absenteeism (sick and compassionate leave), productivity losses and increased replacement and training costs. Each of these impacts needs to be monitored and planned for.

### Human Resources Management Information System

The initial, and critical, step in managing the impacts of the epidemic upon the Municipality is to make available data on personnel leave and absence from duty, by type (i.e., whether sick leave, casual leave for funeral attendance, by age and gender profile, etc.). This permits managers to analyse trends and costs and indicates where the loss of critical personnel may occur, allowing time for preliminary and succession planning, etc.

Windhoek municipality maintains a computerised human resources information system. Unfortunately, this system is not user-friendly and, as a result, it proved difficult and time consuming to obtain the data required for this Assessment. The system does not appear easily able to produce monthly information upon which Strategic Executive Directors can make decisions as to absenteeism trends and costs, as well as those relating to staff deployment and succession training plans that are needed in the face of the epidemic.

However, according to key informants within the municipality, changes are being made to its information technology systems. These should include ensuring that the system can produce updated monthly reports on staff attrition, absenteeism by type of leave taken, and the costs of these. Given the high projected AIDS death rate within the municipality over the next eleven years, *the changes are urgently needed.*

### Sick Leave

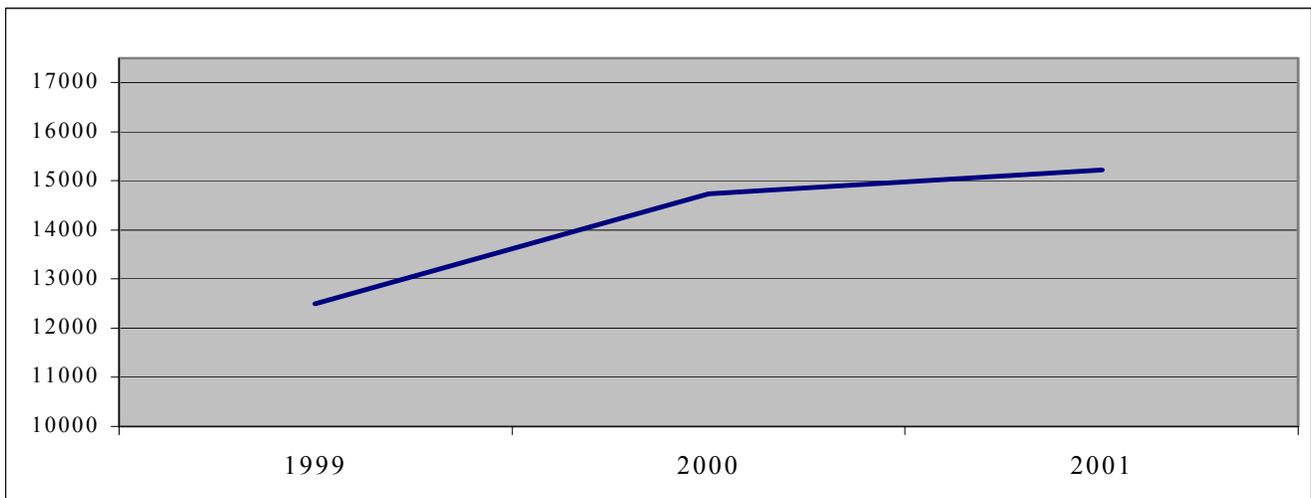
Municipal sick leave policy is determined by the Local Authorities Act. Employees are entitled to 120 days sick leave at full pay during each consecutive thirty-six month period, which can be followed by 120 days of sick leave at half pay over a similar time period.

In addition, the municipality can grant special leave to employees when all other forms of leave have been used. Special leave can be granted under circumstances that the "Council is satisfied that the circumstances justify it" on full or no salary as they deem fit, according to the Conditions of Service. No evidence was found of special leave being granted to employees who may have used all sick leave accruing to them.

The reality of HIV/AIDS is that employees who have AIDS become progressively ill, experiencing bouts of sick leave, generally over the last 12 to 18 months of their lives. During this period, the individual remains on the payroll and cannot be replaced and is substituted by colleagues who act on their behalf, or by temporary appointments.

Windhoek maintains data on sick leave taken by employees and, as the following figures demonstrate, this has increased over the past several years. The total number of days taken has increased from 12,500 days in 1999 to over 15,000 sick leave days in 2001. This trend is illustrated in the following figure.

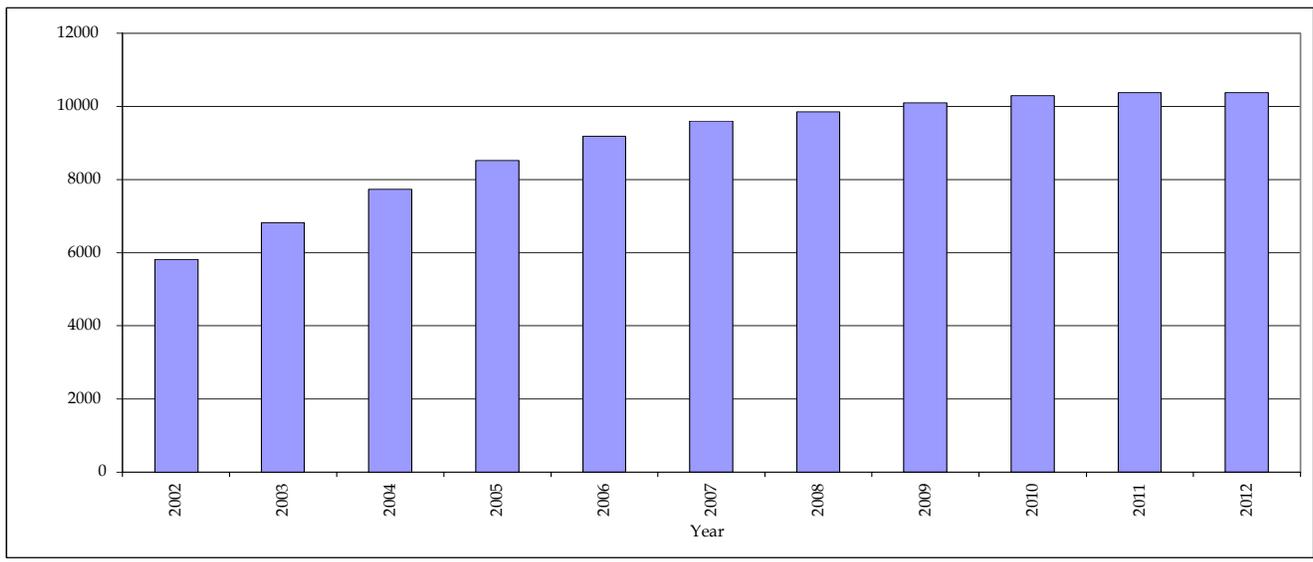
**Figure 4.6: Total Sick Leave Days by Year, Municipality of Windhoek (1999 - 2001)**



As a result of changes within and between departments of the municipality over the past several years (for example, the merger of public safety and emergency services with community services) it has not proven possible to analyse sick leave trends by department. However, analysis of the data provided does permit development of projected sick leave

solely as a result of AIDS over the next several years. This analysis is based on the number of sick leave days taken by employees and recorded by the municipality. While only a few years of data are available, the average number of sick leave days taken has been increasing and is assumed generally to be a result of AIDS-related illness as there have been no dramatic increases in the number of employees. From the demographic projections used in this report, it was possible to estimate the level of AIDS-related illness over the period during which sick leave has increased. The number of days of sick leave for those who were ill is likely to account for this increase in sick leave. This estimate was then used to project sick leave and establish the number of estimated future deaths. Figure 4.7 illustrates this trend.

**Figure 4.7: Projected AIDS-related Sick Leave, Municipality of Windhoek (2002 - 2012)**



As can be seen from the above, absenteeism resulting from AIDS illness is projected to double from over 5,000 days in 2002 to close to 10,000 by 2012. The costs of this level of absenteeism will be high, and are discussed below.

### Training

The Municipality has a training programme in place on which it has spent N\$4,792,273 on training and development over the past three years. Forty percent of the training budget for 2001/2 (N\$1,894,000) was for succession training as part of the municipal Affirmative Action Plan.

The training available to employees ranges from tertiary degrees at external institutions, to specialised courses and modules and literacy training.

HIV/AIDS will increase the need for training of Municipal personnel, as employees are lost to the epidemic early in their careers. No data was provided to the consultants on training costs by band, but these will need to be incorporated into municipal planning in the future as the epidemic will result in increased and more frequent training as staff are lost to AIDS. Equally, the private and other sectors, offering higher salary and benefit packages, will increase the rate at which they "poach" trained staff as they in turn lose employees. This is likely to be particularly true for skilled Municipal staff and those trained to degree-level. This, in its turn, will increase the costs of training provided by the Municipality as it further increases staff turnover.

Municipal training policies, therefore, also need to include strategies for maintaining and developing skilled staff. These have to be based on the provision of more frequent, but shorter-term training opportunities, within affordable cost parameters.

Staff Attrition

The following table presents data on termination trends within the municipality over the period 1997 - 2001. Both deaths among municipal employees and medical retirements demonstrate slight increases over the period, although it should be noted that the Municipality of Windhoek has been following a stricter definition of the grounds for medical retirement over the past several years. These trends are similar to the findings based on the AIDS projections discussed above.

**Table 4.1: Termination Trends, Municipality of Windhoek (1997 - 2001)**

Year	Resigned	Retired	Dead	Dismissed	Medical Retirements
1997	18	2	8	2	0
1998	10	5	1	1	2
1999	17	8	8	8	0
2000	28	14	11	6	1
2001	38	20	18	5	3
<b>Totals</b>	<b>111</b>	<b>49</b>	<b>46</b>	<b>22</b>	<b>6</b>

## Medical Aid

The municipality pays 50% of monthly medical aid contributions on behalf of employees to any recognised Namibian medical scheme and these costs accounted for some N\$6.25 million of the personnel budget in 2001. Medical aid contributions appear to have been increasing by some 2% per annum over the past several years. As the epidemic deepens in Namibia, the cost of medical aid contributions will continue to increase.

## Pension Fund

City of Windhoek Municipality employees are members the Retirement Fund for Local Authorities in Namibia.

The Retirement Fund for Local Authorities in Namibia operated as a defined benefit fund until 1992, when due to the large number of claims it changed to a defined contribution fund. This means that the amount paid to members' families on their premature death was reduced.

