THE RESPONSE OF THE INSURANCE INDUSTRY TO THE IMPACT OF HIV/AIDS ON EMPLOYEE RISK BENEFITS

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EXECUTIVE SUMMARY

The impact of HIV/AIDS on employee risk benefits represents a threat to the social security of the majority of South African employees. The economic dimension of the disease is manifested in prohibitive cost increases and declining value of employee risk benefits. The key challenge is to balance the need for adequate and affordable insurance for HIV positive employees, against the need to protect other employees from unfair risk distribution policies.

This paper evaluates existing literature and considers the response of the insurance industry by looking at theoretical principles, historical lessons, scientific evidence, and the changing social environment, from the perspectives of the different stakeholders.

The consolidation of this work suggests that sustainable responses are best achieved by primarily exploring cost containment measures rather than cost shifting exercises. Secondly, looking beyond the traditional role of business as profit making enterprises to consider the social role of the insurance industry, as well as the role of government in the provision of what is arguably a public good.

Declaration

I, Sinazo Funeka Mtimkulu declare that this project report is my own work. It is submitted in partial fulfilment of the requirements of the degree of Master of Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

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Sinazo Funeka Mtimkulu

…….day of September 2001

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Glossary

AIDS:	Acquired immune deficiency syndrome refers to a manifestation of HIV infection characterised by defined indicator illnesses, which occur usually when the CD4 count is less than 200.
Anti-selection:	The propensity for people to want to take out insurance contracts when they believe their risk is higher than the insurance company has allowed for in its premiums.
Bacteraemia:	The presence of bacteria in the blood.
Buboes:	Confluent masses of pus filled glands.
Ectoparasite:	A parasite that lives outside the body of the host.
Epidemic:	Refers to a disease attacking many people in a region at the same time.
HIV:	Human Immunodeficiency Virus, the virus believed to cause AIDS.
Mucocutaneous:	Pertaining to the mucous membrane and skin.
Pandemic:	Refers to a disease affecting or attacking the population of an extensive region, such as an entire country, continent, hemisphere or even the entire planet.

Paresis:	Slight or incomplete paralysis.
Pestilence:	Old term denoting epidemics caused by infectious diseases. Pestilences have been defined as something dangerous to morals or society, as having an evil effect or influence.
Price elasticity of demand:	The percentage change in the quantity demanded if the price of the product changes by one percent, *ceteris paribus*.
Proposer:	Individual or organisation seeking insurance.
Prostration:	Extreme exhaustion or powerlessness.
Term insurance:	Insurance that provides protection against death within a given period only.
Underwriting:	The process of assessing a proposal for insurance to decide on its acceptability and if so, on what terms
Viral load:	Amount of virus present in the blood.

1. INTRODUCTION

1.1 The Research Problem

The acquired immune deficiency syndrome (AIDS) was first described in a cluster of male homosexuals in Los Angeles, USA in 1981 (Whiteside & Sunter, 2000). Two decades later, the human immunodeficiency virus (HIV), the virus subsequently shown to be the cause of AIDS, and AIDS are wreaking havoc in societies and economies, especially in developing counties. South Africa in particular, has been amongst the hardest hit, with the invidious honour of having the largest number of people living with HIV in the world (Whiteside & Sunter, 2000). At present, the impact of HIV/AIDS is pervasive and poses challenges to many sectors of society.

Since its origins in pre-biblical times (Renn, 1998), insurance has occupied a key position in society in its evolving role as risk mitigator. As the key industry in the management of medical risk, the advent of HIV/AIDS presents a combination of new and old challenges. On one hand, it is the first new disease that underwriters had to face in living memory (Renn, 1998). On the other, medical history is fraught with pandemics, arguably more threatening than HIV/AIDS at the time.

Employee benefits are an important aspect of overall employee compensation and are inextricably linked to remuneration strategies

(Theunissen, 1997). Among the recognised direct costs of HIV/AIDS to business, is the increasing cost of employee benefits. The impact on risk benefits in particular, stands to have far reaching consequences. As the cost of treatment becomes increasingly prohibitive, HIV/AIDS poses a threat to the continued provision of these benefits in their current form (Moore, 1999).

In South Africa, the insurance industry was one of the first industries to respond to the HIV/AIDS epidemic and take steps to address it, not only at an industry level, but at a national level as well. In this regard, it must be commended for its foresight and leadership. In the process, industry players have come up with a range of innovative, if sometimes controversial solutions. In the meantime, the impact of HIV/AIDS is increasingly being felt by way of an escalation of the cost of employee risk benefits and HIV/AIDS related medical boarding. (Moore, 1999).

The paper seeks to evaluate the response of the insurance industry to the impact of HIV/AIDS on employee risk benefits and further, explore the legitimacy and efficacy of available options.

To overcome the HIV/AIDS epidemic, Whiteside & Sunter (2000) propose an approach made up of many small initiatives, pursued on as wide a front as possible. Partly in acknowledgement of this recommendation, this project is a small contribution to the growing body of work in this area.

In light of the aforegoing, the key objectives of this report will be to:

- Evaluate the historical and current perspectives of the insurance industry stakeholders in the HIV/AIDS environment;
- Appraise the role of traditional industry practices in addressing the HIV/AIDS problem;
- Consolidate the largely uncoordinated efforts of the various contributors to the employee risk benefits and HIV/AIDS challenge;
- Assess viable strategies to minimise the impact of HIV/AIDS on employee risk benefits.

1.2 Relevance of the Topic

In South Africa, the long-term insurance industry operates as a profit orientated private enterprise industry with no legal obligation to provide cover to any individual or group (Keir, 1993; Long-term insurance Act, 1998).

The current debate surrounding the impact of HIV/AIDS on risk benefits revolves around the issues of rising costs and the need for financial viability for funders, i.e. insurance companies, on one hand, and human rights, fairness and equity on the other.

This debate occurs against the background of increasing prohibition of unfair discrimination and attempts to redress past imbalances. In addition, there is a growing need for the private sector and individuals to take responsibility for certain aspects of public well-being, thereby reducing the state burden.

1.3 Report Format and Structure

The project will take the form of a literature review of publicly available literature. Firstly, propositions will be put forward based on the objectives identified above. The literature will be used to evaluate these propositions.

The history and underlying principles of the insurance industry will be explored for current relevance. The report will consider the history of the insurance industry and how it has responded to medical challenges in the past and how these responses can be used to shape the response to the challenge of HIV/AIDS.

Further, the history and nature of other infectious disease epidemics will be evaluated for similarities, which can be leveraged for learning. The current HIV/AIDS epidemic, its impact on employee risk benefits, and the present insurance business environment will be addressed to gain a

balanced view of responses. Current and other possible responses will be evaluated in the context of the above.

The sources of information will be:

- Published peer reviewed articles;
- Journal articles;
- Conference papers;
- Textbooks and books;
- Expert commentaries.

1.4 Key Assumptions and Limitations of Report

The mainstream of medical and biological science is united in their view of the causality and nature of HIV/AIDS. However, it is noted that a contrary view does exist (Presidential AIDS Advisory Panel Report, 2001). For the purposes of this paper, it is accepted that HIV causes AIDS.

Employee risk benefits are by definition group benefits. As such, they present different challenges and require specialised solutions, not necessarily applicable to individual insurance. It is recognised that HIV/AIDS has major implications for individual insurance, which will affect more people than those in formal employment. However, these will not be specifically addressed in this report.

While a wealth of information of information exists on general HIV/AIDS issues, it is largely focussed on more basic challenges that affect greater segments of society. Thus, the availability of relevant literature on specialised topics such as employee risk benefits is limited. Nevertheless, various organisations, individuals and corporations have been working behind the scenes to address this particular problem. Their contributions will form the basis of this paper.

1.5 Employee Benefit Schemes

Employee benefit schemes are usually collective in nature with employees compelled to join either an employer-sponsored arrangement or a scheme sponsored between trade unions and the employer. Members gain benefits through sharing a variety of risks, in the pooling of the investment, insurance and administrative processes (Rejda, 1995). Typically, they comprise risk benefits and retirement benefits. Risk benefits protect against the risk of death, disability and sickness while retirement benefits represent savings put aside for retirement. Risk benefits can be further divided into two, medical aid benefits and insured benefits.

1.5.1 Insured Benefits

The South African insurance industry can be divided into life assurance (alternatively, long term insurance), short-term insurance and the re-

insurance industry. Life assurance provides life and health risk cover to individuals or groups while short term insurance provides indemnity insurance for property and other liabilities. A re-insurance company shares the risk that an assurance company accepts if the amount that needs to be paid when a claim becomes due is more than the assurer can afford (IISA 1998). As such, the re-insurer's risk lies mainly in catastrophic and unusual incidents. For the purposes of this paper, insured risk benefits of relevance to the insurance industry include the following:

- Death benefits

These are paid out on the death of the member and include funeral benefits.

- Disability benefits

These are paid out in the event of a disabling injury or illness. The benefit may be for permanent or temporary disability or both. Payment may be in the form of a monthly income or a capital lump sum.

- Sickness benefits

These benefits are separate from medical aid benefits and are paid out in the event of defined dread diseases. Typical diseases covered include cancer, kidney failure, heart attack, stroke, paraplegia and major organ transplants.

Some retirement funds cater for ancillary benefits such as death and early retirement on the grounds of ill health or disability. When the death benefit is part of the retirement fund, the actual benefit is usually based on salary and period of service and is offset against the amount that would have been paid on retirement. Early retirement benefits are extra benefits bought separately from an insurer. In the rare instances where these are part of the retirement fund, the risk is self-insured. Therefore, the role of life assurer in retirement funds is that of investment manager and/or administrator, rather than assurer (IISA, 1998). Hence, retirement funds are not included for consideration in this paper.

1.5.2 Medical Aid Benefits

Medical aid schemes are “non-profit trusts” established in terms of the Medical Schemes Act to provide ongoing medical cover for members (Medical Schemes Act, 1998). Despite this, an extensive for-profit commercial market for health care exists with a substantial influence on the way in which health care is delivered, paid for, and funded. This is partly because suppliers into the market, i.e. service providers and administrators generally operate on a for profit basis.

Insurance companies have become important players in the market, in certain instances directly or indirectly controlling administrators, hospital

groups or pharmaceutical benefit companies (Vertical Integration and Horizontal collusion in Managed Healthcare, 1999).

In terms of employee risk benefits, the relevant sectors are the life assurance industry, the medical aid industry and to a lesser extent the re-insurance industry. For the purposes of this paper, the term insurance industry should be interpreted to encompass these industries.

The terms assurance and insurance both relate to a risk transfer arrangement where the responsibility for meeting losses passes from one party to another and are used interchangeably in this report.

2. PROPOSITION

HIV/AIDS is a disease with economic, developmental and social dimensions. Therefore, responses of the insurance industry to the impact of HIV/AIDS on employee risk benefits are best evaluated across a range of criteria including:

- Social justice;
- Fairness;
- Financial viability;
- Benefit to the individual.

The project will look at currently available literature to substantiate this proposition. Possible options will be identified and these criteria used to evaluate the options.

3. BACKGROUND

3.1 History and Basis of Insurance

The basic need for insurance stems from risk and uncertainty. These risks have existed from the earliest times (Renn, 1998), and the traditional method of dealing with the poverty that resulted was to relieve it by charitable donations from those who were more fortunate.

This was never very satisfactory, however, both because the protection provided was often inadequate and because of the stigma sometimes attached to the receipt of charity. The natural progression therefore was to look for some means whereby the necessary relief could be provided as a right at an adequate level, out of funds earmarked for that purpose, and hence the insurance principle was born (Renn, 1998).

While rudimentary forms of insurance have been identified from early Hebrew writings of 18th century BC (Renn, 1998), the origins of modern insurance can be traced more directly to the protection sought by medieval merchants when consigning cargoes of goods. Gerald Malynes, a merchant writing in 1620 describes the foundations of modern insurance system as we know it today (Renn, 1998). He explains how the premium for marine insurance differed according to the situation of the place, whether it was a time of war or peace, and what dangers there were

thought to be from “pirates, men of war, rocks and inaccessible places, seasons of the year and so on” (Renn, 1998:13).

It was important when determining the premium for a particular voyage to know the full details, including “age and goodness of the ship, whether she was sailing on her own or in company with other ships, the extent to which the ship was armed, the nature of the goods to be insured and whereabouts in the vessel they were to be carried” (Renn, 1998:13). With time, these crude methods of assessing risk have evolved to more objective and refined methods.

The earliest life policy known was issued in 1583 (Renn, 1998). According Malynes, most of these policies were best underwritten by having acquaintance of the persons whose lives were to be insured, so as to judge “whether aged or young, of good qualities and diet, of disposition gentle or quarrelsome, a traveller or a dweller” (Renn, 1998:14).

John Gaunt’s work with the “Bills of Mortality” in 1662, *Natural and Political Observations Made Upon the Bills of Mortality*, represented a major breakthrough, paving the way for mortality tables (Renn, 1998). He produced an extensive table in which he analysed the deaths over a 20 year period according to the recorded cause of death.

Another pioneering effort came from Corbyn Morris in 1747 who published *An Essay Towards Illustrating the Science of Insurance.* In it, he demonstrates by using simple probability theory and the binomial theorem, how an insurer decreases his “probability of ruin” as he spreads his available risk between more and more policies (Renn, 1998).

In the seventeenth century, friendly societies developed as a means for wage earners to insure each other against loss of earnings from sickness or old age (Renn, 1998). The insurance benefits were typically sick pay and a funeral grant. These societies flourished in the second half of the nineteenth century and the first half of the twentieth century. In many societies mutual insurance was only part of the reason for joining, the friendly and fraternal aspects being just as important.

Insurance companies have offered sickness benefits since the 1880’s (Renn, 1998), but it is only since 1946 that life assurers have become really involved in such business through the offering of long term disability insurance.

Insurance regulation began in the mid-1800s (Renn, 1998). Several insurance companies became insolvent following price competitions and rates that were set too low. In these instances, consumers were the hardest hit when their insurance company could not pay claims. This led

to the establishment of state regulatory bodies to oversee the financial affairs of insurance companies.

With increasing industrialisation, families became more dependent on workers' wages as the main source of income for the household. Employer sponsored group insurance grew out of the need to protect families against a potential loss of these wages (Bucci, 1991). Union demands through collective bargaining and favourable tax treatment were important forces in encouraging the development of these plans (Black, 1990).

Following the United States participation in World War 1, the US insurance industry collaborated with the government to provide life and disability insurance for officers enlisted in the army and navy (Panko, 2000). While the government was responsible for administrative expenses and underwriting the risk, the industry contributed significantly by keeping rates low and providing professional expertise.

Rates were offered based on mortality expected under normal conditions. To ensure that everyone was insured, cover was provided without underwriting and could be convertible to any form of life insurance after the cessation of war, again without underwriting. The August 1918 edition of *Best's Life Insurance News* commented that the insurance industry "rendered a great and generous voluntary service….no service rendered

during the war by any private interest was of greater interest and value" (Panko, 2000:31)

Through the years, the industry has had to adapt in response to social changes, industrial changes, financial booms and busts, epidemics and other natural disasters. Other innovations in response to new needs include managed health care, new types of cover such as dread disease cover, investment strategies that increased profitability, as well as new operating methods.

AIDS was the first new disease that life underwriters and actuaries had to face in living memory (Renn, 1998). The challenge was initially how to measure the possible incidence of the disease and remains how to counter the effect on risk benefits.

3.2 Risk Benefits Today

For objective evaluation of the options available to the insurance industry in response to the HIV/AIDS challenge, it is important to have an understanding of the environment within which the industry operates as well as the specific dynamics within the industry. In this regard, this section will consider the relevant influences in the business environment as well as analyse the South African insurance industry.

3.2.1 Environmental Analysis

The environment of business for South African companies has changed substantially since 1994. In addition to industry specific issues, industries have to contend with national, regional and international influences and changes. Table 1 represents a summary of these changes, which have varying impact on different industries.

Table 1: Trends in the Business Environment

	Pre-1994	**Post 1994**
Political	- Apartheid Restrictions - Monopoly Power - Regulation	- Freedom - Buyer Power - Deregulation
Economic	- Intervention - Demand Management	- Liberalisation - Supply-side Policies
Social	- Labour Immobility and Job Reservation	- Labour Mobility - Affirmative Action
Technological	- Process Innovations	- Telecommunications

(Source – Entrepreneurship Lecture Notes 2000, Prof F. Ahwireng-Obeng, Wits Business School)

- Political

The new political dispensation has brought new found power to consumers. Deregulation has meant that markets have generally become more competitive, providing consumers with wider choices. As a result, the new business imperatives are speed, a focus on customer needs and relationship management (Theunissen, 1997).

- Economic

With the opening up of trade barriers, South African insurers are seeking to achieve global competitiveness in the international insurance markets and are expanding both overseas and in Africa. While the South African market is still the major market for these companies, it will become increasingly less significant.

- Social

The social transformation in South Africa has essentially been one of increased democracy in all areas of social life (Theunissen, 1997). Participatory decision making, collective bargaining, prohibition of unfair discrimination, and the requirement for equity are some of the key features of the new social environment.

Further, increased consumer awareness and activism have led to added environmental, social and ethical responsibilities on the part of business enterprises. In the insurance context, this has led to increased access by

employees to employee benefits as well as a demand for greater flexibility, equity, transparency and value for money.

- Technology

Advances in technology have improved the administrative complexities of mass customisation of benefits, eroding somewhat the advantages of group benefits (Theunissen, 1997).

Ease of access to information ensures that customers are able to compare product offerings, and can easily switch to more competitive products if they believe they can get better value, given their risk profiles and specific needs.

3.2.2 Industry Analysis

For an analysis of the insurance industry, Porter's Five Forces model will be used (Porter, 1979).

- Threat of New Entrants

The recent tide of mergers and acquisitions, and the domination of the industry by a few big players (KPMG, 1999) suggest that significant economies of scale are required for success in the insurance industry. Substantial capital is required to establish a national presence, acquire administration technology and human resources, as well as for the

required unencumbered financial outlay representing proof of ability to meet potential liabilities.

Strict industry regulations govern the formation, registration, administration and solvency of insurance companies (KPMG, 1999). The sale of insurance products requires a network of intermediaries who are closer to the customer base. This network often takes long to establish as it involves intangible issues like trust and reliability. Moreover, existing companies such as Old Mutual, Sanlam and Liberty Life enjoy high brand recognition and strong loyalty base.

These factors all combine to pose significantly high barriers to entry into the insurance industry. However, for foreign companies wishing to establish subsidiaries in South Africa, these barriers are not insurmountable. As such, in the recent past, new entrants into the market have come mainly from foreign companies. The current wave of consolidation activity is in part to develop capacity to compete with these global giants. Consolidation in the industry means that these large dominant players can effectively dictate pricing, profitability levels and service levels (Theunissen, 1997)

- Bargaining Power of Suppliers

The suppliers to the insurance industry in terms of employee benefits, could be regarded as the professional staff who provide the most

strategically significant input into the insurance business, i.e. actuaries. They are responsible for risk analysis and financial modelling in designing and pricing contracts, and monitoring the financial viability of the funds to provide the promised benefit (Renn, 1998).

Actuaries are few in number and are amongst the most highly paid professionals in South Africa (ASSA, 2001). While they are a profession distinct from insurers, they can also be insurers. At the same time, the actuary's work is not limited to the insurance industry, as various other professional options exist. Thus, they represent very powerful suppliers to the insurance industry.

The intermediaries who market insurance products are generally independent brokers. As a group they are powerful to the extent that as the main channel of distribution, they can negotiate high commissions for themselves, further increasing the cost to the consumer. Advances in technology are threatening the power of these intermediaries as direct sales via the Internet increase.

- Bargaining Power of Customers

The insurance contract is a contract of utmost good faith. This means that both contracting parties have a duty to disclose any material information, which could influence the nature of the contract (Reinecke & van der Merwe 1989). The terms and conditions of policies and the rates of

premiums generally fall outside the scope of legislation except where consumer protection and equity considerations prohibit terms considered to be unfairly discriminatory (Long-term insurance Act, 1998). The insurer lays down the terms of the contract, while the employees as a group are limited to choosing a set of benefits amongst a proposed range.

Employee groups may opt to self insure the risk of their funds (IISA, 1997). However, lack of administration expertise and the risk associated with self-insurance have not made this a popular choice. Employee groups therefore, are not a competitive threat to the insurance industry.

Currently, for the long-term insurance industry, group business including pension funds, represents 40% of premium income and only 31% of total long-term insurance industry income (Appendix 1). In addition, on a premium vs income basis, group benefits are becoming increasingly less profitable. For every Rand of premium received for group benefits, R1.25 is paid out as benefits, compared to 82c benefits paid out for every Rand premium in individual business (Appendix 1). At present, this is sustainable because of differences in timing between premium income and benefit payout, which allows for investment growth of the income. Twenty years ago, for each R1 paid out in benefits, the insurance industry collected R2.90 in premiums (Basson, 2001).

With the new industry trend of diversification into the financial services, the proportion of revenue from the core life business stands to decline further. As group risk benefits become less significant to the insurance industry, so too will the bargaining power of such groups.

Overall, employee group benefits are not a crucial source of income for the insurance industry. Moreover, there is no threat of backward integration by the industry's employee benefits customers by way of self insurance. Hence, employee groups have very little bargaining power outside of legislated rights.

- Substitute Products

Insurance is only one way of protecting against risk. With a few exceptions, insurance need not be purchased, people can forgo it if it becomes too expensive (Abraham, 1985). Instead of buying insurance, individuals can self insure by investing their savings in other contractual saving schemes such as unit trusts, to serve as a cushion in the event of loss or self protect by spending more on loss prevention (Abraham S.; 1985).

Economic principles dictate that the price elasticity of demand of a particular product determines what will happen to demand in response to changes in price. Determinants of the price elasticity of demand are summarised below (Mohr, Lewis & associates, 2000):

- Substitution possibilities: the greater the availability of substitutes, the greater the price elasticity of demand;
- The degree of complementarity of the product: in the case of highly complementary products e.g. a car and car tyres, the price elasticity of demand tends to be low;
- The type of want satisfied by the product: the price elasticity of demand for necessities like basic foodstuffs tends to be lower than that of luxury goods;
- The time period under consideration: demand tends to be more price elastic in the long run than in the short run;
- The proportion of income spent on products: the greater the proportion of income spent, the greater the price elasticity of demand will be.

Risk benefits are long term by nature and contributions represent a significant portion of employee income. In addition, employees regard them as grudge purchases, luxuries in the face of more pressing needs. There are no obvious complementary products and in most instances, substitutes are available, particularly for those in higher income brackets. These factors combine to make the demand for insurance products elastic, i.e. greater than one. As such, substantial price increases in the price of insurance are likely to lead to proportionally reduced demand (Mohr, Lewis & associates, 2000) where individual risk is perceived to be low.

Currently, the long-term insurance market is under pressure from competing investment products (KPMG, 1999). For the insurance industry however this is not a serious threat in the long term. Having recognised the threat posed by these substitutes, insurance companies are making inroads into these markets, the ultimate being the formation of bancassurance companies.

- Rivalry

At the end of 1999, there were 66 companies engaged in long term insurance, up from 56 at the end of 1998. In the past 20 years the insurance industry has grown from a R2.5 billion to a R125 billion industry (Basson, 2001). Until 1993, premium income doubled roughly every three years. Growth has since slowed down from these high levels, but the industry remains highly competitive. Most of the long-term insurers are members of the Life Offices' Association, a representative body which aims to be a self regulatory body for the industry.

Given the intense competition within the industry, individual companies are unlikely to adopt inefficient strategies that would compromise their competitive advantage. If measures addressing social problems that affect the industry are at the expense of financial efficiency, those measures will have to be adopted by the entire industry.

3.3 Infectious Disease Epidemics – A Historical Perspective

3.3.1 Introduction

AIDS has brought to the fore the enormous social, political and economic implications that a new disease can have on society. The disease has been described as a metaphor for modern humanity's worst nightmare (Cameron 1991). However, a look at the history of medical development reveals a litany of pestilences, epidemics, and pandemics arguably more devastating than the current HIV/AIDS pandemic.

Epidemics have been a frequently repeated feature of human history from the earliest recorded Plague of Athens in 430BC up to the present day. They affect all continents and cultures and as such lend themselves to comparative analysis (Ranger & Slack, 1992).