In April 2000, the fund further reduced the level of its death benefits, as these payments had become unsustainable due to the high number of claims, which were resulting in an increase in the cost of premiums.

Prior to April 2000, the fund provided a benefit payment equal to three times annual salary as lump sum at the death of a member, plus a monthly income of 50% of base monthly salary and 10% for five minors up to the age of 25, providing they were attending an institution of higher learning. Employers pay into the fund 21.7% of the employee's base monthly salary, of this amount 14% is used for investment, 6% goes to pay death benefits and 1.7% provides for the fund's administration. Employees contribute 10% of base monthly salary to the fund.

The current death benefit allows for a lump sum payment of 5.3 times annual salary at the death of a member, three differing options based on the level of guarantee and investment. <sup>1</sup>

The Retirement Fund for Local Authorities in Namibia Investment Report of 31<sup>st</sup> December 2001 reveals that the fund had investments in Namibia and South Africa, whose the market value totaled some N\$ 3.7 billion. The rate of return on these investments over the past 10 years was 16.3%.

As at the valuation date, the contribution rate required to cover the cost of risk benefits and other expenses, expressed as a percentage of pensionable salaries, was estimated as follows:

**Table 4.2: Contribution Rate Required**

<b>Benefit Type</b>	<b>Percentage</b>
Death Benefits	4.80
Disability Benefits	1.20
Total Risk Benefit Contribution	6.00
Expenses	1.70
Required Contribution Rate	7.70

The current contribution rate is therefore sufficient to provide for the risk benefits and the expenses. In sum, the funds operates on the basis of defined contribution (as opposed to defined benefit), that is, the benefits received are determined by the amount of the contribution made by and on behalf of the employee, and the return on the investments made by the fund. This, while protecting the Fund for depletion resulting from the increased costs of AIDS mortality, does not reduce the cost of the epidemic. It merely switches these costs from the Fund to members, and the households and the communities in which they live.

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<sup>1</sup> Following of review of the initial draft of this report, anecdotal evidence suggests that death benefits have very recently been decreased yet again, with the Fund's actuaries indicating in reports, according to personnel within the municipality indicating that further changes will be needed to ensure the Fund's stability.

The impact of HIV/AIDS has caused the fund to lower the death benefits while increasing the cost to the members. This trend will continue as more members die from the diseases associated with AIDS and the death benefits claim continue to rise.

### Critical Functions and Posts

Many of the costs associated with HIV/AIDS can be identified and, with some difficulty, quantified. Many, however, are more difficult to determine and these less obvious costs and consequences may be larger and more important. These include the loss of institutional memory, the impact on staff morale, and the inability to perform critical functions as a result.

This Assessment attempted to identify critical posts through the key informant interviews. Those interviewed were first asked to identify essential and critical functions in their departments or sections. Following this, they were asked to identify the posts critical to achieving these functions.

In most instances, managers were able to identify critical functions. The identification of the posts (i.e., individuals) fulfilling these functions became more difficult. It should be noted that, when undertaking a critical posts analysis, these posts are often not those filled by the most skilled or highly educated staff. They can be posts filled by individuals who have unique experience in a task requiring a particular set of skills. A detailed critical post analysis will therefore need to be undertaken by the Municipality.

Key informants believed that public transportation, sanitation, water and electricity provision were critical functions of the municipality. The Strategic Executive: Planning, Urbanisation and Environment was highlighted as being vulnerable to the epidemic as its divisions are interlinked and all their functions are necessary for the department to operate efficiently.

With regard to critical posts, key informants believed that people with less technical skills are easier to replace in comparison to people with highly technical skills. Those interviewed indicate that management would find someone internal to take the place of the absent person.

Key informants believed that the City of Windhoek was currently being managed better than at any time in its past and that this promotes the city's ability to respond to the epidemic. However, this improved management and efficiency within the municipality has promoted leaner and narrower senior management structures. These individuals make the key decisions, and function, according to key informants, as a close knit team. Ironically, this improved management structure may itself pose a risk, and it will be important to ensure that the decision-making process is sufficiently flexible to allow for the absence of one or more of the key individuals.

"Employees are not seen as irreplaceable. Work is normally delegated to sub-ordinates. All employees work as a team and not in isolation." KII, Windhoek

### Succession Planning

Succession planning is in place as part of the Municipality's Affirmative Action Policy and Programme. Succession plans are being introduced and training is being given to "understudies" to prepare them for new posts and responsibilities. This planning will need to be widened as AIDS will both affect the municipality efforts to redress the discriminatory imbalances of the past and make it necessary to implement succession planning for posts identified as critical as to the impact of HIV/AIDS.

### Governance

In Namibia municipal and town council officers are democratically elected to provide services to their communities. They thus become the tier of government closest to the people they serve. The HIV/AIDS epidemic will impact on the process of local elections and the relationship between councillors and those they represent.

Firstly, councillors, as elected representatives, will be expected by their communities to lead the local response to the epidemic. This entails not only ensuring that the local authority manages and plans for service provision in the face of the impacts of HIV/AIDS, but that it actively develops and implements efforts to prevent infection and provide support to those who are infected at the grassroots level. As the impact of the epidemic deepens over the next ten to eight years, the local electorate will demand that councillors respond. If they fail to do so, voters may become increasingly dissatisfied and may vote office-holders out of office, shift their support to alternate parties, or even stop voting altogether.

Secondly, councillors themselves will not be immune to the epidemic. They too will be faced with the illness and death of relatives and friends, adding to their burden as elected officials, while anecdotal stories and first-hand reports from countries in the region tell of HIV infection among senior officials, and local councillors cannot assume that they, or some of their colleagues, will not also be infected and become ill from this disease. In Windhoek the municipality is involved in the Build Together Programme and the Windhoek Housing Initiative. While the first does not involve a capital commitment the administrative costs will increase, for the later there will also be administrative cost increases and possibly the loss of capital.

Thirdly, the epidemic will reduce the resources available for municipal-level service provision, by reducing the tax base or redirecting resources to AIDS-specific programmes and services. This reduction in resources, combined with the reduction in capacity at the local level, will occur at the same time that the epidemic results in increased demands for local government support and services.

Fourthly, the epidemic has the potential to impact on the electoral process itself. AIDS could make elections more difficult and more expensive to hold, by affecting some of the officials and civil society representatives who administer elections, and by complicating the process of ridding voter rolls of those who have died as a result of the epidemic. In addition, residents may be less likely to vote if they are ill or occupied with caring for an ill family member. AIDS will also cause increased illness, retirement, and death of elected officials, which will

result in more frequent by-elections, further increasing costs to the municipality. In addition, by-elections usually have much lower turnout than general elections, which means the officials elected in this way may have less support from, and connection to, individual voters and the communities that they serve.

## Costs

In order to estimate the cost of the epidemic to the local authority a simplified model was developed as a guide to where the major costs of the epidemic will lie. The assumptions behind these costs are discussed in Annex C to this report that contains the detailed costing tables, the notes and assumptions on each of the costing sheets used. Copies of the model were made available to each of the municipalities, so that they can be used as an ongoing planning tool. The assumptions upon which the following figures are based will need to be updated and modified, as improved data becomes available.

The overall finding is that the costs associated with the epidemic for Windhoek municipality will be high. The main costs lie in increased medical aid contributions, as well as the cost of absenteeism and the productivity losses. Over the nine year period (2002 - 2010) the present value cost will be N\$25,826,261 across all bands. The following table provides data on these increased costs by band. The figures are discounted totals, i.e., are shown at present value.

**Table 4.3: Total Increased Costs Resulting from the Epidemic by Band, Municipality of Windhoek**

Band	2002	2003	2004	2005	2006	2007	2008	2009	2010
A	395,084	435,094	467,500	483,780	487,899	484,249	475,526	462,260	447,846
B	839,812	917,811	981,542	1,029,205	1,054,142	1,039,236	1,009,640	984,063	958,280
C	841,085	930,227	994,433	1,040,619	1,060,346	1,055,962	1,042,133	1,017,031	984,528
D - F	427,930	472,271	490,871	509,970	540,957	550,002	524,054	499,171	475,437
All Bands	2,500,912	2,755,402	2,934,346	3,063,573	3,143,345	3,129,448	3,051,353	2,962,526	2,866,091

The following tables present the breakdowns for each band. The detailed working table, explanations and calculations are contained in Annex C to this report. It should be noted that the mortality rates and sick leave data used are taken from data contained in the two previous chapters of this report.

**Table 4.4: Total Increased Costs Resulting from the Epidemic on Band A, Municipality of Windhoek**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	11	13	16	18	20	21	22	23	23	24	24
Sick leave											
Days	1920	2256	2576	2814	2992	3130	3230	3308	3368	3408	3408
Cost	274560	322608	368368	402402	427856	447590	461890	473044	481624	487344	487344
Compassionate leave											
cols	3146	3718	4576	5148	5720	6006	6292	6578	6578	6864	6864
Productivity	44473	54197	62348	69498	74074	77649	81224	82225	84799	85800	85800
Recruitment	3427	4050	4985	5608	6231	6543	6854	7166	7166	7477	7477
Training	3427	4050	4985	5608	6231	6543	6854	7166	7166	7477	7477
<b>Sub total</b>	<b>329033</b>	<b>388623</b>	<b>445262</b>	<b>488264</b>	<b>520112</b>	<b>544330</b>	<b>563114</b>	<b>576179</b>	<b>587333</b>	<b>594963</b>	<b>594963</b>
Benefit increases											
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>55307</b>										
<b>Total</b>	<b>384340</b>	<b>443930</b>	<b>500568</b>	<b>543571</b>	<b>575419</b>	<b>599637</b>	<b>618421</b>	<b>631485</b>	<b>642639</b>	<b>650269</b>	<b>650269</b>
Discounted total	384340	422791	454030	469557	473399	469831	461475	448785	434964	419169	399209
<b>Present value cost</b>	4837549										