The list of major epidemics through time is extensive. The lessons to be garnered from the fascinating and sometimes shocking history of infectious diseases call for a project of their own. This discussion will focus on only four of the more widely chronicled epidemics in history, i.e. the plague, cholera, leprosy and syphilis. These have been specifically chosen for their distinctiveness in terms of the way in which they were interpreted and constructed, as well as their richness of context. While

these will be used to provide a background to epidemics, reference will be made to other notable epidemics.

Much like HIV/AIDS, the diseases discussed are transmitted from person to person; at the time there was no known cure or vaccine; young healthy adults were affected at least as much as other age groups; and in general, they disproportionately affected the poorer members of society (Ranger & Slack, 1992).

- The Plague (Black Death)

The plague that swept across Europe between 1347 and 1349 was arguably the most devastating natural disasters ever to strike Europe. The disease broke out in 1346 in the trading city of Caffa in Crimea (McNeill 1977), and spread by ship throughout the Mediterranean to North and Western Europe.

Plague is an acute infectious illness of human beings, wild rodents and their ectoparasites (Braunwald, Isselbacher, Petersdorf, Wilson, Martin, & Fauci, 1987). Human plague follows bites by rodent fleas, but following circulatory spread to the lungs, can subsequently spread from person to person via inhaled droplets. In addition to painful buboes, other symptoms include fever, headache, prostration, vascular coagulation and abdominal distress (pain, anorexia, nausea, vomiting and diarrhoea). The disease

has a fulminant course and is universally fatal if untreated following circulatory spread (Braunwald *et al* 1987).

While the impact may have been greater on the poor, the plague did not respect social boundaries, the rich were just as likely to be infected and die as the poor. Basing projections on the British Isles mortality rates, it is estimated that the Black Death claimed the lives of at least one third of the European population between 1346 and 1350 (McNeill, 1977).

- Cholera

Cholera represents a more modern epidemic, having reared its head in the nineteenth century. For a long time, the disease had been endemic in Bengal, causing occasional epidemics in other parts of India and adjacent regions. Following a particularly severe outbreak in Culcutta in 1830, the disease spread overland and more significantly, by sea, to neighbouring regions in Asia, south along the east coast of Africa, through the Persian Gulf to the Baltic by 1831, and from Ireland, to Canada, into the United states in 1832 and Mexico in 1833 (McNeill, 1977).

In most cholera epidemics the disease is waterborne, but contamination of food by infected faeces contributes to its spread. Patients present abruptly with profuse, rice-water diarrhoea and vomiting, leading to rapid depletion of body fluids, dehydration and death (Braunwald et al 1987).

While not as contagious as the plague, cholera killed rapidly and dramatically. The period between the onset of symptoms and death could be as short as 12 hours. Half of all who contracted the disease during the 1830 to 1833 epidemics died (Ranger & Slack, 1992). During the nineteenth century, five cholera epidemics claimed the lives of an estimated 130 000 Britons, while during the same century and the first quarter of the next, India lost more than 25 million people to the disease (Watts, 1999).

Of specific note, cholera affected young adults more than children and the aged, and a disproportionate number of victims were poor (Ranger & Slack, 1992; Watts, 1999). Poverty increased the risk of infection, and once infected, increased the risk of dying. The rich could flee from outbreaks with relative ease, their occupations did not predispose them to infection, and their lifestyle made it easier to maintain strict standards of hygiene.

- Leprosy

Strictly speaking, leprosy is not recognised as an epidemic. Its low rate of contagion, long incubation period of six months to 40 years, as well as its propensity for morbidity rather than mortality, put it in a different class to the other diseases discussed here. Notwithstanding, leprosy represents a good example of a chronic disease whose incidence declined

substantially, despite a lack of significant scientific medical input. (Braunwald *et al* 1987; Watts, 1999).

The incidence of leprosy, which had been the main scourge in Europe before 1347, fell notably with the emergence of the Black Death (McNeill, 1977). The existence of other factors, which may have mediated the spread of the disease (McNeill, 1977; Watts, 1999), represent lessons in the interaction of diseases with their host, other diseases and the greater ecosystem.

Originating at least as far back as sixth century AD in India (McNeill, 1977), leprosy has been one of the most stigmatised infections in history. Its hideous and destructive mucocutaneous manifestations are described widely. While direct human-to-human transmission is believed to be responsible for most cases, the exact mode of transmission remains a point of conjecture (Braunwald *et al* 1987).

- Syphilis

The first documented description of syphilis was recorded at the end of the fifteenth century when a pandemic known as the great pox spread through Europe and Asia (Braunwald *et al* 1987). It flourished between 1493 and 1935 amidst the repression and shame of its venereal transmission and disfiguring symptoms. In the process the disease evolved from the rapidly lethal, multiple disease syndrome of the first epidemic, to a less

aggressive form that prevails to date (McNeill, 1977; Ranger & Slack, 1992; Watts, 1999).

Like AIDS, syphilis is sexually transmitted and can be transmitted to the unborn child during pregnancy, resulting in abortion, still birth, prematurity, neonatal death or non-fatal congenital syphilis in the infant (Braunwald *et al* 1987). Sexually acquired syphilis has an incubation period of about three weeks, followed by a primary lymphatic stage, a secondary bacteraemic stage, a latent period of up to thirty years, and finally, a tertiary stage, which in the pre-antibiotic period led to death in one third of cases. Symptoms are numerous, involving multiple organs, and vary according to the stage. They include skin lesions, immunodeficiency, paresis and disfiguring skeletal lesions.

In the years before World War 1, the role of condoms in preventing the spread of syphilis was limited mainly by what appears to have been prudent financial principles. For rubber companies, the profits from producing and marketing condoms, was not worth the effort of educating the public and medical fraternity (Watts, 1999).

Probably more than any of the other epidemics, the close parallels between syphilis and AIDS represent a fertile ground for lessons from the responses of society to a new contagious venereal disease.

3.3.2 The Responses

- Society Responses

Epidemics have elicited different responses depending on prevailing social and political factors. However, the underlying themes are generally similar, irrespective of historical or geographic contexts. To a large extent, these responses have been shaped by ignorance, social prejudice, fear, and less often, pity for the victims (Ranger & Slack, 1992).

The most consistent reaction to the external threat posed by infectious epidemics is profound shock. Depending on the context, this shock either galvanised communities into action or resulted in apathy and an attitude of acceptance.

On the religious front, the Christian dualism of belief in disease being both punishment for sins and a natural phenomenon, is attributed to having urged them to action (Ranger & Slack, 1992). In contrast, some authors have noted that Islamic belief was more fatalistic. Believing that the plague was Allah's will, they simply continued as if nothing had happened (McNeill, 1977; Ranger & Slack, 1992; Watts, 1999). Plague was a martyrdom, which Moslems should not resist. Turkish fatalism resulted in heavier losses compared to their Christian neighbours (MCNeill, 1977) and severely disadvantaged the Ottoman Empire (Watts, 1999) because

of failure to adopt control measures such as quarantine and sanitary measures.

The chief determinant of whether concerted action was taken against a particular epidemic appears to have depended on whom the disease affected. Diseases that did not respect social class or hierarchy received the most attention. In Europe, what finally tipped the balance in favour of intervention and eventually the total eradication of smallpox was just this realisation (Watts, 1999).

Control measures mainly involved, invasive and often imprecise methods of carrier identification, avoidance or separation from the general community, compulsory burial in special graves, destruction of their personal possessions and preventative sanitation (McNeill, 1977; Ranger & Slack, 1992; Watts, 1999; Allen, 2000). These measures were common to all these epidemics. It could be said that the sick became the enemy, often accused of being responsible for their own illness.

Leper laws ensured that lepers were not only isolated from their families, but sometimes also lost their properties, livelihood, and access to spiritual worship (Allen, 2000). Panic-stricken towns barred their gates to syphilitics, and hospitals refused them admission (Allen, 2000). In medieval Europe, relatives abandoned their sick to plague “hospitals”, from which very few emerged. Military cordons, control of human

movement, quarantines and other policing methods were a prominent feature of the cholera epidemic, from India to Europe (Ranger & Slack, 1992).

Panic manifested by riots and social upheaval, were often reactions to the strict controls and policing regulations imposed by apparently insensitive and uncaring authorities. Incidents were higher where the merits of the measures were poorly communicated and therefore not understood. At the same time, panic also manifested itself in the flight of thousands from cities in order to avoid infection, as in the cholera epidemic (Ranger & Slack, 1992).

Even when some of these measures were abandoned or qualified, in the early 19th century, that was arguably more the result of fear of public disturbance and pressure from mercantile or trading interests, than an awareness that they were less effective against diseases like cholera than they had been against the plague (Ranger & Slack, 1992).

In the absence of credible explanations from medical science or any other prevailing science, art or belief, scapegoats were identified, usually from the ranks of minorities, foreigners, inferiors and other peripheral groups. In Europe, Jews were accused of causing the Black Death epidemic by poisoning Christian wells. Thousands were subsequently burnt alive across Europe (Ranger & Slack, 1992; Watts, 1999). Other marginal

groups were subjected to similar attitudes throughout the world in all these epidemics. In turn, the marginalized believed epidemics were the result of plots by external enemies, governors or elites to poison the poor (Ranger & Slack, 1992; Watts, 1999). In the colonised lands of Africa, Asia and America, the dynamics of blame were similar.

For a variety of reasons, disillusioned communities rejected religion and the teachings of the established church fell into disrepute. Before the advent of modern medicine in the late nineteenth century (Watts, 1999), the role of doctors was less scientific and largely limited to preventative rather than curative medicine. In the face of infectious epidemics they were helpless, as they could not actually cure any illness. The doctors' function was to give an impression of caring (Watts, 1999) and reliving others of the responsibility of what to do (McNeill, 1977).

With a discredited religious sector and a helpless medical fraternity, it was up to secular civic administration to take up the cudgels against the diseases. This "corporate activism" was characterised by power play, emulation and rivalry. In medieval Italy, small states rivalled one another to excel their neighbours in their care for the welfare of their citizens in response to the plague (Ranger & Slack, 1992). The same phenomenon was seen later throughout Europe. With time territorial governments began to coordinate control measures (Watts, 1999).

In Italy, the cost of financing control measures against the plague, subsistence for those whose livelihoods had been destroyed, and medical services was paid for by taxes exacted from the communities (Watts, 1999). In England, the poor law Amendment Act of 1834 left the resulting unemployed largely to the generosity of property-holding rate payers (Watts, 1999).

In sum, historical accounts of the response to epidemic disease generally began with the prominence of religion, popular folklore and tradition as a source of solutions. As a result of the ensuing crisis of confidence in expert opinion, rejection of old laws, customs and standards of behaviour followed.

This was accompanied by a revival of latent social tensions, rumour susceptibility and corporate activism. Finally, social pressures and reality triumphed.

In almost all epidemics, intellectual justification of social responses stands out as a common theme (Ranger & Slack, 1992; Watts, 1999). The most productive of all society responses appear to be associated with epidemics which threatened the elite, as was the case with plague in Europe and cholera in the 19th century.

- The Insurance Industry Response

Up until the late sixteenth and seventeenth centuries, growth in the life assurance industry was very slow. The sale of life policies was mainly limited to term assurances on business partners and merchants' factors (Cockerell & Green, 1976). This was due partly to failure to apply existing knowledge to the technical problems of underwriting and the poor profitability of the business at the time.

By late eighteenth century, policies for widows and survivors were available from subscription societies. These societies limited the size of the membership. In Britain, the *Amicable Society for Perpetual Assurance Office* established in 1706, the most permanent and well documented of the early life insurance schemes, restricted membership to 2000 (Cockerell & Green, 1976). Subscriptions were divided among the estates of members who had died in each year.

Before the advent of employee group policies in the mid nineteenth century, insurance was only available to the middle and higher classes of society. Policyholders were mainly from the landed, professional, and commercial sections of the community. It is estimated that in 1845, less than 100 000 people of Britain's population of 25 million were insured with life offices (Cockerell & Green, 1976).

Before 1850, a proposer usually had had to appear before a committee of directors of the life office to determine whether he was healthy and of good character (Renn, 1998). No medical examination was conducted and the underwriting decision was made by the directors based on the proposer's general appearance.

Extra premiums were required "from small pox victims and proposals from other unhealthy lives were normally refused" (Cockerell & Green, 1976:44). In addition to health risks, overseas travel and overseas residence was treated as a special risk factor, presumably in acknowledgement of the risks associated with travel as well as the risk of unknown foreign infections. By 1900, this had become more scientific with the involvement of doctors, the introduction of urine testing and blood pressure readings, and actuaries playing an increasing role.

The insurance industry was thus not heavily impacted by the morbidity and mortality resulting from epidemics. While there is evidence of many life insurance companies closing down or being taken over by other companies, particularly in the nineteenth century, this was reportedly due to the business failure of small speculative companies (Cockerell & Green, 1976), rather than the effect of unprecedented claims. However, the lessons from the responses of society in general provide valuable lessons for today's society and the insurance industry in particular on issues of

principle. These lessons will be highlighted later in the discussion section of the paper.

3.3.3 Outcome of Epidemics

The reduced populations and shortened productive life spans left behind in the wake of epidemics create enormous demographic and economic challenges. The epidemics of the late 14th century reduced the average European life expectancy from between 35 and 40 years to below 20 years (Herlihy, 1997). In addition, the demographics of dependents and earners were altered as the diseases affected mainly the young economically active members of society.

High mortalities also cut short the careers of craftsmen and other professionals. In an effort to maintain these skills and professions, post-plague Europe saw the proliferation of universities and opening of occupations to members of society who had previously been denied access (Herlihy, 1997).

The effect of the fall in production, was general inflation, particularly that of commodities. Further, the reduced number of agricultural renters and workers reduced the cost of agricultural rents and increased the bargaining power of labour, such that the real cost of labour rose

dramatically to between two and three times the levels in the thirteenth century (Herlihy, 1997).

The imbalances in the cost of factors of production, favoured a policy of factor substitution. In particular, cheap land and capital were widely substituted for expensive labour (Herlihy, 1997). Out of this, evolved technological innovation, particularly in the development labour saving devices and machinery.

Thus, the devastation caused by the plague in Europe also paved the way for technical innovation, creativity and a better more diversified economy. While this phenomenon has not been documented to the same extent elsewhere, it nevertheless presents a compelling example of the long-term positive economic consequences of epidemics.

3.3.4 Summary

Epidemics such as those discussed above posed new problems because the aetiology and long-term prognosis were poorly understood (McNeill, 1977); hence their risk could not be modelled. The mixed social response was such that charity and sometimes taxation took care of the losses arising out of epidemics.

HIV/AIDS on the other hand is currently reasonably well understood and the risk modelled with a passable degree of accuracy. This provides an opportunity for the insurance industry to have an informed role as part of the societal response to the epidemic. The next section reviews the current HIV/AIDS epidemic for an understanding of the factors that influence this role.

3.4 The HIV/AIDS Pandemic

For an understanding of the impact of HIV/AIDS on employee medical benefits, it is essential to have a working knowledge of the nature of the disease, the prevalence and the cost of the various treatment modalities available.

3.4.1 Overview

HIV/AIDS is a blood borne disease transmitted primarily through sexual intercourse, exposure to contaminated blood and other body fluids, and from mother to child during pregnancy, birth or breastfeeding. HIV is a retrovirus and thus can only replicate inside cells, reproducing itself using genetic material from the cells of its host. Affected cells are usually T-helper lymphocytes and to a lesser extent macrophages which have a surface molecule called cluster designation 4 (CD4) (Regensberg, 1999b).

These cells perform various tasks critical to the normal functioning of the immune system.

Having entered the body, the virus infects a large number of CD4 cells and replicates rapidly. Immediately after infection, there is a period during which the person is infected and infective, but does not have sufficient antibodies for the virus to be detectable through normal laboratory testing. This is called the window period and can range from six weeks to 15 months, with a mean of about three months. Antibody tests with increased sensitivity can be carried out if it is suspected that the patient is in the window period (Martin & Sim, 2000).

After the initial high rate of replication, the viral load, (amount of virus present in the blood) falls until it reaches a “set point” after about six months where it may remain for many years before rising again. During the primary stage of infection, the number of circulating CD4 cells falls by about 20-40% after which the count may rise again briefly, followed by a gradual fall over a period of years (Regensberg, 1999b). HIV is thus characterised by a gradual deterioration in immune function. As the number of CD4 cells decline, the infected person becomes progressively more symptomatic and vulnerable to the many conditions that define AIDS.

Since the advent of the epidemic, great strides have been made in the understanding and management of HIV/AIDS. Initially, very little could be done to help those infected with HIV, other than to treat opportunistic infections as they arose. Recent advances in medicine have resulted in the development of new anti-retroviral drug combinations, changing the outlook for many patients in terms of improved quality of life and overall survival (Geretti & Easterbrook, 2001).

Standard treatment for HIV infection is a regimen consisting of three drugs (Gulick, Hu, Fiscus, Fletcher, Haubrich, Cheng, Acosta, Lagakos, Swanstrom, Freimuth, Snyder, Mills, Fischl, Pettinelli, & Katzenstein, 2000). On this universally recommended regime, approximately 30% of patients fail to suppress their viral load below detectable levels and 40 - 60% experience viral load rebound after initial suppression (Geretti & Easterbrook, 2000). Incomplete suppression of viral replication during therapy promotes the emergence of resistant virus variants (Condra, Petropoulos, Ziermann, Schleif, Shivaprakash, & Emini, 2000). The characteristics of patients who do not respond positively to treatment remain unclear (Piketty, Weiss, Thomas, Mohamed, Belec, & Kazatchkine, 2001).

In addition to anti-retroviral therapy, prophylactic drugs may be given to prevent certain opportunistic infections. Treatment is also available to

treat many of these opportunistic infections should they occur (Regensberg, 1999b).

Tests used to assess severity and stage of infection, include the CD4 count and the viral load count. Full blown AIDS is characterised by a high viral load count and a low CD4 count. The CD4 count is a measure of the degree of immune suppression in HIV positive individuals. A normal individual has a CD4+ count of between 1000 and 1200 per mm^3 of blood, and most staging systems classify individuals as sick with AIDS when their CD4+ counts fall below 200 per mm^3 (Regensberg, 1999b).

While it has not been conclusively proven that HIV invariably leads to death, in South Africa the average life expectancy of an adult testing positive for HIV is seven years (ABSA Healthcare Consultants, 2000).

3.4.2 The Cost of Treatment

Because of the variations in symptoms and in opportunistic illnesses, the cost and number of healthcare episodes for an HIV infected person vary widely but averages have been estimated based on commonly occurring patterns in South Africa.

Katz 1999, looked at the impact of HIV/AIDS on medical scheme solvency and provides actuarially based estimates of the cost of treating HIV and

AIDS for medical schemes. HIV and AIDS are considered separately as they represent different disease stages and have different cost implications.

The overall cost of HIV treatment varied from R9 000.00 to R50 000.00 per annum. HIV treatment costs include all out of hospital costs associated with treating the virus itself i.e. anti-retroviral therapy, including prophylaxis for opportunistic infections. The variations arise from the different treatment regimes and tariffs used by different service providers. Currently recommended therapy would fall on the high side of this range.

The overall cost for treating AIDS in 1999 is presented in Table 2. AIDS treatment includes all in hospital costs associated with treating the opportunistic infections associated with full blown AIDS.

Table 2 - Cost of Treating AIDS in 1999

Category	Years prior to death	Inpatient	Outpatient	Total
HIGH	1	R 47,400	R 4,819	R 52,218
INTERMEDIATE	2 to 3	R 15,787	R 3,658	R 19,446
LOW	4+	R 0	R 9,100	R 9,100

(Source – Katz 1999)

Katz's impression of the AIDS costs is that they are an underestimate given their basis on studies on mine clinics and Baragwanath Hospital (Katz 1999).

It has been suggested that HIV/AIDS should be treated like any chronic illness and not subject to special treatment with respect to insurance and employee risk benefits. Indeed, HIV is now internationally recognised as a chronic manageable disease (Baraldi, 2000) and with currently available therapy, the disease course can be like that of other chronic illnesses such as hypertension (Cowlin, 1999).

Table 3 shows the difference in prevalence and cost per life per annum between HIV and three other common chronic conditions for a typical medical scheme in 1999 Rand terms. Prevalence represents that in medical schemes. The fourth column represents the total cost to the scheme divided by the number of medical scheme members

Table 3: Prevalence and Cost of HIV vs Other Chronic Diseases

Chronic Condition	Prevalence in 1999	Approximate Cost per chronic sufferer p.a. in 1999	Cost per medical scheme life per annum
HIV	5.0%	R 12,000	R600.00
Diabetes	0.6%	R 8,300	R 50.00
Asthma	0.3%	R 4,200	R 12.60
Hypertension	1.4%	R 520	R 7.30

Source: Katz, 1999

From this table, it is evident that the cost of treating HIV is significantly higher than the cost for other chronic conditions. Viewing this from a different angle, the overall cost of treating all chronic conditions is approximately a third to a quarter of the HIV cost (Katz, 1999). Projections are that HIV claims will add 40% and AIDS claims 22% to overall premium paid by year 2010 (Katz, 1999).

3.4.3 Prevalence

Most data on the South African HIV/AIDS epidemic are obtained from the Department of Health's annual survey of antenatal clinics. Every year in October anonymous samples are taken from routine blood specimens of women attending state funded antenatal clinics. The data are used as the basis for estimating the current and future size of the epidemic using projection models (Whiteside & Sunter, 2000).

The Metroploitan Doyle model is an actuarial model that was developed in 1988 to project the incidence of HIV/AIDS in South Africa. The model is widely accepted and the HIV epidemic has progressed more or less in line with its projections in the 1990's. According to the model, in 1999, 11% of the South African workforce was HIV positive and 0.6% ill with AIDS (Moore, 1999). The projection was that this would increase to 18% and 1.8% by year 2005 respectively. As at 2000 year end it is estimated that 4.6 million South Africans are HIV positive.

Appendix 2 is an overview of current HIV and AIDS statistics and provides some insight into the risk faced by insurers. Of note is that most HIV positive people are adults between the ages of 20 and 45, in the prime of their economically active life. The prevalence in the insured population has been considerably lower due to the prevalence among the employed being generally lower than among the unemployed. In the late 1990s, the prevalence of insured lives tested at the underwriting stage appears to have been between 2.5% and 3.0% (ASSA, 2001).

The validity of these projections has been questioned (Heywood & Rahiman, 2000), coming as they do from the insurance industry that may have vested interests in inflating the figures. HIV may be blamed for poor fund performance, which may be related to administrative inefficiencies. Stevens (2001) points out that these demographic projections are based on assumptions and not facts. Thus a margin for error exists.

The profile of high risk individuals in South Africa is black heterosexuals between the ages of 15 to 49 from lower socio-economic classes (Whiteside & Sunter, 2000).

4. THE IMPACT OF HIV/AIDS ON RISK BENEFITS

4.1 The Legislative Environment

The role of legislation is to maintain an environment in which insurers can operate profitably while ensuring that the profit motive does not threaten important public values (Scherzer, 1988). Hamblin (1991) in Canadian HIV/AIDS Legal Network (2001) discusses three main models through which law can be incorporated into HIV/AIDS strategies:

- The proscriptive model which penalises certain forms of conduct;
- The protective model that focuses on the need to uphold the rights and interests of people living with HIV/AIDS;
- A third model that seeks to use the law to promote the changes in values and patterns of social interaction that create vulnerability to the threat of HIV infection.

Hamblin argues that proscriptive laws are not appropriate if they seek to target mainly the conduct of people with HIV/AIDS. Protective laws in focusing on protecting people from discrimination, breaches of confidentiality, and other harmful and undesirable practices, may help enlist the cooperation and support of people at risk of HIV in prevention strategies. The third model addresses underlying social and economic factors that affect individuals in the HIV/AIDS context by promoting and reinforcing change. Hamblin concludes by urging the full exploitation of

the potential of the law to promote HIV strategies and where possible, change traditions and values that negatively affect people at risk of HIV infection. (Hamblin, 1991 in Canadian HIV/AIDS Legal Network, 2001).