**Table 4.5: Total Increased Costs Resulting from the Epidemic on Band B, Municipality of Windhoek**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	13	16	19	21	24	26	27	27	28	29	29
Sick leave											
Days	2310	2690	3048	3384	3662	3802	3880	3978	4078	4118	4118
Cost	540540	629460	713232	791856	856908	889668	907920	930852	954252	963612	963612
Compassionate leave											
cols	6084	7488	8892	9828	11232	12168	12636	12636	13104	13572	13572
Productivity	170492	196654	222908	247432	265075	272563	278507	287024	292874	294512	294512
Recruitment	4050	4985	5920	6543	7477	8100	8412	8412	8724	9035	9035
Training	12961	15952	18943	20937	23927	25921	26918	26918	27915	28912	28912
<b>Sub total</b>	<b>734127</b>	<b>854538</b>	<b>969895</b>	<b>1076595</b>	<b>1164620</b>	<b>1208421</b>	<b>1234393</b>	<b>1265843</b>	<b>1296869</b>	<b>1309644</b>	<b>1309644</b>
Benefit increases	88494	88494	88494	88494	88494	88494	88494	88494	88494	88494	88494
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>0</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>
<b>Total</b>	<b>822621</b>	<b>943032</b>	<b>1058389</b>	<b>1165089</b>	<b>1253114</b>	<b>1296915</b>	<b>1322887</b>	<b>1354337</b>	<b>1385363</b>	<b>1398138</b>	<b>1398138</b>
Discounted total	822621	898126	959990	1006448	1030940	1016167	987159	962502	937668	901252	858335
<b>Present value cost</b>	<b>10381208</b>										

**Table 4.6: Total Increased Costs Resulting from the Epidemic on Band C, Municipality of Windhoek**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	7	9	10	12	13	14	15	15	16	16	16
Sick leave											
Days	1260	1480	1678	1856	1994	2094	2172	2232	2272	2272	2272
Cost	554400	651200	738320	816640	877360	921360	955680	982080	999680	999680	999680
Compassionate leave											
cols	6160	7920	8800	10560	11440	12320	13200	13200	14080	14080	14080
Productivity	173800	204072	231088	253264	272360	283360	294536	302456	305536	305536	305536
Recruitment	2181	2804	3116	3739	4050	4362	4673	4673	4985	4985	4985
Training	10904	14020	15578	18693	20251	21809	23367	23367	24924	24924	24924
<b>Sub total</b>	<b>747445</b>	<b>880016</b>	<b>996901</b>	<b>1102896</b>	<b>1185461</b>	<b>1243211</b>	<b>1291456</b>	<b>1325776</b>	<b>1349205</b>	<b>1349205</b>	<b>1349205</b>
Benefit increase	78408	78408	78408	78408	78408	78408	78408	78408	78408	78408	78408
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>	<b>78408</b>
<b>Total</b>	<b>825853</b>	<b>958424</b>	<b>1075309</b>	<b>1181304</b>	<b>1263869</b>	<b>1321619</b>	<b>1369864</b>	<b>1404184</b>	<b>1427613</b>	<b>1427613</b>	<b>1427613</b>
Discounted total	825853	912785	975337	1020455	1039788	1035523	1022214	997927	966265	920252	876431
<b>Present value cost</b>	<b>10592830</b>										

**Table 4.7: Total Increased Costs Resulting from the Epidemic on Band D - F, Municipality of Windhoek**

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	2	2	3	3	3	4	4	4	4	4	4
Sick leave											
Days	330	390	430	468	528	568	568	568	568	568	568
Cost	280500	331500	365500	397800	448800	482800	482800	482800	482800	482800	482800
Compassionate leave											
cols	3400	3400	5100	5100	5100	6800	6800	6800	6800	6800	6800
Productivity	89420	104720	110670	126310	141610	147560	147560	147560	147560	147560	147560
Recruitment	623	623	935	935	935	1246	1246	1246	1246	1246	1246
Training	3739	3739	5608	5608	5608	7477	7477	7477	7477	7477	7477
<b>Sub total</b>	<b>377682</b>	<b>443982</b>	<b>487813</b>	<b>535753</b>	<b>602053</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>
Benefit increase	42075	42075	42075	42075	42075	42075	42075	42075	42075	42075	42075
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>	<b>42075</b>
<b>Total</b>	<b>419757</b>	<b>486057</b>	<b>529888</b>	<b>577828</b>	<b>644128</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>
Discounted total	419757	462911	480624	499149	529925	539034	513365	488919	465637	443464	422347
<b>Present value cost</b>	<b>5265133</b>										

## Services and Planning

Demand for the housing and services lie primarily in the city's north and northwestern areas. The TRP survey, conducted in 1995, confirmed that some 82% of the city's housing and service needs were in these areas. Municipal data indicates that in 2001 there was a backlog in the provision of an erven of 8,000 plots in informal areas (with the number in formal areas being unspecified).

The city's planning department has thus been focussing its efforts on these two areas in order to meet demand, and has established delivery targets to 2011. These targets include the delivery of 2,600 serviced erven over the ten-year period 2001-2011.

These delivery targets are based on population projections developed by municipal planners, drawn from 1991 census data and probable urban growth rates established in the 1995 RTP surveys conducted for the municipality. These assume that there will be some 252,000 residents of the city in 2001 and will have expanded to 425,000 individuals by 2011. As we have seen in the previous chapter, that while the city will continue to grow, the HIV/AIDS epidemic will substantially slow this growth rate.

The demographic projections discussed in Chapter 3 indicate that the city's growth rate will be reduced by over half over the ten-year period. Under the 'without AIDS' scenario the growth rate of the city was projected at just over 4% per annum. This rate is lower than that used by Windhoek's planners because it takes into account the demographic impacts of AIDS on the populations of the regions from which most migrants are drawn. Under the 'with AIDS' scenario, the city's population is projected to grow at some 1.8% per annum over the ten year period.

However, given the backlog in housing, erven and service delivery, it is unlikely that the reduced growth rate of the city's population will permit any reduction in the planned delivery of some 2,600 erven in the informal areas over the next ten years. What this reduced

growth rate does imply is a reduction in the rate at which service delivery would need to be increased over the period in order to accommodate new migrants.

Equally, the demand for burial space and costs associated with its allocation, preparation and maintenance will increase as the death rate climbs and will need to be planned for. How great such an increase will be is difficult to

“I am from Katutura and I know that the cemetery used to have spaces available, but now it is very full. In the past people were only buried on Saturdays, but now people are buried everyday of the week. The new cemetery (Oponganda) is also nearly full.” SWAG participant, Windhoek.

estimate. Many residents of Windhoek are migrants from elsewhere in the north of Namibia. They may well opt to return home while ill and die outside of the town. However, anecdotal evidence suggests that burial and cemetery space is becoming a problem and will require long term planning.

### External Impacts

The municipality generates revenue in a number of ways. The table below lists the municipality's major sources of income:

**Table 4.8: Revenue Generated, Municipality of Windhoek**

Item	2000/1	2001/2
Rates	98 075 000	100 800 000
Electricity	179 181 000	193 239 000
Sanitation (refuse)	23 900 000	24 873 000
Sewerage	28 852 000	29 770 000
Water	97 774 000	129 823 608
<b>Total</b>	<b>427 782 000</b>	<b>477 824 000</b>
as a % of total revenue	84%	83%

Rates are a major and important source of income for the municipality. Ratepayers can be divided into two components: the private sector and households. While there will be a negative impact on the private sector resulting from HIV/AIDS, for the majority rates are unlikely to be a major cost component and their ability to meet this obligation should rarely be affected. At the household level, however, the impact of the disease could quite possibly affect their ability to pay.

The sanitation, sewerage and water services are run on a policy of no profit/no loss. Thus, the level of demand for these services may be affected both by the performance of the economy and the slowed growth rate of the city. However, this should do little to the financial position of the municipality because a change in revenue should be accompanied by a similar change in expenditure. A similar impact to that relating to rates concerning the ability to pay for services does, however, present itself.

Electricity provision is, however, different. Electricity is purchased by the municipality from NamPower and sold at a premium to consumers. The profit generated in this manner is then used to finance other operations as well as municipal investments. It is likely that electricity sales are related to the performance of the regional economy. Any factor depressing the growth of the economy will depress the demand for electricity and therefore the revenue of the municipality. Ability to pay for electricity at the household level also becomes an issue.

### Land and Housing Sales

The sale of land and houses is an important source of revenue for the municipality. HIV/AIDS, however, will affect these sales in a number of ways, complicating the achievement of delivery targets and interfering with revenue flows. If land or property is purchased from the municipality with no financial ties between the buyer and the municipality existing after the sale there will be little impact as a result of the epidemic. The possible exception being that house and land prices and the health of the market will be affected by HIV/AIDS via the epidemic's impact on the local and regional economy.

If, however, the municipality finances the sale of property or they administer that finance, there will be impacts. A loan agreement involving the municipality in any way means that the council will be involved if the owner dies. If the municipality administers the loan there will be an increase in the costs associated with processing and dealing with that death. In cases where the municipality finances the sale itself than there will be an increase in administrative costs, possible loss of revenue and a decline in profitability.

Administrative costs will increase as deaths increase as changes in the financial arrangements will have to be processed or repossessions conducted. For example, in the case where upon death of the house or plot owner a substitute beneficiary purchaser is identified, the agreements will have to be amended to reflect this change.

In the situation where the sale is financed by the municipality itself, there is a risk that the council will lose revenue as payments stop. Presently, the municipality recoups pre-financed service provision, with sales being financed by the Build Together Programme and Windhoek Housing Scheme. Build Together allocated N\$5.267 million to Windhoek, while a further \$4 million has been reserved for the city. The Windhoek Housing Scheme has been allocated N\$2 million. While sales agreements under these programmes do include life insurance cover this will become more expensive and as deaths increase this cover will become more difficult to arrange, especially for low income groups. If the amount outstanding becomes uninsured at the time of death and no substitute purchaser is available, the council will be faced with writing off the debt or repossessing the property which itself can be expensive. This may be further complicated if a household is left impoverished by the impact of AIDS or contains orphans who have no alternative accommodation.

Even if outstanding debt is covered by an insurance policy, death will decrease the profitability of sales. Sales of property generate revenue in two ways, firstly through the capital payment and secondly through the interest received. Insurance protects the capital, but early payment following a death means the loss of interest income for the remaining years of the loan.

### Household Level Impacts

Studies on the impact of HIV/AIDS conducted elsewhere in Africa have found that the greatest impact on the household occurs just after death as, after the long financial strain of illness, the

"In Outjo the Roman Catholic Church now have approximately five funeral services per Saturday, while the Lutheran Church have approximately nine funeral services on any Saturday." SWAG Participant,

household is faced with the cost of burial. At this stage, households may find it difficult to meet other expenses. The impact on municipal revenue resulting from this household-level impact will largely be determined by two factors: the expenditures sacrificed by the household when the impact occurs, and if these expenditures include payment for services, the response of the municipality. If the household has to reduce or redirect expenditure, but they choose to cut back on other products and services rather than those provided by the municipality, there will be no impact on revenue. If, however, they do stop paying for some or all services provided by the municipality the impact on revenue will, in turn, be affected by the response of the municipality to this non-payment. If for example a household were unable to pay for electricity the typical response would be disconnection. This response makes it more difficult for the household to recover from the crisis, they are now faced with debt and possibly reconnection charges. During the period of disconnection the municipality is making no profit. Alternatively, the municipality could offer a reprieve from payments for a short period of time following a death. This would reduce the pressure on the household during a difficult time. Further, it should result in fewer disconnections reducing these costs. Once this stipulated period has passed, the household would be expected to resume payments. In the long term this may be more financially beneficial both to the household and the municipality as the costs associated with disconnection are not lost.

### Impact on Revenue Growth

A related and important issue is the impact on revenue growth. All the major sources of revenue are related to the size of the city, in terms of area and population. In the demographic section of this paper the slowing in the rate of population growth was discussed. This slowing in population growth translates into a reduction in the rate of revenue growth. However, at the same time, growth in expenditures is also slowed and the net financial position of the municipality should be relatively unaffected. There is, however, one possible set of financial impacts associated with slower growth. The staff and productive capacity of the municipality has to increase as the city grows. If the rate of increase in staff and productive capacity, including planned service provision, continues to be based on

previous population growth rates for the city, then expenditure will increase faster than revenue. To prevent such an occurrence it is essential that planners include the impact of the HIV/AIDS epidemic now, as increases in capacity, for example, water and sanitation, involve long term planning.

The HIV/AIDS epidemic will impact not only on the revenue of the municipality, but also on the level and pattern of expenditures. Firstly, the council is a large employer and is therefore experiencing the associated increasing cost of labour. The magnitude and implications of these increasing costs are discussed elsewhere in this report. Clearly, however, they will increase the expenditures of the municipality while generating no increase in revenue or provision of services.

### **The Municipal Response**

The Occupational Health and Safety Department has responsibility for the municipality's response to HIV and AIDS and has incorporated Information, Education and Communication (IEC) into its activities. In addition, a draft Workplace Policy and Programme has been developed, but awaits full Council approval and implementation pending the outcome of this Assessment.

The draft Workplace Policy covers all municipal employees, workplaces and human resources practices. It is based on the principles of human rights as embodied in the Constitution of the Republic of Namibia, and other relevant legislation, such as the Labour Act and the Local Authorities Act. The draft policy is based on best practices and contains, among other provisions, the following:

- protection of the rights of those living with HIV/AIDS;
- ensures that there will be no pre-employment screening of prospective employees;
- ensures that HIV status will not be a factor in job promotion or transfer;
- includes measures for risk management on the job;
- advocates the development and implementation of an HIV/AIDS and STDs workplace programme in consultation with all employees;

- supports planning for HIV/AIDS; and
- assists in the development of external linkages and partnerships which promote and coordinate HIV/AIDS programmes in the city.

The draft Workplace Policy and Programme developed by the municipality includes components relating to leadership, awareness and IEC programmes, a comprehensive wellness programme (VCT, psycho-social counselling and occupational health and safety services) and support services, including an Employee Assistance programme.

Both the Policy and its associated programme are now expected to be approved shortly. In the interim, the municipality has conducted a more limited set of HIV/AIDS awareness and support activities. These were assessed during the qualitative interviews conducted as part of this Assessment, and those participating in the interviews were also requested to provide insights on "ideal" interventions for their workplaces. All Municipal officers interviewed expressed concern as to the impact of HIV/AIDS on programmes and service provision and there is a feeling of urgency as to the rapid implementation of the more comprehensive response (as contained in the Policy) to the epidemic.

According to those interviewed, current activities include the following:

- HIV/AIDS education activities;
- people from AIDS prevention and other organisations give presentations;
- distribution of condoms (however, some participants were unaware of condom distribution); and
- distribution of condoms, pamphlets and other information on World AIDS Day.

These, together with the level of knowledge about the epidemic among employees, are discussed below.

#### Knowledge, Attitudes and Practices (KAP)

Municipal employees demonstrated reasonably good knowledge about HIV, AIDS and the transmission of the virus. However, correct knowledge was very dependent on the level of

education of the respondent. Those with lower educational attainment had lower levels of knowledge. However, responses to some questions indicated a higher than anticipated level of uncertainty among the majority of those interviewed as to how the disease can be transmitted.

Close to half of all of these interviewed during Focus Groups and the SWAGs knew of someone who died of AIDS, and *all* respondents believed they worked with colleagues who were infected. Summary findings are indicated in the following table:

**Table 4.9: Attitudes to HIV/AIDS**

Statement	Agree	Disagree
Question "I don't think that there is anyone in our local authority who has the AIDS virus."		21
Reasons for "disagree": <ul style="list-style-type: none"> <li>"I personally knew someone who was positive"</li> </ul>		
Question: "There is a serious problem of 'sugar daddies' in our community."		21
Reasons for "agree": <ul style="list-style-type: none"> <li>'Sugar daddies' have been around before HIV/AIDS especially in the Herero culture according to one respondent.</li> <li>'Sugar daddies' take advantage of girls from poorer households</li> </ul>		
Question "If someone is known to have the AIDS virus, they should be isolated."		21
Reasons for "disagree": <ul style="list-style-type: none"> <li>People should not be isolated, but identified</li> <li>Isolation will lead to the neglect of people</li> <li>HIV/AIDS positive people are human and should be treated with dignity</li> </ul>		
Question: "Households that are taking care of an AIDS patient are avoided by other households."	21	5
Reasons for "agree": <ul style="list-style-type: none"> <li>Households taking care of AIDS patients are being avoided because people are ignorant</li> <li>Some people are afraid</li> <li>Stigma of AIDS</li> </ul>		
Question: "A number of people believe that they can be cleansed of the AIDS virus if they have sex with a virgin."	11	10
Reasons for "disagree": <ul style="list-style-type: none"> <li>The participants do not feel that people can be cured if one sleeps with a virgin, but half of the respondents did indicate that there are a number of people who believe that it is true that it why young girls are being raped.</li> </ul>		
Question: "If a woman wants to use a condom but the man does not, the man's decision should rule and they should still have sex."		16
Reasons for "disagree": <ul style="list-style-type: none"> <li>They disagreed, but said this is happening in Namibia</li> <li>It is very difficult, especially for married women to request that the husband should use a condom, because the husband would think that the wife does not trust him.</li> </ul>		

Question: "If one is in a long-term relationship, it is really impossible to refuse sex, including sex without a condom, even if you fear that they have a sexual infection"	5	11
Reasons for "disagree": <ul style="list-style-type: none"> <li>Couples can refuse but it is difficult because one of the partners would be suspicious of the reason for refusing sex or sex without a condom</li> <li>This statement would depend on the relationship between partners.</li> </ul>		
Question: "If a shopkeeper has the AIDS virus, I would still buy products from them, including fresh produce."	15	1
Reasons for "disagree": <ul style="list-style-type: none"> <li>One participant indicated that he would buy from such a shop if it is the only available shop</li> </ul>		

### Interventions

Participants were asked to discuss how they believed the municipality should respond to the epidemic. The interventions suggested by municipal employees are included below.

### *Support Networks*

Those interviewed believed that the nature and type of support networks would depend on the target group and that more survey work was needed within the local authority to determine needs. Small groups of people should be formed in order to discuss and share ideas. The Health Department should be in charge of developing support networks, with the involvement of all department heads. HIV/AIDS issues should be discussed at their weekly work meetings. It was noted that the Councillor from the Soweto Constituency has established support groups, but nothing has happened within the municipality, as leaders are not actively involved.

### *Condoms*

Condoms and 'advertising papers' (on how to use a condom and information of HIV/AIDS) should be placed where all employees register each morning. Many participants believed that sex would take place regardless of the distribution of condoms, indicating (to these individuals) that the ideal intervention would be to distribute condoms to all. Condoms should be placed everywhere

Sex will take place whether one has a condom or not." SWAG Participant, Windhoek.

as, according to some participants, there might be employees who 'mix work with pleasure' and they should have easy access to condoms. Placement of condoms was felt to be important as, if they were not in the right place, they would not be used. Municipalities should give their employees packages that include condoms each Friday.

### *Awareness Raising*

Suggestions included the following: 'Namibia should do more to make people aware of HIV/AIDS, even if only five minutes is spent on the eight o' clock news'. 'HIV/AIDS subjects must be taught in school, videos should be shown, the media should have printed photos and newspaper should write something in their newspapers everyday on HIV/AIDS'. 'HIV/AIDS should be written in job descriptions so that employees are forced to do something in terms of HIV/AIDS as part of their work'. 'Videos should be shown in clinic waiting rooms'. 'Pictures of infected people should be posted'. 'Pictures of other diseases are usually posted, the same should be done with HIV/AIDS'. 'People have read enough about HIV/AIDS now they must be shown', so that they are pushed to understand the severity of the impacts. These awareness campaigns should not only be for employees of the local authority, but also for the community.

Employees stressed that it was important for top management to be involved, not just lower grades.

### *Financial Support*

It was suggested that worker's clubs be initiated who could sell items or have some sort of fundraising event in order to put money into a trust. This trust should assist people who are infected. No one should be forced to belong to such a club. The municipality should also, according to its employees, provide antiretroviral drugs to infected people, because these drugs are too expensive for any employee to afford. Government should initiate a tax on all companies that could be used to pay for these types of drugs for other employees. Namibia is 'sitting on a time bomb', and government should urgently do something about it.

There was a concern that pension funds and medical schemes are being depleted and that all people regardless of HIV status are affected. Government should find a way to assist in this regard. Insurance companies should give awards to people who do not claim often. One respondent believed that government knows what the impacts of HIV/AIDS would be. It would be good if government comes out with what they know and inform the nation of the impacts. People would understand the situation and even contribute financially if needed. Government should make more funds available by giving less to projects or institutions such as the roads company.

#### *Interventions to Reduce High Risk Behaviours*

‘People should be educated to take care of themselves’. ‘Prostitutes should be registered, because this would allow the municipality to implement interventions with them’, but the respondents did not believe that prostitution should be legalised. ‘People who live far from their families should be involved in discussions on how to deal with the situation’.