Kirby (1991) in Canadian HIV/AIDS Legal Network, (2001) puts forward the following “ten commandments” for legal measures in the area of HIV/AIDS:

- Respect the cultural and legal diversity of every jurisdiction;
- Ensure that the guiding criterion is containment of the spread of the virus;
- Ensure that the law is based on sound scientific data;
- Review old laws on public health and reform them;
- Face up to making unpopular and unpalatable decisions;
- Respect for human rights of all persons;
- Resist simplistic solutions;
- Ensure that coercive measures are proportional to the needs for action
- Do not put too much faith in law: law plays only a minor part in the HIV/AIDS challenge;
- Acknowledge the paradox of AIDS law: the most effective laws are those that help with the confidence and attention of affected people and people at risk.

With this background, the relevant sections of each South African act that impacts on HIV/AIDS and employee risk benefits are summarised below. This regulatory framework provides the current legal guiding principles for insurance industry response options.

4.1.1 The Constitution of South Africa Act 108 of 1996

Section 9 of the Bill of Rights guarantees the right to equality and non-discrimination. Section 12 provides the right to have access to healthcare services. Sections 14, 23 and 32 guarantee the rights to privacy, fair labour practice, and access to information respectively. According to Section 36, these rights may be limited provided that the limitation is reasonable and justifiable.

4.1.2 The Employment Equity Act No. 55 of 1998

This act aims at eliminating unfair discrimination in employment and ensures the implementation of employment equity to redress the effects of discrimination. Section 6 explicitly prohibits unfair discrimination against an employee in any employment policy or practice on the grounds of HIV status among others. Section 7 prohibits medical testing of an employee unless legislation permits or it is justifiable in the light of medical facts, employment conditions, social policy, the fair distribution of employee

benefits or the inherent requirements of a job. Testing for HIV status is prohibited unless determined to be justifiable by the Labour Court.

4.1.3 Labour Relations Act No. 66 of 1995

Sections 27 to 39 provide for collective bargaining in establishing and administering employee benefit schemes. Through Workplace Forums, Sections 78 to 94 encourage information disclosure, consultation and joint decision making in all areas pertaining to employee benefits. The Code of Good Practice in Schedule 8 addresses the situation where an employee no longer has the capacity to perform their function. It outlines steps to be followed prior to dismissing the employee on the grounds of incapacity.

4.1.4 Basic Conditions of Employment Act No. 75 of 1997

The Act makes provisions for the regulation of basic conditions of employment such as working hours and leave. Section 22 states that every employee is entitled to six weeks paid leave within a 36 month cycle. Agreement may be reached to extend the sick leave at reduced pay.

4.1.5 The Medical Schemes Act No. 131 of 1998

The Minimum Benefits section prescribes the minimum level of benefits required by a scheme in order to have its rules approved by the Registrar of Medical Schemes (Section 29). This aims to prevent dumping by medical schemes on public hospitals where the rules of the scheme exclude the basic minimum requirement. Included in the minimum benefits provisions, is the requirement to cover AIDS, namely all opportunistic infections. This can be done in a public hospital where costs are lower. There is no requirement to cover anti-retroviral therapy or AIDS treatment where the CD4 count is below 100 if it is not the first admission to hospital.

The act provides for guaranteed acceptance of all applicants, which means that underwriting individual members who enter medical schemes is not allowed (Section 29). To prevent anti selection, 12 month pre-existing exclusion clauses may exist. The Community Rating Clause requires schemes to charge a fixed premium irrespective of age.

4.1.6 Long-term Insurance Act No. 52 of 1998

This act regulates registration, maintenance of financially sound arrangements, business practices and policies, and gives the registrar of long-term insurance powers to enforce these rules. The policyholder

protection rules aim to ensure fair treatment of consumers in accordance with sound insurance principles and practices.

4.1.7 Promotion of Equality and Prevention of Unfair Discrimination Act No.4 of 2000

This act prohibits unfair discrimination on various grounds including race, gender, sex and sexual orientation (Sections 6 to 13). It further provides guidelines as to what represents unfair discrimination (Sections 14 to 15). HIV/AIDS is included among other criteria to be considered for possible inclusion under prohibited grounds (Section 24).

4.2 The Insurance Industry Perspective

4.2.1 Insured Benefits

The insurance industry has often been in the firing line from AIDS activists as a result of some of the industry's responses to HIV/AIDS (Totaram, 1998). The industry asserts that it has a right to exclude risk from coverage or to limit the amount of risk it will cover as long as the exclusion or limitation is not contrary to statute. Because the insurance policy is a contract, they can include whatever terms they choose so long as they are legal (Swanson, 1993).

Implicit in the insurance principle of spreading risk is the unpredictability and randomness of insured events (Keir,1993). In addition, large numbers of insured are required and the insured risk must have a relatively small probability of occurring. However, the sound operations of a private insurance enterprise depend on the statistical predictability of claims.

When the probability of occurrence of an event becomes too high, claims increase and consequently the premiums increase. Where the risk of occurrence can be identified and ascribed to certain individuals, lower risk individuals will not be prepared to pay these higher premiums and may opt out of the insurance to invest their money in other vehicles. This leaves the remaining members who have above-average risk, paying even higher premiums as the risk is spread amongst fewer people who have a relatively higher probability of claiming (Keir, 1993; Abraham, 1985).

From an insurer perspective, equitable premiums mean that the price charged is proportional to the expectation of claiming. Through underwriting, risks are classified and the terms of acceptance effected accordingly such that different risk classes are charged premiums in proportion to the expected costs (Abraham, 1985). Currently used classification variables include age, sex, current health status, occupation and lifestyle.

Beyond a certain level of risk, even this increase in premiums becomes untenable. In practice, acceptance of extra mortality levels beyond six times normal, risks the financial viability of the system (Keir, 1993). The mortality expectation of a newly infected HIV person is at least 20 times (Keir, 1993) and up to 50 times (Visser, 1993) that of a normal 30 year old. In contrast, that of a smoker compared to a non smoker is two times normal, while a smoker with a history of myocardial infarction in the past two years is three times normal, and that of a quadriplegic around five times normal (Keir, 1993).

Like most consumer markets, the insurance industry argues that an important part of their responsibility lies with their existing customers (Keir, 1993). To this end, they need to ensure that their end of the contract can be honoured and the interests of existing policyholders are not compromised. The industry acknowledges that underwriting is discriminatory but necessary for the equitable payment of premiums (Keir, 1993). Therefore, they argue that HIV/AIDS should not be exempt from proven sound financial practices any more than other serious illnesses.

Visser 1993, notes that there are four strategies that health and life insurance companies can use to reduce HIV/AIDS related expenses:

- They can exclude HIV/AIDS as covered conditions;
- They can refuse to insure persons infected with HIV;

- They can refuse to insure high risk groups without regard to their health status;
- They can require tests for HIV antibodies as a condition of coverage and limit benefits.

Swanson (1993), draws on some experience from the USA and adds two more strategies to the ones put forward by Visser:

- Placing a cap on the amount of coverage that they will provide for HIV related treatments;
- Administering insurance plans in a discriminatory manner so as to delay or deny coverage.

All six of these strategies have been used to a greater or lesser degree in the South African insurance industry (Swanson, 1993). They will be evaluated later in the discussion section.

4.2.2 Medical Aid Benefits

In contrast to life insurance and disability benefits, legislation limits discrimination in medical aid schemes. Katz (1999) recommends options for containing costs and reducing the impact on medical scheme solvency within legal limits.

These are:

- Impose limits on HIV and AIDS claims within the minimum benefit requirements;
- Allow for future HIV and AIDS related claims in the overall level of the current pricing;
- Underwrite employee groups by prevalence risk;
- Reserving funds for future HIV/AIDS claims such that the claims experience over a specified period remains constant;
- Re-insurance to limit the variance on HIV and AIDS claims.

4.3 The Social Perspective

4.3.1 Combined Risk Benefits

In a 1997 study commissioned by the AIDS Legal Network to assess the attitudes of business to the AIDS epidemic and HIV positive employees, 77.6% of private sector employers believed that HIV testing was appropriate for employee fringe benefit considerations (Heywood, 1998).

For the majority of South African employees, employee benefits are the only form of social security that they and their families have (Heywood, 1996). The existing government social security system is inadequate and does not prevent people from falling into poverty. As such, the provision

of employee risk benefits in South Africa is not only a workplace and industry issue but a social issue as well.

Moultrie & Thomas (1996) note that certain types of insurance such as medical insurance are arguably “merit goods”, that is goods which society considers should be available in certain quantities to all irrespective of ability to pay. Further, they regard insurance, particularly that relating to life and disability risks, as a social good, a good the supply of which generates positive externalities, so that society has an interest in ensuring that the good is supplied as widely as possible.

Moultrie & Thomas (1996) question the appropriateness of the traditional legal model of pure contract, which is premised upon the assumption of equality of bargaining power, as well as being free from entering into the contract. The problems highlighted are that if the proposer does not wish to accept the insurer's terms, no bargaining is possible. If the proposer wants insurance, he has to agree to whatever conditions the insurer stipulates. Thus, the freedom of the proposer in the context of an insurance contract is limited to two choices, that is, to agree to the conditions offered, or do without insurance, while the insurer has the power to alter the terms of the policy.

The parties therefore do not enjoy the equality of bargaining power, which lies at the root of the pure contract model (Moultrie & Thomas, 1996). On the other hand, in insurance, the parties may differ in their initial level of information about the risk to be insured, typically with the proposer having superior information.

Social policies have led to the abandonment of the concept of pure contract in many spheres of social life (Moultrie & Thomas, 1996). An example of where the notion of pure contract has been long since qualified by other considerations is employment. Initially the worker had to accept a contract of employment on the terms offered by the employer, or remain unemployed. The employer, however, could choose who was employed as well as the criteria used to select employees. Even after the commencement of employment, the employer still had the upper hand in dealing with employees. This imbalance has however been reduced over time, mainly as a result of the formation of trade unions, who have contributed significantly to the new labour legislations (Moultrie & Thomas, 1996).

Moultrie & Thomas (1996) challenge why the insurance industry should be permitted to assert a right to pure contract, when in almost all other sectors of economic and social activity it has been rejected as being unfair and socially illegitimate because of the power it gives to the dominant contracting party.

Douglas (1998) notes that there is a fundamental tension between human rights law and insurance practice. Human rights law requires that personal characteristics be ignored, while the basis of insurance is classifying risk using probabilities based on innate personal characteristics.

Abraham (1985) identifies five features of insurance classification schemes, namely;

- Separation: the degree to which the insureds in different classes have different expected losses. The greater the separation the greater the statistical support for charging classes different premiums;
- Reliability: the classification should be susceptible to as little administrative error and fraud as possible;
- Incentive value: classes should be based on variables within the insured's control e.g. charging higher rates to smokers may encourage individual smokers to stop;
- Homogeneity: the more homogeneous the class membership, the stronger the argument for charging each member the same rate. The more varied the expected loss of members within a class the weaker the argument for classification;
- Admissibility: some variables with predictive power may be socially or morally inadmissible for use in constructing risk classes. Race is

cited as an example of a variable that is almost always inadmissible.

Wortham (1986) in Moultrie & Thomas (1996) recommends similar factors for assessing rating variables in order to decide how their use should be regulated. These include:

- Statistical power;
- Statistical size;
- Causality;
- Incentives for loss reduction;
- Controllability;
- Compatibility with social values;
- Availability of alternatives to insurance.

These factors proposed by the different authors can be grouped into two: efficiency factors (separation, reliability, incentive value, statistical power and statistical size) and fairness factors (homogeneity, admissibility, social values and availability of alternatives). No classification system can simultaneously maximise satisfaction in each of the criteria (Abraham, 1985). Indeed, the two groups of factors are often in conflict. Efficiency is often at the cost of fairness. For example, the social desirability of not

utilising morally inadmissible variables may make it worthwhile to sacrifice some degree of efficiency.

In an efficient classification system, i.e. one comprising of efficiency factors only, there is no cross subsidisation between risk classes and the system does not discourage insureds from allocating optimal resources to loss prevention. Moreover, the system does not strive to make its prices equal expected costs when improvement in accuracy is not worth the cost of achieving it (Abraham, 1985). Risk distributional fairness on the other hand pertains to individuals within the system and touches on more than economic considerations alone.

Moultrie & Thomas (1996) caution against the folly of businesses failing to respond timeously to changing social opinions. Looking at the experience in other markets which suggests that consumer perceptions on ethical issues can have a major impact on businesses, the paper cites examples of companies who suffered considerable financial losses because of consumer boycotts motivated by perceived social injustices perpetrated by the companies. This was despite the particular companies apparently sound financial judgement and scientific backing.

Actuaries need to recognise that underwriting is not always a scientific classification but one that rightfully often depends on intuition and

experience (Moultrie & Thomas, 1996). Even where the process involves pure statistical justification, the resulting decision regarding the particular underwriting process should take into account commercial and social factors. If the industry wants an increasing social role for private insurance and the associated opportunities for profit, it must accept that society will take a greater interest in the social legitimacy of risk classification procedures (Moultrie & Thomas, 1996).

4.4 The Individual Perspective

While insurance businesses operate as competitive private enterprises, insurance also serves an essential public function (Schezer, 1988). As a form of social security, employee benefits are a vital aspect of most employees' lives. Kramer (2001) in Stevens (2001) projects that when the risk of increased cost of employee risk benefits is passed on to employees, life, disability and medical benefits are likely to be reduced to half by 2005 and one third by 2010 when compared to 1999 figures. If benefits are to be maintained in their current form, then the cost is likely to double over the next five to ten years.

4.4.1 Medical Aid Benefits

Medical schemes are obliged to accept all employees onto an employer based medical scheme without underwriting (Medical Schemes Act No 131 of 1998). In addition to the cost of the benefits, for the HIV positive employee, the challenge remains the accessibility and adequacy of treatment. As discussed earlier, the schemes are not obliged to provide anti-retroviral therapy, or AIDS treatment at certain stages of illness.

4.4.2 Disability Benefits

When the infected employee becomes increasingly incapacitated and unable to work, they may be boarded on the grounds of ill health. Of special concern to the HIV positive employee are the following:

- Assessment of Disability

HIV/AIDS is characterised by cyclical episodes of immune deficiency resulting in illness which may be disabling. The outcome of each episode could be recovery to normal functioning, partial recovery or death. Currently used laboratory markers such as CD4 and viral load counts give an indication of a patient's status at a point in time and have limited predictive value.

- Type of Benefit

Temporary disability benefits allow the employee the opportunity to return to work should they recover from an AIDS episode. Permanently disabled employees are taken out of the system and replaced. Should they recover, the employer is not obliged to offer them employment.

- Structure of Benefit

To the insurer, disability income payment is preferable to capital lump sum payment in the AIDS scenario as the assumption is that the claimant does not have long to live. The duration of payment of disability income is reduced as the survival period between disability and death is reduced.

- Waiting Period

Most disability schemes have a waiting period ranging from three months to one year before an employee can be regarded as being disabled (IISA, 1997). For the AIDS claimant, this is often critical as he may die before the claim can be paid out.

The costs of maintaining HIV/AIDS individuals increase with disease progression (Ezzy, de Visser, & Bartos, 1999). In a study aimed at analysing risk factors for progression to AIDS and death in HIV positive individuals, lack of legal income was found to be a strong risk factor that was independent of CD4 count and viral load (Piketty, Castiel, Giral, Lhomme, Boubilley, Olievenstein, Lert, & Kazatchkine, 1999). In this

particular study, difference in access to healthcare was not an issue as the individuals were followed up in an outpatient facility that provided free consultations and medications, including laboratory investigations and anti-retroviral drugs.

Disability benefits represent a source of legal income, which needs to be provided timeously and in adequate amounts to improve the general outlook for disabled employees. However, employees need to be protected from the practice of utilising these benefits as a way of getting rid of sick employees, where alternatives could be found in the workplace. A socially supportive workplace will go a long way towards reducing the incidence of illness in the HIV positive employee (Sorovich, Brucker & Kimberly, 2000)

4.4.3 Life Insurance

For many employees, life insurance is about more than just peace of mind but also an indispensable instrument of finance (Visser, 1993). Cession of life policies is often required when taking out loans such as for housing or significant bank overdrafts. Being denied access to life insurance therefore does not merely affect what happens after death but the quality of life of the individual as well as that of his family.

Because of the protracted nature of HIV illness, there may be a long period where household resources are depleted giving rise to greater and more enduring hardship than other causes of death (Whiteside & Sunter, 2000). Life insurance maintains the financial security of people who depend upon a deceased person for support or fulfilment of mutual financial or business obligations. Where assets have been eroded from looking after a terminally ill person, surviving family members may be made whole to some extent through the proceeds of such insurance, reinforcing the stability of family units (Scherzer, 1988).

Employee risk benefits are therefore a crucial determinant in whether an HIV positive employee can maintain a reasonable quality of life and continue to contribute to society or whether they progress down the path of an otherwise fatal illness.

4.5 The Medical Perspective

Lack of knowledge about the management of HIV/AIDS among both general practitioners and specialists has been cited as one of the problems of the medical management of the disease (Regensberg, 1999a). In addition, the high cost of anti-retroviral drugs has led many practitioners to believe that the only available intervention is palliative care (Baraldi, 2000).

The reaction from healthcare providers to limits and exclusions imposed by the insurance industry has been to bypass these limits by masking patient diagnoses and causes of death to reflect re-imbursible illnesses (Taylor, 1999). After all, the diagnosis of “pneumonia” in an HIV positive patient presenting with Pneumocystis Carinii Pneumonia, an opportunistic infection, is not invalid.

Exclusion clauses and limitations place a lot of responsibility in the hands of the treating doctor as the determinant of the nature of illness. Given the sanctity and often personal nature of the doctor-patient relationship, this raises the question of the practicality of expecting the medical fraternity to become the claims managers of life offices in so far as AIDS related claims are concerned (Booth, 1993).

4.6 Summary

This section has presented the context of the HIV/AIDS epidemic in South Africa and the interaction between the epidemic and the various stakeholders. The often conflicting perspectives highlight the need for a shift from traditional practices and mindsets, in order to accommodate the needs of HIV positive employees, other employees, society in general as well as the insurance industry. Given this context, the next section will consider some of the options currently available to address this problem, and propose other possible options.

5. OPTIONS FOR CONSIDERATION

5.1 Insured Benefits

5.1.1 Underwriting

Underwriting has been used as a risk management tool to limit the risk of adverse selection when writing individual policies. Group policies have traditionally been exempt from this practice as it was assumed that, as long as the group was large enough, any individual risk would be spread amongst the members. The individual merely needed to be healthy enough to be at work on the day of appointment. Insurers felt safe in assuming that the people who are able to work are the healthiest people in society (Scherzer, 1988).

Often these groups are experience rated, meaning that premiums are set for a prescribed period and future premiums are based on past claims experience. When individuals within the group require additional cover, they would then be individually underwritten (Rejda, 1995). By charging a single per capita premium rates the risk is spread evenly to all members in the group. Some groups may be healthier than others based on variables such as age or nature of occupation. The rates between different groups are therefore not necessarily the same.

The prevalence of HIV/AIDS amongst certain groups has brought up the question of underwriting group benefits where such risk is deemed to be unacceptably high, or indeed underwriting all group benefit schemes.

- Pre-benefit Testing

This has been proposed as a measure that aims to eliminate adverse risk to funds such as disability benefit funds by medically screening applicants before acceptance (Alexander Forbes Disability Management Service, 1997).

This process prevents selection against the fund from prospective members with known high-risk medical conditions. The trustees of the fund may agree to limit, restrict or exclude the death and /or disability benefits of new entrants to protect the benefits of existing members.

It is not a pre-employment condition and the employer does not have access to the medical information. The exclusions are temporary and lapse after a specified period, usually a maximum of 15 years. The screening process may include a medical disclosure questionnaire and various blood tests, including HIV. Other medical conditions are then also affected.

- Group Underwriting

Given the profile of individuals at high risk for being HIV positive, some employee groups are riskier than others. Insurers could use these risk variables as a basis for group underwriting. This would result in groups with a higher prevalence of these variables being charged higher premiums than lower risk groups.

5.2 Medical Aid Benefits

5.2.1 Managed HIV/AIDS Treatment

In light of the impact of HIV/AIDS on medical schemes, Regensbeg (1999a) believes that medical schemes are faced with three choices:

- Continue to ignore the problem and face certain financial disaster;
- Provide for unrestricted access to improved but limited benefits;
- Provide for managed access to reasonable benefits.

Regensberg recommends the third option, which provides managed access to anti-retroviral and other therapy within the framework of a controlled disease management programme. Service providers work within specified guidelines providing set treatment regimens. Therapy is approved only at certain stages of the disease, e.g. when the CD4 count falls below a certain level.

Some medical aid schemes have taken up this option, but the practice has not gained wide popularity in the industry yet. A 2001 survey of 60 major South African companies revealed that 48% of their medical schemes implemented HIV/AIDS management programmes (Old Mutual, 2001). A criticism of some of the existing health management groups has been that they are essentially drug distribution groups, not focused on the holistic individual clinical management (Stevens, 2001).

5.3 Combined Risk Benefits

5.3.1 Customisation and Restructuring of Risk Benefits

Solomon, Lacey & Martens (1996) propose flexibility in offering risk benefits, in part to address the HIV/AIDS problem. They propose possible ranges of risk benefits as opposed to the current one–size-fits–all approach.

On one end of the scale is the cash only option where employees are given a set amount of cash and may use it to purchase personalised risk benefits as they see fit (Solomon *et al*, 1996). The next stage, an employer offers a variety of arrangements and the employee constructs a package by combining any of those on offer.

The modular option, further along the scale offers a fixed set of options, which can be selected by the employee. The next method, the “core plus” approach prevents employees making inappropriate choices by creating a core set of benefits for each of the risk benefits, representing the minimum which must be taken up. At the end of the scale is the “core only” where the employee has no option regarding his risk benefits (Solomon *et al*, 1996).

The flexible benefit approach is said to be a growing worldwide trend having gained popularity in the United States in particular (Solomon *et al*, 1996).

Other forms of restructuring benefits entail structuring benefits to take into account the dynamics of HIV/AIDS illness, disability and death. Options include:

- Moving from lump sum disability benefits to monthly income benefits;
- Offsetting disability benefits against death benefits if death occurs within a specified period of time;
- Capping death benefit contributions at a fixed percentage of salary. (Alexander Forbes Disability Management Service, 1997).

5.3.2 Risk Redistribution Policy

The social dimension of HIV/AIDS raises the possibility of government intervention in insurance risk classification to ensure that HIV positive employees do not shoulder the costs on their own. In a risk redistribution policy, classes are constructed and prices set such that some classes are not self supporting while others are overcharged (Abraham, 1985).

For example, contribution to employee risk benefit schemes could be on a percentage of salary basis while the benefits remain the same for all. The rich who are also low risk for HIV would effectively be subsidising the poor who are at high risk. In other words, salary is used as a proxy for rich vs poor, or in South Africa, black vs white, avoiding the use of socially unacceptable variables. This type of risk classification is not intended to avoid differential treatment of certain risk classes but in fact to accord special treatment to the classes that benefit to improve their welfare (Abraham, 1985).

Such a system would necessarily require the intervention of government through legislation as it is unlikely that individual insurers would voluntarily adopt a system that is inefficient. High-salary employees would also be unwilling to purchase inappropriately priced insurance given their risk and benefits.

5.3.3 Public - Private Partnership

The HIV/AIDS epidemic demands a departure from traditional business practices to embrace new ideas and novel solutions. Traditionally, public private partnerships focused on concessions for the construction and management of infrastructure (Nagakawa, 1980). More recently, these partnerships have extended to other areas of civil life with much success.

Taking a leaf out of the American response to World War 1 discussed above, government, employers, employees and the insurance industry, could come together in a partnership to provide solutions. The key elements of this partnership would be as follows:

- Insured Benefits
- The insurance industry continues to provide employee risk benefits in the traditional form;
- Employees or groups are not classified for HIV/AIDS purposes;
- The unacceptable portion of HIV/AIDS extra morbidity and mortality is re-insured by the government. This means that insurers assume the risk for HIV/AIDS morbidity and mortality up to the level where the risk is the same as that of the average chronic disease in terms of cost and prevalence;

- Basic premiums increase or decrease at the rate they would have in the absence of the unacceptable portion of HIV/AIDS morbidity and mortality;
- The insurance industry provides professional expertise to manage the government re-insurance programme at a cost to be shared between employees, employers and the insurers.