“Government should stop employing people from far away from their wives/husbands because this is forcing people to have sex with people outside their marriages.” FGD Participant

#### *Political Will*

More than one participant felt that there were top managers in the municipality and government who were infected with HIV, but because of secrecy, people at lower levels of employment felt that they were the only ones prone to infection. Political leaders should come forward and publicly declare their status for others to feel free about doing the same. One participant felt that, if there leadership was involved, then programmes would have been initiated. If leaders within the municipality showed active participation then others would follow.

### *Testing, Counselling and Treatment for HIV Positive People*

Testing was seen as very important for municipalities to know the status of their employees. 'Municipalities should emulate NamPower where employees were asked to take a blood test. This would give reliable data for municipalities, but the municipalities should not follow the route of the NDF, whereby they do not employ people who tested positively'. People who are infected but still healthy should be hired, because they may live longer than people who are not HIV positive.

One factor that would make testing, counselling and treatment interventions acceptable and effective would be trust and confidence. 'Government should also subsidise treatment for infected people, because it is a very expensive'. Places where testing and counselling takes place should also treat other diseases.

### *Destigmatisation*

It is very difficult to change attitudes towards HIV/AIDS and employees. 'The only solution is to educate employees about HIV/AIDS. They should be informed that those who are HIV-positive can live healthy lives after infection'. It was felt that it would be valuable if more infected people went public and if role models that were HIV positive declared their status in public. Another participant felt that the stigma would be broken when more and more people publicly declared their status, and if infected people are publicly accepted by others through holding hands, kissing and hugging. It is very important for parents to talk to their children about AIDS. It will go a long way if parents talk to their children and try and prepare the next generation for the challenges posed by the disease.

## Chapter 5: The Way Forward

### Introduction

This final chapter is based on the proceedings of the Strategic Response and Action Planning Workshop held in Walvis Bay from 12 - 16 August 2002, and attended by elected councillors, including mayors, as well as management and other officials from each of the five local authorities. The purpose of the workshop was to assist each municipality develop *draft* multi-sectoral and integrated plans preventing future infections and mitigating the impact of HIV/AIDS on their city or town.

The planning process involved developing a common understanding and agreement of the impacts of HIV/AIDS on the five cities, and thereafter agreeing to a strategic response. Finally, participants from each local authority began developing plans to prevent and mitigate the epidemic in their own city. It should be noted that the plans developed for each local authority are drafts, and will require consolidation and expansion, prior to their submission through senior management to Council for approval.

### The Planning Process

The planning process involved the following:

- reviewing the draft Impact Assessment reports (including ensuring their accuracy, and recommending suggested changes);
- developing a common understanding and agreement of the impacts of HIV/AIDS on the five cities;
- agreeing the elements of a strategic response;
- identifying the data and information needs in order to inform this response ; and
- developing draft plans to prevent and mitigate the impacts of the epidemic in their own city.

It should be noted that the plans developed for each local authority are *drafts*, and will require consolidation and expansion, prior to their submission through senior management to the respective Municipal or Town Council for approval.

## **Strategic Response**

Participants agreed that an appropriate strategic response by each local authority would encompass the following.

### Management Strategies

Management strategies are intended to assist the local authority to identify, plan for, mitigate and monitor the impacts of the epidemic on its personnel and operations.

### Internal Strategies

Internal strategies are intended to enhance knowledge and understanding of HIV and AIDS among municipal employees and reduce future infections through prevention activities built on this knowledge. They are centred on the development, approval and implementation of Workplace Policies and Programmes

### External Strategies

The external environment refers to the impacts of HIV/AIDS on the community served by Windhoek Municipality. The intention of these strategies is to widen the municipal response to the epidemic through enhanced linkage with and support to existing government and non governmental organisation programmes and activities.

Based on these three strategies, the participants from Windhoek then developed the following goal to guide and inform the town's strategic response to the epidemic:

**GOAL: To reduce the incidence rate of HIV/AIDS infection in the City of Windhoek to below the national epidemic level.**

## **Data Needs**

Detailed lists of the information and data required to plan for the epidemic's impacts and to inform prevention activities were discussed and developed at the Workshop. These included:

- data needed to inform management responses to the impact of the epidemic, for example those relating to absenteeism, personnel profiles, critical posts, etc.;
- data needed to measure and monitor the epidemic's impact on the city such as that relating to its economic performance, municipal revenue, etc.; and
- data needed to expand the municipal prevention response both internally and externally. This included Knowledge, Attitudes and Practices studies data on other providers of prevention and support services among the wider community, for example.

Data sources for this information were discussed, and a detailed list of these is contained in the minutes of the Workshop proceedings. However, in this regard, the importance of collecting adequate data within local authorities should not be under-estimated. This is especially pertinent with regard to the human resource management systems presently in place within each local authority. While most are able to provide the basic data needed to monitor the epidemic's impacts on personnel (i.e., that relating to absenteeism), with the exception of Swakopmund, none are disaggregating leave by type and none are costing these absences. Some, such as the used by Windhoek Municipality, are recognised as being user-unfriendly and needing modification in order that internal indicators of the impact of epidemic can be monitored on a monthly basis.

Equally, no municipality is monitoring the impact and cost of AIDS related illness and death on benefit programmes and their costs. These need to be monitored annually.

## **Action Plans**

Each municipality then developed its own plan covering the three elements of the agreed strategic response. Each strategy area has several objectives, and for each of these a detailed

list of activities was developed, the person or persons responsible for the activity were designated, the time frame established, outputs identified and budgets estimated. The detailed draft plans developed for Windhoek are contained in Annex B to this report.

## **The Way Forward**

Following the workshop, deadlines were set for the receipt of additional comments of the draft and will lead completion of the final report. At this stage the Assessment of the Impact of HIV/AIDS on Windhoek is to be presented to Council for approval and action. This is scheduled for mid-September 2002.

The draft plans included in the final report will require further elaboration and, perhaps, amendment, by Council officers prior to their presentation to management and subsequently to Council for agreement and approval.

However, Family Health International (FHI), through whom the funds for this Assessment have been provided, has agreed that the remaining, *limited*, funds under the SIAPAC contract *may* be re-programmed, subject to availability. The intention is to support activities related to the acceptance, initiation and implementation of findings and recommendations (as contained in the plans) resulting from this Assessment by the local authorities. Requests for the use of these funds are to be made in writing to FHI through SIAPAC for approval. The types of activities suggested for the use of the remaining funds are further workshops presenting the findings from the Assessment and the draft plans to senior managers and Councils at the local level, additional data gathering exercises to supplement findings from the report or further planning exercises, etc.

Beyond these activities, additional strengths and resources are to be found within the network of local authorities in Namibia, through the national associations (NALAO and ALAN). Equally, AMICAALL can assist in developing and implementing the plans to mitigate the impacts of HIV/AIDS on each municipality. It is the responsibility of the

appropriate representatives within each local authority to present the findings of the reports and the plans to mitigate the impacts of HIV/AIDS to these national associations as well as other bodies.

# **Annex A: Active HIV/AIDS Organisations**

The following AIDS Support Organisations indicated that they provide services in the Windhoek area:

**Name of Organisation:** Aids Care Trust in Namibia

**Programmes**

- Provide ongoing pre and post counselling
- Awareness creation through Radio talks and distribution of IEC materials
- Training of AIDS Counsellors, Educators and Home Care Givers,
- Provision of Home Based services to People Living With HIV/ AIDS and their families,
- Facilitate Home Base Care Training Workshops,
- Distribute Information Education and Communication (IEC) materials,
- Prevention Programmes at workplace,
- Condom distribution

**Name of Organisation:** AIDS Law Unit (LAC)

**Programmes**

- Litigation and legal advice,
- Lobbying and Advocacy
- Policy Formulation,
- Development of Training and Educational materials

**Name of Organisation:** “Aitsama Huisen” Students’ Empowerment and development trust (SEDT)

**Programmes**

- HIV/AIDS awareness creation,
- Provide infrastructure that would practically expose students’ to entrepreneurship,
- Facilitate exposure visits of HIV/ AIDS people to schools
- Raising business awareness and host market days,
- Intensify the HIV/ AIDS prevention campaign

**Name of Organisation:** Alliance of Mayors and Municipal leaders on HIV/ AIDS in Africa (AMICAALL)

**Programmes**

- The programme aims to strengthen capacity to reduce the social and economic impact of HIV/AIDS on urban and peri-urban centres, with particular focus on heavily

affected countries in sub-Saharan Africa by supporting the development of local government/civil society partnerships; creating capacity for scaling up multi sectoral responses; sharing knowledge and lessons about what works across countries contributing to the development of a supportive policy environment that reflects the rights of those affected and is gender sensitive; stimulating twinning and other partnerships to enhance solidarity across borders; and promoting innovative approaches to resource mobilisation for community based initiatives.

AMICAAL is the strategy adopted by the Alliance to translate its goals into concrete options in countries and communities. The overall goals of AMICAAL are to develop and implement multi-sectoral responses to the HIV/AIDS epidemic at the local level via a consultative process between Civil Society and Community leaders and achieve local capacity. It calls for a locally fed, multi-sectoral approach that complements and supports national policies.

**Name of Organisation:** Catholic AIDS Action (CAA)

#### **Programmes**

- Implement a modified programme for Primary schools – Stepping Stones,
- Motivate and implement youth-prevention oriented programmes such drama groups, peer-support and establish Anti AIDS Clubs in Roman Catholic affiliated parishes and schools,
- Recruit and train volunteers for spiritual support, counselling, home-visits, caring and supporting sick ones and orphaned children,
- Ensure a demonstrated commitment to HIV/AIDS awareness and prevention through periodic sermons, distribution of literature and group meetings.
- Offer support for local self-help Groups and activities,
- Soup kitchens for HIV/AIDS patients, orphans and vulnerable children,
- Initiatives in living positively and caring for ourselves in order to care for others,
- Income generating activities and limited direct (welfare) support,
- Undertake community education and outreach programmes,
- Implement annual Training of Trainers (ToT) programmes in Home Based Care and Physio-social supports,
- Host annual Conferences (both at national and regional level).

**Name of Organisation:** Change of Lifestyle Home's Project (C. O. L. S)

#### **Programmes**

- Safe house for juvenile offenders,
- Education programme
- Health Unit (HIV/AIDS)
- 4H Project (Youth Entrepreneurial Programme)
- Youth Development Programme.

**Name of Organisation:** Chief Hosea Kutako Foundation AIDS Desk (CHKFAD)

**Programmes**

- To promote a sense of solidarity, self-discipline and practical cooperation among the youth for a genuine action,
- Promote primary health care as a first line defence against diseases with emphasis on AIDS, TB and avoidance of diet
- Organize educative meetings, seminars workshops and conferences in various communities on matters pertaining to poverty alleviation as well HIV/AIDS.

**Name of Organisation:** Council of Churches in Namibia (CCN)

**Programmes**

- Conduct faith justice and society programmes
- HIV/AIDS educational campaign,
- Conduct Violence against Women and Children Workshop,
- Operational Voluntary testing Centre, with cost involved
- Marriage counselling

**Name of Organisation:** ELCRN AIDS Programme

**Programmes**

- Home Base Care/Psycho-Social,
- Support to OVC/Counselling Services,
- Training of Trainees,
- Peer Education Training,
- Stepping Stones Programme,
- Pastors in Sexual Education and Counselling,
- Awareness Raising: Developing IEC materials etc.

**Name of Organisation:** Kasoyetua Youth Group of Namibia

**Programmes**

- House to house consultation,
- AIDS Awareness campaign and condom distribution in rural areas,
- Poem presentation and drama performance on HIV/AIDS with the intention of raising public awareness with regard to HIV/AIDS,
- Sensitisation Workshops on HIV/AIDS,
- Conduct Life Skills Educational Programmes in rural areas targeting youth aged 14-20 at secondary level.

**Name of Organisation:** Katutura Youth Enterprise Centre (KAYEC)

**Programmes**

- Conduct livelihood HIV/AIDS Training to rural young men and women aged 15 - 30 yrs for self-employment,
- Offer vocational Training courses in Bricks Laying and Plastering, Carpentry and Joinery, Plumbing and Pipefitting and Metalwork and Welding,
- Business Training courses,
- Computer Training courses,
- Youth Leadership

**Name of Organisation:** Khomas Women in Development (KwiD)

**Programmes**

- Home Based Care to people infected and affected by HIV/AIDS,
- Offer technical support for HIV/AIDS orphans

**Name of Organisation:** Lifeline/Childline Namibia

**Programmes**

- Lay counselling hotline services (7 days per week - 15 hours per day)
- Face - to - face counselling,
- Training of prospective Volunteer Counsellors,
- Childline Schools programme (12,000n Primary school children per annum exposed to Life Skills educational drama. Skills in areas of sexual abuse molestation, domestic violence and HIV/AIDS).
- Life Skills Training in Communities on variety of subjects,
- Facilitation of sustainable community development programmes with focus on emotional health and counselling services,
- Networking with government Ministries and other bodies to enlarge the resource pool for people in emotional need,
- Fundraising activities to sustain all these services.

**Name of Organisation:** Mothers' Voice Grassroots Care Project

**Programmes**

- Provide ongoing counselling support and Home Based care to People living With HIV/AIDS who are rejected by their families,
- Community mobilization and sensitisation programmes,
- Provide training to families members of People Living With HIV/AIDS with specific focus on home base care, nutrition and hygiene,

- Income generating projects
- Provide daily soup kitchens for terminally ill and orphan children.

**Name of Organisation:** Namibia National Network for People Living with HIV/AIDS  
(NNNP+/LIRONGA EPARU)

### **Programmes**

- Mitigate for the rights of PLWHA,
- Provision of information, education and communication (IEC) materials on HIV/AIDS,
- Administer Bursary Fund for PLWHA – long term object of the Network,
- Provide Counselling and Home Based Care to people living and affected by HIV/AIDS and if need be refer to suitable Counsellors,
- Offer Empowerment, self-reliance, self confidence and motivational training courses for PLWHA,
- Advocate for access to treatment, care and support for PLWHA,
- Undertake annual regional visits to selected regions in order to build the capacity of regional structures,
- Advocate to policy makers and politicians on matters of different impact to PLWHA, such the introduction of PTCT programme – (parental-to-child-transmission),
- Income generating projects to support orphans and for self-sustainable.

**Name of Organisation:** Namibia Planned Parenthood Association (NAPPA)

### **Programmes**

- Condom distribution,
- Information dissemination pertaining to sexual and reproductive health,
- Educational provision on family planning,
- Development of IEC material for public use,
- Implementing a 5-year UNFPA funded project to provide SRH information and Service to youths in-and-out of school in the Ohangwena Region,
- Establishment of Youth Clubs in schools.

**Name of Organisation:** Namibia Red Cross Society (NRCS)

### **Programmes**

- First aid training,
- Street kids and orphans project,
- Promotion of the Movements fundamental principles and humanitarian values,
- Reproductive Health and HIV/AIDS Educational programmes at refugee camps and other selected communities,

- Water and sanitation programme,
- Disaster response and preparedness,
- Home Based Care for terminally ill.

**Name of Organisation:** Namibia Students' Education Movement (NASEM)

**Programmes**

- Fostering of parents', students and teachers co-operation amongst various educational institutions,
- Advocate for abstinence as the best option of alternatively condom use and adherence to moral values and social ethics,
- Conduct various students' rights and obligations workshops,
- Leadership capacity building workshop for Learners and Students' Representative Council,
- Career guidance and motivational workshops for learners,
- Crisis intervention and mediation at school level,
- Participation in policy formulation with relevant stakeholders with emphasis on education and affecting the youth and the entire nation at large.

**Name of Organisation:** NaSoMa

**Programmes**

- Development of Behaviour Change Communication (CBC) materials as part of HIV/AIDS prevention approach,
- Offer training on the correct usage and consistent of both the male and female condoms,
- Build an infrastructure for implementing a Namibian managed social marketing programmes,
- Set up a countrywide distribution and sales network for male and female condoms,
- Promote and market both the male and female condoms ensuring that products are always available, affordable and easily accessible to everybody.

**Name of Organisation:** National Union of Namibia Workers (NUNW)

**Programmes**

- Collective bargaining activities,
- Dispute negotiation, resolution, mediation and prevention,
- Arbitration.

**Name of Organisation:** Peer Education and Counselling Project (PECP)

**Programmes**

- Face to face counselling,
- Helpline telephone counselling,
- Training of Community AIDS Educators and Counsellors,
- Establish Regional Community HIV/AIDS Committee select and train HIV/AIDS Community Educators,
- Condom distribution at strategic places in and around Windhoek.

**Name of Organisation:** Philippi Namibia

**Programmes**

- Provides various specialized training courses on HIV/AIDS, Sexual Abuse, and addictions as well as Basic Advanced Counselling,
- People with social problems such as marital problems and drugs addictions are also given counselling.

**Name of Organisation:** Sister Namibia

**Programmes**

- Conduct research on the socio-cultural constructions of masculinities, feminities and sexualities as a basis for developing pilot materials for comprehensive sexuality education in Namibia,
- Advocate and lobbies for full representation and participation of women in politics and governance,
- Provide training to women in rural and marginalized urban communities on the Convention for the Elimination of All Forms of Discrimination Against Women (CEDAW) and women's rights,
- Conduct discussion events on topical issues of concern to women,
- Collect and hosts regional and international materials on women and gender issues

**Name of Organisation:** Social Marketing Association (SMA)

**Programmes**

- Social marketing of maximum gold condoms and bednets,
- Promotional activities for condoms,
- Design drama and educational spots for the Rukwangali and Silozi radio services,
- Provision of high quality and affordable treated bednets to the residence of North Eastern Regions of Namibia and Walvis Bay,
- Facilitate ongoing education on HIV/AIDS in the north-eastern regions of Namibia.

**Name of Organisation:** Soli Deo Gloria HIV/AIDS Awareness Club

**Programmes**

- Visits to hospitals, old age homes and regional branches to offer voluntary social work promoting a culture of Christianity,
- HIV/AIDS awareness campaign through drama, musical performance and debates with focus in rural areas,
- Offer specialized musical training classes/courses,
- Facilitate Training of Trainers from selected regions.

**Name of Organisation:** True Love Waits (TLW)

**Programmes**

- Advocate for minimal teenage pregnancies and early parenthood,
- HIV/AIDS Information dissemination to the public meetings, school visits, shebeens and at squatter areas,
- Peer education and counselling,
- Regular radio talks in at least three indigenous languages,
- Encourage young people to opt for abstinence until marriage,
- Conduct radio talks,
- House to house visits to educate the public on the transmission of HIV/AIDS as well as the prevention methods thereof.

**Name of Organisation:** Woman Solidarity

**Programmes**

- Offer talks, workshops and seminars to secondary schools students' with emphasis on violence against women,
- Telephonic and face to face counselling,
- Carry outreach programmes in a form of workshops and educational talks at schools and work place in order to raise public awareness thus ultimately reducing violence resultant HIV/AIDS infections,
- Offers support to women who were abused, sexually, physically or emotionally,
- Crisis intervention through a third-party,
- Advocacy and lobbying, networking and research into woman abuse and rape.

**Name of Organisation:** Young Women Christian Association of Namibia (YWCA)

**Programmes**

- Offer Peer Counselling,
- Conducts HIV/AIDS drama performance,
- Run and manage needlework classes,
- Provide counselling to teenage mothers,
- Provide Pre-and primary education,
- Conducts literacy programmes, Income generating projects (vegetable garden)

# **Annex B: Prevention, Response and Action Plans**

**WINDHOEK: MANAGEMENT STRATEGIES**

<b>STRATEGY AREA: Structure and Planning</b>								
<b>OBJECTIVE: To establish and mandate structure to plan implement and monitor the responses</b>								
<b>INDICATOR: Improved understanding: Records of the minimum data sets to inform HIV/AIDS programme</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Identifies the relevant stakeholders to constitute a task force for this assignment	HIR (H+S DIV)	Various Departments and Councillors	15 - 16 Aug. 02	Task Force formed	—	—	IT
2.	Drafts the terms of reference of Task Force	HIR (H+S DIV)	Task Force HIV/AIDS Expert Councillors	19 - 20 Aug. 02	TOR Drafted	—	—	—
3.	Institutionalised Task Force and Receives mandate through the approval by MC and council (submission)	Corporate H+S Committee	Task Force members SE Forum Councillors	Sept. 02 MC	Task Force Institutionalised and Mandated	Also approved by MC N\$50 000	—	MC
4.	Determinate the types of information that is needed and institutions that can provide it	Corporate H+S Committee	Task Force members SE Forum Councillors	3 - 4 Sept. 02	Sources of information identified	—	—	HIV/AIDS Expert