- Medical Aid Benefits

The principles would be the same as above, except that medical aid scheme administrators would provide the professional expertise of administering the government re-insurance programme.

This strategy is not aimed at cost containment but at spreading the costs to include government, reflecting the “common good” nature of the problem. However, it is not merely shifting the burden to government, but works together to address the problem according to the capabilities of each sector.

6. DISCUSSION

From the above discussion, it is clear that despite some questions regarding the accuracy of currently available statistics, HIV/AIDS will have a significant impact on employee risk benefits.

The AIDS Consortium Code of Good Practice (Appendix 3) recommends that group life assurance schemes regard HIV like comparable life threatening conditions when determining benefits. The industry argues that in terms of prevalence and the cost of treating HIV/AIDS, there are no comparable conditions. Thus, in addressing the problem of HIV/AIDS, new solutions will have to be found in addition to relying on conventional practices.

It has been proposed that these new solutions would best be guided by, financial viability, social legitimacy, benefit to the individual as well as fairness. In considering the options presented, it is important at this stage to review some of the issues introduced above in this context.

6.1 Historical Lessons

The section on infectious disease epidemics highlights some of the events that have accompanied epidemics in history. In the current HIV/AIDS context, the challenge remains for influential members of society to use

these historical successes and failures constructively in responding to the epidemic. With respect to the insurance industry, the salient lessons are summarised below.

6.1.1 The Need for Action

The inhumane treatment of victims in controlling diseases cannot be condoned. Some of the measures applied were indeed, counter productive. However, the partial success of quarantine methods against diseases like the plague and the more marked success of sanitation promotion in cholera, present a strong argument for the actions taken by authorities in controlling epidemics. In general, those communities who took action, however drastic or irrational, fared better than those who did not. Fatalism is therefore not an option.

6.1.2 Disease Evolution

Diseases exist in a wider ecosystem comprising the host and other organisms. Interaction within this ecosystem has seen diseases evolve towards less catastrophic outcomes. Most descriptions of ancient plagues differ significantly from the disease forms known today. In addition, co-factors may exist, affecting susceptibility to infection, severity of disease as well as outcome. Hence, all these factors need to be taken into account in assessing the risk posed by a particular disease infection.

This historic insight is particularly valuable in the HIV/AIDS insurance scenario, when assessing risk of infection, morbidity, mortality once infected, as well as the long-term course of the disease overall. Current projections of the impact of HIV/AIDS may well be an overestimate given the difficulty in quantifying these interactions.

6.1.3 Diseases in Context

Shaping responses requires a holistic picture of the extent of the epidemic. Patterns of morbidity and mortality do not always move in the same direction over time. For example, in Europe before stabilisation of mortality in the 18th century, violent epidemics and acute infections went hand in hand with low levels of morbidity for survivors. In contrast, in Africa where background morbidity is high and rising, morbidity and mortality patterns during an epidemic may mask chronic diseases and other problems of background health (Ranger and Slack 1992). Part of the morbidity and mortality attributed to HIV/AIDS may be perpetuated by underlying chronic diseases, which may need to be addressed just as vigorously.

Therefore, in analysing patterns of morbidity and mortality, epidemics need to be viewed in the context of their disease environment. For insurers, HIV/AIDS should be seen and addressed as part of the greater health problems in South Africa.

6.1.4 Stimulus for Innovation

History is strewn with stories of developmental progress in the face of epidemics. Rivalry between city states and between nations, and the quest for solutions to combat disease led to some innovative developments. The first health commissions and the first boards of health were set up in the face of the plague in Venice and Florence in 1348(Ranger & Slack, 1992; Watts, 1999). Condoms were first developed to limit the spread of syphilis (Allen 2000). To a large extent, epidemics represent an age of forced creativity and innovation. Those who do not heed the call may find themselves prematurely destined for the history books in their various fields.

Finally, in researching the history of epidemics, it became clear that to chroniclers of history, infectious disease epidemics are not seen merely as an impersonal force to be judged only by intellectual competence, medical skills or administrative prudence. Rather, the moral, ethical and value based human context of responses, represent at least as much of the focus.

6.2 The Impact of HIV/AIDS

While great advances have been made in the field of medical science, there is still no cure and no vaccine to prevent infection. Anti-retroviral therapy is expensive and the long-term benefits uncertain. Effective therapy requires highly trained medical doctors working in well-equipped clinic with experience performing a wide range of sophisticated tests and procedures, as administration and monitoring are crucial (World Bank, 1999).

Some patients taking the treatment have dramatically improved their health, others show little or no improvement, while others cannot tolerate the drugs. The characteristics of these different patients and the percentage of patients who would benefit from recommended therapy are as yet undetermined. Some treatment regimens have been proven to be ineffective and therefore a waste of resources (World Bank, 1999).

As the epidemic progresses, the cost of providing medical care for HIV and AIDS is set to increase due to the high cost of anti-retroviral treatment as well as the high levels of medical inflation in general. However, these costs are unlikely to remain high for much longer. Numerous AIDS action groups have been vociferously lobbying government and pharmaceutical companies for a reduction in drug costs with some success (Stevens,

2001). In addition, as patents on existing AIDS drugs expire, generic alternatives will be produced at significantly reduced prices.

The R100 million UNAIDS grant to South Africa, the R500 million World Bank soft loan for AIDS, the five year free offer of Nevirapine and the price reduction offer on AZT (Bateman, Sanders & Howse, 2000) all point to a significant reduction in the cost of treating HIV and AIDS in the future. Notwithstanding, the cost of treating HIV/AIDS will remain an added burden to medical aid schemes.

6.3 The Regulatory Framework

With respect to HIV/AIDS and insurance, the South African regulatory environment has aspects of all three legal models described by Hamlin (Canadian HIV/AIDS Legal Network, 2001). The powers given to the Registrar of long-term insurance, by the Long-term Insurance Act, allow for intervention in matters of public interests (Section 6e) and penalties where conditions of the act are not adhered to (Section 5a).

In the insurance context, the common theme of all the acts discussed previously is the protection of the HIV positive individual against unfair practices and discrimination. The regulatory environment further encourages a shift from traditional attitudes and treatment of employees,

towards more involvement and consideration of employees in decision making.

Case law suggests that financial constraints may be a justifiable reason to limit some of the rights guaranteed by legislation (Heywood, 1998). The particular case which was heard at the Constitutional Court involved a patient who was seeking his right to ongoing emergency treatment (kidney dialysis) at public expense. In handing down judgement, the judge stated that the courts would hesitate to interfere with rational decisions taken in good faith by medical professionals and public authorities.

Currently, a case is underway in the Cape Town courts where an employee is challenging a decision denying her benefits because of her HIV status (Stevens, 2001). As in other areas of social life, case law will provide guidance and test the applicability of these legislations.

6.4 HIV/AIDS as a Social Disease

HIV/AIDS has resulted in a growing pool of orphans and an increase in the number of households headed by children. Estimates are that in KwaZulu-Natal, there were 65 000 AIDS orphans in 2000 and there will be 500 000 by 2010 (Whiteside & Sunter, 2000). Declining life expectancy and job losses will affect the dependency ratio, namely the ratio of non-working population to working population, burdening family support

systems with implications for the already overburdened social security systems (Appendix 2).

With proliferation of the disease and a depletion of national capital, South African society comes under threat of not only social instability but political instability as well (Whiteside & Sunter, 2000). In a decade's time, 25% of the country's population will be between age 15-24, when the propensity to commit crime is at its highest (Whiteside & Sunter, 2000). AIDS and age will be significant contributors to an increase in the rate of crime in South Africa over the next 10-20 years, leading to both social and political instability.

This enormous social impact cannot be addressed by one sector of society alone and requires the joint efforts of government, business in their specific industries as well as civil society.

6.5 Group Underwriting

From a purely financial point of view, underwriting of group benefits represents the most logical solution to curbing the rising cost of these benefits. Low risk groups and the insurance industry will then not have to shoulder these costs. However, this solution raises several problems.

Firstly, in deciding which variables to utilise in classifying risk, underwriters will have to consider the profile of high risk individuals. The variables that would probably result in the most homogeneity and separation are race and socio-economic status. The social inadmissibility of these variables has been highlighted before. Moreover, these variables are non-controllable, i.e. an individual cannot choose not to be in a particular group.

The use of non-controllable variables denies individuals the opportunity to exercise individual responsibility to alter the effect of being grouped negatively (Abraham, 1985). This results in allocating a heavy burden to one group of insureds merely because a percentage of those with similar characteristics have a high expected loss. While the variables of race and socio-economic status may be the most efficient, it is proposed that they are inadmissible.

Previously, when the most efficient variables were unacceptable, insurers have in the past provided coverage on terms they would not have done based on their judgement of actuarial risk alone, and they have redistributed the risk to all other policyholders (Moultrie & Thomas, 1996). The magnitude of the HIV/AIDS epidemic however, prohibits this risk redistribution as the shared risk is likely to prove too much for low risk individuals.

6.6 Pre-Benefit Testing

The legality of pre-benefit testing is still debatable. Proponents argue that it is necessary for the fair distribution of employee benefits as per Section seven of the Employment Equity Act. The practice is occurring to a limited extent, awaiting the first legal test case.

Heywood (1996) argues that pre-benefit testing is discriminatory because it is intended to remove prospective employees from an employee benefit which is an established employee entitlement. In addition, HIV/AIDS affects mainly groups that are already marginalized, namely, blacks and the poor. This could be viewed as further discrimination under the guise of HIV/AIDS.

HIV status on its own may not be an adequate variable in assessing risk. As discussed earlier, the risk of morbidity and mortality in an HIV positive individual differs depending on their specific set of circumstances. A healthy HIV positive person with access to current best treatment clearly does not pose the same risks as someone with recurrent opportunistic infections, no access to treatment, a low CD4 count and high viral load. Improving the accuracy of this risk classification to incorporate these factors may prove very expensive for the industry. Using the HIV test on its own may be regarded as unfair to those HIV positive individuals who represent lower risk.

Finally, in the context of employer sponsored group schemes, the issue of confidentiality remains a problem. Trustees who have access to confidential medical results are often employers or employees themselves. In this regard, the confidentiality of these results cannot be guaranteed.

6.7 Fairness in Discrimination

The Promotion of Equality and Prohibition of Unfair Discrimination Act of 2000 provides guidelines as to what constitutes fair and unfair discrimination. According to the act, it is not unfair to take measures designed to protect or advance persons or categories of persons disadvantaged by unfair discrimination. Other factors to be considered are the context, impact on the individual, impact on human dignity, and steps that the discriminator takes to address the disadvantage that arises (Section 14).

Moultrie & Thomas (1996) consider the Rawlsian notion of fairness in the context of insurance. Citing influential Canadian philosopher John Rawls, the authors explore the two aspects to fairness. Firstly, the principle of greatest equal freedom, namely that each person or organisation should have the widest possible freedom, but only to the extent that that is compatible with the possession of equal freedom by other persons. The

second principle, the principle of difference, says that inequalities may be justified, provided that they make even the poorest members of a society better off than they would otherwise have been.

Rawls argues that these principles will be acceptable to everyone if they place themselves behind a “veil of ignorance”, that is they assume that, when choosing the principles by which society should operate, they do not know what position in society they occupy. The authors note that from this perspective, fairness does not necessarily mean “equal treatment for equal risks”.

The profile of HIV positive people puts them into the category of those previously disadvantaged by discrimination. It could be argued then that discriminatory measures that advance this category in the HIV/AIDS context are not unfair. Inequalities resulting from this discrimination stand to benefit the poorer members of society, albeit at the expense of the richer.

6.8 Flexible Risk Benefits

The concept of flexible risk benefits offers opportunities for customisation of individual employee benefits within the framework of the workplace. The benefits of group benefits as opposed to individual cover, include

savings in administrative costs, reduced need for underwriting and other group discounts. Flexible risk benefits allow employees to chose only those benefits which they feel they may need.

This will result in anti-selection whereby only high risk individuals will want to take out certain forms of cover, leading to higher premiums for them (Solomon et al, 1997). It will also increase the need for individual underwriting. Moreover, employers may feel that they have moral obligations to assist surviving family members of employees who did not have life cover.