**WINDHOEK: WORKPLACE PROGRAMME**

<b>STRATEGY AREA: Workplace HIV/AIDS Policy</b>								
<b>OBJECTIVE: To review, adopt and implement workplace policy</b>								
<b>INDICATOR: Workplace policy in place and disseminated</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Forward the draft to SE forum and managers and other relevant stakeholders for final comments	HR (Health and Safety)	Corporate Health and Safety Committee	19 - 30 Aug. 02	Final Draft	—	—	Legal office and LAC
2.	Final draft to management committee in the term of a item	HR (Health and Safety)	Task force	15 Sept. 02	Policy adopted by MC	—	—	—
3.	Submission to council for endorsement	MC	—	31 Sept. 02	Policy endorsement and known by public	—	—	—
4.	Launch policy at a public event for implementation	Council (office of mayor and ETR)	Public managers SE's	31 Sept. 02	Implementation Commences	—	Public events budget	—

**WINDHOEK: WORKPLACE PROGRAMME**

<b>STRATEGY AREA: Prevention Programme</b>								
<b>OBJECTIVE: To promote and support safer sexual practice in a well informed workplace</b>								
<b>INDICATOR: Well informed workplace with noticeable behavioural change</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Conduct awareness campaigns through out the organisation	HR (H + S division)	Health Service division community development MOHSS	Sept. 02 - 30 June 03	Campaign programme in place	Utilise Training budget	—	Other stakeholder
2.	Acquire and distribute condoms in the workplace	HR	Health Services Division	Sept. 02 - 30 June 03	Number of condoms distributed	—	—	MOHSS

**WINDHOEK: WORKPLACE PROGRAMME**

<b>STRATEGY AREA: Training</b>								
<b>OBJECTIVE: To establish a cadre of appropriately trained staff and supported staff in HIV/AIDS and counselling</b>								
<b>INDICATOR: Increased knowledge of HIV/AIDS</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Identify trainers and/or training institutions	HR (Health and Safety Division)	Training and Development Task Force	until July 03	Trained personnel, trainers to train others (Training Programme)	—	Training & Development	—
2.	Identify those to be trained	Task force	Supervisors	until July 03	Trained personnel, trainers to train others (Training Programme)	—	Training & Development	—
3.	Facilitate training of trainers	HR (Health and Safety Division)	Task force	until July 03	Trained personnel, trainers to train others (Training Programme)	Trained Budget	Training & Development	—
4.	Evaluate the effectiveness of the training	HR (Health and Safety Division)	Training institutions trainer (participants)	Until July 03	Trained personnel, trainers to train others (Training Programme)	Trained Budget	Training & Development	—

**WINDHOEK: EXTERNAL STRATEGIES**

<b>STRATEGY AREA: Baseline and periodic impact assessment</b>								
<b>OBJECTIVE: To establish the status of the epidemic currently and in future amongst the employees</b>								
<b>INDICATOR:</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Organise a workshop to present the data collected	HR (Health and Safety Division)	Departments corporate Health and Safety Committee Councillors	—	Clear picture of the HIV/ AIDS status in the City of Windhoek	To be arranged through the office of the CEO	CEO's budget	HEARD
2.	Promote voluntary counselling and testing	HR (Health and Safety Division)	Task force corporate Health and Safety Committee	Continuously	Baseline data	HR	HR	AIDS Care Trust

**WINDHOEK: EXTERNAL STRATEGIES**

<b>STRATEGY AREA: Programme for infected and affected staff</b>								
<b>OBJECTIVE: To create an enable environment and provide appropriate treatment, care and support</b>								
<b>INDICATOR:</b>								
<b>No.</b>	<b>Activities</b>	<b>Responsible Person Lead unit</b>	<b>Other Partners</b>	<b>Time frame</b>	<b>Output</b>	<b>Budget</b>	<b>Fund-ing Source</b>	<b>Technical Assistance</b>
1.	Establish and coordinate counselling services for the staff	HR (Health and Safety Division)	NGO's, clinics and medical practitioners	Continuously	Counselling services	HR		NGO's, clinics and medical practitioners
2.	Introduces the HIV/AIDS policy to the workforce	HR (Health and Safety Division)	Corporate Health and Safety Committee	1-5 Oct. 02	Knowledge of the policy for implementation	HR Printing	—	Task force
3.	Facilitates treatment for the effected	HR (Health and Safety Division)	Medical aid medical, practitioners and clinic	Continuously	Access to treatment	HR	—	Medical aid, medical practitioners and clinics
4.	Facilitates Home Based Care	HR (Health and Safety Division)	Task Force and other relevant stakeholders	Continuously	Home based care	HR	—	MOHSS, Catholic AIDS Action Programme and NASOMA

# **Annex C: Cost Assumptions**

## ESTIMATING THE COST OF HIV/AIDS IN Windhoek Municipality

This simple model is divided into a number of sheets.

The first is this introduction,

The 'Total' sheet presents the total cost of HIV across all job bands/grades

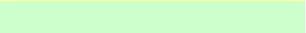
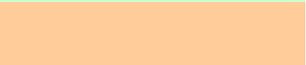
The 'Result' sheets present results for each band

The 'Á&D' sheets contain the data for each band on which the costings are based

The 'Notesheets' explain the headings in the 'Results' and 'Á&D' sheets

The 'Limitations' sheet outlines the problems with the model

The model is colour coded:

	Cells containing headings
	Cells which require data
	Calculated output, do not enter data

This model is extremely simplified, this was necessary due to the lack of human resource data available.

It is not intended to provide an accurate estimate of cost, but rather to provide an idea of the order of magnitude

It can also be used as a planning tool to identify major costs and implications of different situations

## NOTES

Deaths	Total number of employee deaths from AIDS in current year
Sick leave	
Days	Total number of days sick leave taken as a result of HIV infection in current year
Cost	Cost of sick leave: calculated as number of days*average cash salary
Compassionate leave cols	Cost of compassionate leave taken as a result of the death of colleagues
Productivity	The cost of lower productivity resulting from HIV infection
Recruitment	The cost of recruiting replacement staff for those who have died from AIDS that year
Training	The cost of training replacement staff for those who have died from AIDS that year
<b>Sub total</b>	
Pension fund increase	The cost of increased pension fund contributions necessary to cover increased death benefits
Compassionate leave family	Cost of compassionate leave taken as a result of the death of family members
Housing	The amount of bad debt resulting from outstanding housing loans which the life insurance has refused to cover
<b>Sub total</b>	
<b>Total</b>	
Discounted total	The present value of future costs 2002-2010

## Notes

Sick leave in service	The average number of days sick leave taken, per year, up to and including the year of death for employees who die in service
Sick leave retirement	The average number of days sick leave taken, per year, up to and including the year of death for employees who die after retiring of service
Productivity loss	The proportion by which productivity is reduced as a result of HIV infection up to and including the year of death
Productivity days	The number of days work which the lost productivity is equivalent to
Productivity days cost (in service)	The cost of the work day equivalent lost for those who die in service
Productivity days cost (retirement)	The cost of the work day equivalent lost for those who die after retiring from service
Cost per day	The average cost of a lost day of work
Number of working days	Total number of working days per year per employee
Training	The average cost of training a replacement employee
Recruitment	The average cost of recruiting a replacement employee
Average outstanding debt (housing)	The average amount outstanding on an employees housing loan at the time of an AIDS related death
Proportion of life insurance refused	The proportion of life insurance pay outs, resulting from an AIDS death, which are refused on the grounds of an AIDS exclusions
In service deaths	The proportion of AIDS deaths which occur while the employee is still in service
Retirement deaths	The proportion of AIDS deaths which occur after the employee has retired from service
Premature years	The average number of years employees who die of AIDS would have remained at work
Compassionate leave family	The average (across the entire work force not just those who have lost a family member) number of days taken as compassionate leave for a family members death resulting from AIDS
Compassionate leave cols	The average (across the entire work force) number of days taken as compassionate leave for a Colleagues death resulting from AIDS
Staff growth rate	The rate at which the work force is expected to grow each year
Pension fund increase	The percentage increase in pension fund contributions, as a percentage of the salary bill, necessary to cover the cost of increased AIDS deaths
Total staff	Total staffing complement in 2002
Discount rate	The government discount rate

## Limitations

The model is limited in a number of ways

Firstly, many of the complicated calculations are exogenous inputs to the model: deaths from AIDS, pension fund increases etc

Secondly, costs are not distributed throughout the year, the discounted amount assumes that they all happen at once

This is not a major concern as it makes little difference to the final result

Thirdly, the model takes little consideration of the difference in costs associated with different levels of employment and differences in age

The work force should be disaggregated by age, and job band and the model run for each.

This was not possible given the limitations of the data.

Finally, the model is limited, as is any model, in that it is only as good as the data which is entered into it.

## RESULTS ALL BANDS

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Deaths	33	40	48	54	60	65	68	69	71
Sick leave									
Days	5820	6816	7732	8522	9176	9594	9850	10086	10281
Cost	1650000	1934768	2185420	2408698	2610924	2741418	2808290	2868776	2918351
Compassionate leave cols	18790	22526	27368	30636	33492	37294	38928	39214	40561
Productivity	478185	559643	627014	696504	753119	781132	801827	819265	830711
Recruitment	10281	12462	14955	16824	18693	20251	21186	21497	22111
Training	31031	37760	45113	50846	56018	61750	64617	64928	67481
<b>Sub total</b>	<b>2188288</b>	<b>2567159</b>	<b>2899870</b>	<b>3203507</b>	<b>3472246</b>	<b>3641846</b>	<b>3734847</b>	<b>3813681</b>	<b>3879211</b>
Benefit increase	264284	264284	264284	264284	264284	264284	264284	264284	264284
Compassionate leave family	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>	<b>264284</b>
<b>Total</b>	<b>2452571</b>	<b>2831443</b>	<b>3164154</b>	<b>3467791</b>	<b>3736530</b>	<b>3906129</b>	<b>3999131</b>	<b>4077965</b>	<b>4143515</b>
Discounted total	2452571	2696612	2869981	2995608	3074052	3060555	2984213	2898133	2804511
<b>Present value cost</b>	<b>31076721</b>								

## ASSUMPTIONS AND DATA BAND

### A

	1	2	3	4	5	6	7	Death			
Sick leave in service	4	0	0	0	0	36	40	80			
Sick leave retirement	4	0	0	0	0	40	80	0			
Productivity loss	0	0	0	0	0	0	0.1	0.1			
Productivity days	0	0	0	0	0	0	18	14			
Productivity days cost (in service)	0	0	0	0	0	0	2574	2002			
Productivity days cost (retirement)	0	0	0	0	0	0	2574	0			
Cost per day	143										
Number of working days	220	Discounted	Net								
Training	500	188.4447414	311.55526								
Recruitment	500	188.4447414	311.55526								
Average outstanding debt	0										
Proportion not covered	0.1										
In service deaths	0.5										
Retirement deaths	0.5										
Premature years	20										
Compassionate leave family	0										
Compassionate leave cols	2										
Staff growth rate	0										
Benefit increase	0.003										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total staff	586	586	586	586	586	586	586	586	586	586	586
Excess mortality	0.0128213	0.015415753	0.0177215	0.0196484	0.0210339	0.021958357	0.0224695	0.0226274	0.0227124	0.0226613	0.022687
No. close family	5										
Discount rate	0.05										

## Total Increased Costs Resulting from the Epidemic on Band A

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	11	13	16	18	20	21	22	23	23	24	24
Sick leave											
Days	1920	2256	2576	2814	2992	3130	3230	3308	3368	3408	3408
Cost	274560	322608	368368	402402	427856	447590	461890	473044	481624	487344	487344
Compassionate leave											
cols	3146	3718	4576	5148	5720	6006	6292	6578	6578	6864	6864
Productivity	44473	54197	62348	69498	74074	77649	81224	82225	84799	85800	85800
Recruitment	3427	4050	4985	5608	6231	6543	6854	7166	7166	7477	7477
Training	3427	4050	4985	5608	6231	6543	6854	7166	7166	7477	7477
<b>Sub total</b>	<b>329033</b>	<b>388623</b>	<b>445262</b>	<b>488264</b>	<b>520112</b>	<b>544330</b>	<b>563114</b>	<b>576179</b>	<b>587333</b>	<b>594963</b>	<b>594963</b>
Benefit increases	55307	55307	55307	55307	55307	55307	55307	55307	55307	55307	55307
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>55307</b>										
<b>Total</b>	<b>384340</b>	<b>443930</b>	<b>500568</b>	<b>543571</b>	<b>575419</b>	<b>599637</b>	<b>618421</b>	<b>631485</b>	<b>642639</b>	<b>650269</b>	<b>650269</b>
Discounted total	384340	422791	454030	469557	473399	469831	461475	448785	434964	419169	399209
<b>Present value cost</b>	4837549										

## ASSUMPTIONS AND DATA FOR BAND B

	1	2	3	4	5	6	7	Death						
Sick leave in service	4	0	0	0	0	36	40	80						
Sick leave retirement	4	0	0	0	0	40	80	0						
Productivity loss	0	0	0	0	0	0.1	0.1	0.1						
Productivity days	0	0	0	0	0	18.4	18	14						
Productivity days cost (in service)	0	0	0	0	0	4305.6	4212	3276						
Productivity days cost (retirement)	0	0	0	0	0	4305.6	4212	0						
Cost per day	234													
Number of working days	220	Discounted	Net											
Training	1600	603.0231726	996.97683											
Recruitment	500	188.4447414	311.55526											
Average outstanding debt	0													
Proportion not covered	0.1													
In service deaths	0.5													
Retirement deaths	0.5													
Premature years	20													
Compassionate leave family	0													
Compassionate leave cols	2													
Staff growth rate	0													
Benefit increase	0.003													
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012			
Total staff	573	573	573	573	573	573	573	573	573	573	573			
Excess mortality	0.0128213	0.015415753	0.0177215	0.0196484	0.0210339	0.021958357	0.0224695	0.0226274	0.0227124	0.0226613	0.022687			
No. close family	5													
Discount rate	0.05													

## Total Increased Costs Resulting from the Epidemic on Band B

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	13	16	19	21	24	26	27	27	28	29	29
Sick leave											
Days	2310	2690	3048	3384	3662	3802	3880	3978	4078	4118	4118
Cost	540540	629460	713232	791856	856908	889668	907920	930852	954252	963612	963612
Compassionate leave											
cols	6084	7488	8892	9828	11232	12168	12636	12636	13104	13572	13572
Productivity	170492	196654	222908	247432	265075	272563	278507	287024	292874	294512	294512
Recruitment	4050	4985	5920	6543	7477	8100	8412	8412	8724	9035	9035
Training	12961	15952	18943	20937	23927	25921	26918	26918	27915	28912	28912
<b>Sub total</b>	<b>734127</b>	<b>854538</b>	<b>969895</b>	<b>1076595</b>	<b>1164620</b>	<b>1208421</b>	<b>1234393</b>	<b>1265843</b>	<b>1296869</b>	<b>1309644</b>	<b>1309644</b>
Benefit increases	88494	88494	88494	88494	88494	88494	88494	88494	88494	88494	88494
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>0</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>	<b>88494</b>
<b>Total</b>	<b>822621</b>	<b>943032</b>	<b>1058389</b>	<b>1165089</b>	<b>1253114</b>	<b>1296915</b>	<b>1322887</b>	<b>1354337</b>	<b>1385363</b>	<b>1398138</b>	<b>1398138</b>
Discounted total	822621	898126	959990	1006448	1030940	1016167	987159	962502	937668	901252	858335
<b>Present value cost</b>	<b>10381208</b>										

# ASSUMPTIONS AND DATA FOR BAND C

	1	2	3	4	5	6	7	Death			
Sick leave in service	4	0	0	0	0	36	40	80			
Sick leave retirement	4	0	0	0	0	40	80	0			
Productivity loss	0	0	0	0	0	0.1	0.1	0.1			
Productivity days	0	0	0	0	0	18.4	18	14			
Productivity days cost (in service)	0	0	0	0	0	8096	7920	6160			
Productivity days cost (retirement)	0	0	0	0	0	8096	7920	0			
Cost per day	440										
Number of working days	220	Discounted	Net								
Training	2500	942.2237072	1557.7763								
Recruitment	1700	640.7121209	1059.2879								
Average outstanding debt	0										
Proportion not covered	0.1										
In service deaths	0.5										
Retirement deaths	0.5										
Premature years	20										
Compassionate leave family	0										
Compassionate leave cols	2										
Staff growth rate	0										
Benefit increase	0.003										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total staff	270	270	270	270	270	270	270	270	270	270	270
Excess mortality	0.0128213	0.015415753	0.0177215	0.0196484	0.0210339	0.021958357	0.0224695	0.0226274	0.0227124	0.0226613	0.02268703
No. close family	5										
Discount rate	0.05										

## Total Increased Costs Resulting from the Epidemic on Band C

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	7	9	10	12	13	14	15	15	16	16	16
Sick leave											
Days	1260	1480	1678	1856	1994	2094	2172	2232	2272	2272	2272
Cost	554400	651200	738320	816640	877360	921360	955680	982080	999680	999680	999680
Compassionate leave											
cols	6160	7920	8800	10560	11440	12320	13200	13200	14080	14080	14080
Productivity	173800	204072	231088	253264	272360	283360	294536	302456	305536	305536	305536
Recruitment	2181	2804	3116	3739	4050	4362	4673	4673	4985	4985	4985
Training	10904	14020	15578	18693	20251	21809	23367	23367	24924	24924	24924
<b>Sub total</b>	<b>747445</b>	<b>880016</b>	<b>996901</b>	<b>1102896</b>	<b>1185461</b>	<b>1243211</b>	<b>1291456</b>	<b>1325776</b>	<b>1349205</b>	<b>1349205</b>	<b>1349205</b>
Benefit increase	78408		78408	78408	78408	78408	78408	78408	78408	78408	78408
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>78408</b>		<b>78408</b>		<b>78408</b>	<b>78408</b>		<b>78408</b>	<b>78408</b>		<b>78408</b>
<b>Total</b>		<b>958424</b>	<b>1075309</b>	<b>1181304</b>	<b>1263869</b>		<b>1369864</b>	<b>1404184</b>	<b>1427613</b>		<b>1427613</b>
Discounted total	825853		975337	1020455		1035523	1022214		966265	920252	876431
	10592830										

## ASSUMPTIONS AND DATA FOR BAND D-F

	1	2	3	4	5	6	7	Death			
Sick leave in service	4	0	0	0	0	36	40	80			
Sick leave retirement	4	0	0	0	0	40	80	0			
Productivity loss	0	0	0	0	0	0.1	0.1	0.1			
Productivity days	0	0	0	0	0	18.4	18	14			
Productivity days cost (in service)	0	0	0	0	0	15640	15300	11900			
Productivity days cost (retirement)	0	0	0	0	0	15640	15300	0			
Cost per day	850										
Number of working days	220	Discounted	Net								
Training	3000	1130.668449	1869.3316								
Recruitment	2000	753.7789657	1246.221								
Average outstanding debt	0										
Proportion not covered	0.1										
In service deaths	0.5										
Retirement deaths	0.5										
Premature years	20										
Compassionate leave family	0										
Compassionate leave cols	2										
Staff growth rate	0										
Benefit increase	0.003										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Total staff	75	75	75	75	75	75	75	75	75	75	75
Excess mortality	0.0128213	0.015415753	0.0177215	0.0196484	0.0210339	0.021958357	0.0224695	0.0226274	0.0227124	0.0226613	0.022687
No. close family	5										
Discount rate	0.05										

### Total Increased Costs Resulting from the Epidemic on Band D - F

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Deaths	2	2	3	3	3	4	4	4	4	4	4
Sick leave											
Days	330	390	430	468	528	568	568	568	568	568	568
Cost	280500	331500	365500	397800	448800	482800	482800	482800	482800	482800	482800
Compassionate leave											
cols	3400	3400	5100	5100	5100	6800	6800	6800	6800	6800	6800
Productivity	89420	104720	110670	126310	141610	147560	147560	147560	147560	147560	147560
Recruitment	623	623	935	935	935	1246	1246	1246	1246	1246	1246
Training	3739	3739	5608	5608	5608	7477	7477	7477	7477	7477	7477
<b>Sub total</b>	<b>377682</b>	<b>443982</b>	<b>487813</b>	<b>535753</b>	<b>602053</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>	<b>645884</b>
Benefit increase											
Compassionate leave											
family	0	0	0	0	0	0	0	0	0	0	0
Bad debt	0	0	0	0	0	0	0	0	0	0	0
<b>Sub total</b>	<b>42075</b>										
<b>Total</b>	<b>419757</b>	<b>486057</b>	<b>529888</b>	<b>577828</b>	<b>644128</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>	<b>687959</b>
Discounted total	419757	462911	480624	499149	529925	539034	513365	488919	465637	443464	422347
<b>Present value cost</b>	5265133										

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