Flexible risk benefits could well be more expensive than conventional group cover because of anti-selection, increased administration costs and underwriting. However, the specific needs of low risk employees may be addressed. Solomon *et al* (1996) concede that the flexible risk benefit option is not likely to reduce costs in total but may help employers cap their own costs.

6.9 Individual Considerations

Long waiting periods prior to qualifying for benefits are clearly unacceptable in the HIV/AIDS scenario. Early and flexible decision making regarding nature of disability is crucial in order to shorten the

waiting periods and allow for re-employment where the disability proves temporary.

Income disability benefits linked to death benefits could avoid the problem of double payments where the period between disability and death is shortened. A basic principle of insurance is that the insured should not be better off after the insured event than they were before (Rejda, 1995). Amounts paid out on disability should therefore not allow for improved financial circumstances compared to the able state. Paying capital lump sum benefits in the context of shortened lifespan goes against this principle. Offsetting disability benefits against death benefits at death reduces the total payout but allows for more affordable financial assistance when it is needed.

Table 4 represents the projected increases in cost of the different forms of disability benefits.

Table 4: Projected Cost of Disability Benefits as a Percentage of Salary in South Africa.

	1997	2002	2007
Lump Sum Disability Benefit	1.5	2.9	4.5
Income Disability Benefit	1.5	2.1	2.6

Source: Adapted from Metropolitan Life in Stevens, 2001.

From this table, it appears that income benefits represent a more affordable option than capital benefits. In addition they are more flexible with respect to the possibility of the disabled employee recovering sufficiently to return to employment.

The view of employees as represented by the Congress of South African Trade Unions (COSATU), the largest federation of trade unions in South Africa, is that ill health boarding is not desirable, rather HIV/AIDS employees need to be kept employed in a positive and supportive environment (Stevens, 2001).

6.10 Managed HIV/AIDS Care

The aim of managed care is to control the access and cost of health care, while the maintaining or improving quality (Managed Healthcare in South Africa, 1999). In the case of HIV/AIDS, managed care stands to provide better quality of care than is currently available from the average medical doctor. Managing HIV/AIDS in an environment staffed by medical personnel experienced in its treatment will not only reduce costs but improve the quality of treatment offered as well.

Anti-retroviral therapy has numerous side effects, which demand changes in lifestyle to accommodate the regimen (Baraldi, 2000). In addition, the

high pill burden and complex dose scheduling all contribute to poor compliance with treatment.

Uncontrolled access to anti-retroviral drugs poses serious problems of drug resistance (Condra et al, 2000; Gerretti & Easterbrook, 2001). Citing the African tradition of sharing everything including drugs, Dr Nono Simelela, AIDS director of the Department of Health, concurs. She argues that in the absence of proper controls, laboratory support and monitoring of side effects, uncontrolled access to anti-retroviral therapy could breed a drug resistant virus in Africa (Bateman C., Sanders, F. et al; 2000).

It would appear therefore, that even in the absence of financial considerations, it is crucial that HIV/AIDS treatment be provided in a controlled and supportive environment. Effective management at this stage has positive repercussions for insured benefits as well, reducing the incidence of disability and death.

6.11 Public - Private Partnership

Based on available information, it seems that the financial arguments for shifting the costs of the disease to those affected have some validity. This historical practice has served the insurance industry and those fortunate individuals who are not affected by disease, well in the past. Strategically,

the industry is well positioned to move away from the problem of an HIV infected workforce, to pursue more profitable business.

What remains to be answered is what role the industry sees for itself in greater society, beyond facilitating awareness and education. The South African Life Offices Association has indicated a willingness to cooperate with government in devising solutions to the problem. In their meeting with the Minister of Health in February 2001, representatives of the LOA stated their support for the Minister's five year HIV/AIDS plan and discussed possible ways of dealing with related issues (LOA Circular 2001).

The solution offered by risk distribution policies of effectively taxing the rich to subsidise the poor, is simple but shortsighted and likely to meet with much resistance. Such regulation will be subject to market forces and may place the entire system in jeopardy. The problem of employee risk benefits while very specific, cannot be separated from the greater effort to address the HIV/AIDS epidemic. Government working together with business offers an opportunity to balance the profit imperative of business with the social role that the industry sees for itself, while generating goodwill on both sides.

6.12 Recommendations

To formulate recommendations, options available are evaluated against the proposed criteria. Table 5 and 6 represent this evaluation based on the foregoing discussion for insured benefits and medical aid benefits respectively.

Table 5: Evaluation Matrix – Insured Benefits

	Financial Viability	Social Legitimacy	Unfairly Discriminatory	Benefit to HIV Positive Individual
Managed Healthcare	Yes	Yes	No	Yes
Flexible Risk Benefits	No	No	No	No
Underwriting (Pre-benefit Testing)	Yes	No	No	No
Group Underwriting	No	No	Yes	No
Risk Redistribution Policy	Yes	Yes	Yes	Yes
Public-Private Partnership	Yes	Yes	No	Yes

Table 6: Evaluation Matrix – Medical Aid Benefits

	Financial Viability	Social Legitimacy	Unfairly Discriminatory	Benefit to HIV Positive Individual
Managed Healthcare	Yes	Yes	No	Yes
Flexible Risk Benefits	Yes	No	No	No
Group Underwriting	No	No	Yes	No
Risk Redistribution Policy	Yes	Yes	Yes	Yes
Public-Private Partnership	Yes	Yes	No	Yes

Managed HIV/AIDS care and the formation of public-private partnerships as discussed previously, meet all the evaluation criteria for sustainable responses and are recommended as a strategy to address the impact of HIV/AIDS on both medical aid benefits and insured benefits.

It is envisaged that in the short term, the combined solutions of managed HIV/AIDS care and government in partnership as re-insurer of excess risk will lead to the following:

- Reduction in the cost of HIV/AIDS treatment;
- Better access to treatment for HIV positive employees;
- Improved quality of care;
- Reduction in HIV/AIDS related morbidity;
- Reduction in HIV/AIDS related mortality;
- Affordable benefits for employees;
- Improved insurance industry image;
- Better public perception of government.

In the long term, cost containment through managed HIV/AIDS care coupled with the spreading of risk to government through a public-private partnership promise the following:

- Reduction in overall cost of employee risk benefits;
- Better social security for employees;
- Improved workplace productivity;
- Increased profitability for the insurance industry as a result of improved public image;
- A chink in the armour of the HIV/AIDS epidemic.

7. CONCLUSION

South African society has an interest in ensuring that HIV positive employees have access to adequate healthcare and that the AIDS orphans are provided for. As demonstrated in this report, there is a body of opinion that believes that the insurance industry should accept the responsibility of the added cost in respect of employee benefits, and that existing policies are socially reprehensible.

Currently, employee group benefits are the least profitable segment in insurers' portfolio of services. Trends in the insurance industry point towards an even less significant role for these benefits as a source of revenue. The answer to this unevenness in bargaining power lies in part, in persuading the industry to recognise the long-term benefits of utilising their resources for the common good.

Public opinion holds that business has a duty to act in the interest of the common good (Badaracco, 1996). Increasingly, business is being considered both as political change agents and corporate citizens with civic duties to the place in which they do business.

In the HIV/AIDS context, the social contract between business and society demands a greater role from the insurance industry than mere shareholder profitability. Public expectations have an important role in an industry's

development, and therefore the benefits to be achieved from contributing towards social betterment are likely to exceed the financial cost.

Government is an influential factor in the social setting of business (Nakagawa, 1980). By promoting and regulating business, it has been indispensable in providing a balance between the business imperative of profit and the needs of society. However, regulation alone is not always the most appropriate form of addressing the needs of society, particularly with respect to services that are viewed as common goods. Grant (2000) argues that it is only when submission to the authority of a society is learned and accepted as a thoughtful deliberate choice, does acceptance of a duty become an ethical act.

Government, as custodian of public welfare, has a definite role in committing resources to assist business to play their role in addressing problems of a social nature such as the current HIV/AIDS epidemic. The recommended strategies seek to bring together the efforts and resources of business and government to more efficiently address the challenge of the impact of HIV/AIDS on employee risk benefits.

7.1 Suggestions for Further Research

The recommended solutions provide a broad framework from which a more comprehensive strategy could be developed. To further develop this concept, possible research areas include:

- Identifying key success factors for optimal functioning of the proposed public-private partnership

The different work cultures and orientation of the two sectors pose formidable obstacles to providing seamless delivery of the proposed services. Identifying and addressing key success factors upfront will go a long way towards reducing potential inefficiencies.

- An independent evaluation of the impact of HIV/AIDS on employee risk benefits.

Current statistics and the accompanying projections on incidence and impact come from the insurance industry. An independent source would be very valuable in establishing objectivity and better informed planning.

- Identifying predictive factors of individual response to recommended anti-retroviral therapy

Currently, one of the factors limiting the use of anti-retroviral therapy is the unpredictability of the response to treatment. Identifying the characteristics of patients who do not respond well to treatment would

assist in limiting the adverse effects in this group. In addition, quantifying the proportion of individuals in each group would contribute to better evaluation of the benefits of current therapy.

- Disability assessment in HIV/AIDS

This should involve investigating possibilities of a standardised approach to evaluation of disability in HIV/AIDS that takes into account the cyclical and episodic nature of the disease as well as the needs of patients.

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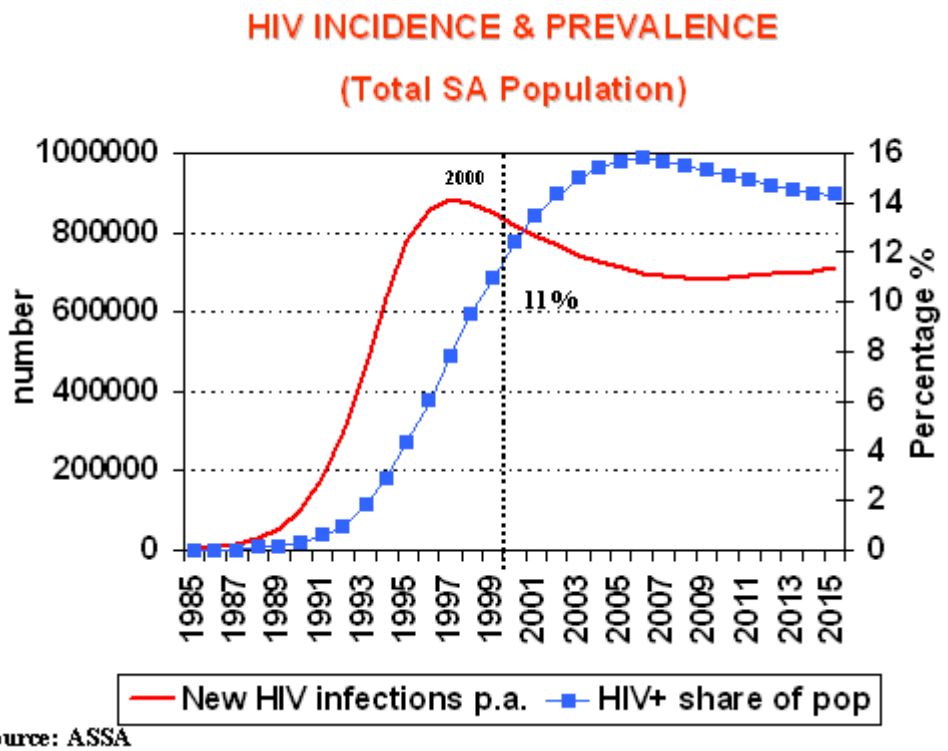
Appendix 1: Long-term Insurance Industry Trade Figures for the Half Year to 31 December 2000..

REVENUE ACCOUNT (FORM A)	ALL OFFICES
	Half-year to
	31 December 2000
	R'000
INCOME	
1. INDIVIDUAL	
1.1 Single premiums	
1.1.1 ILLA's	3,625,397
1.1.2 Compulsory Annuities	2,284,453
1.1.3 Other	12,394,721
Total single premiums	18,304,571
Recurring RA's	2,801,592
Recurring other	13,684,629
Total recurring premiums	16,486,221
TOTAL INDIVIDUAL PREMIUMS	34,790,792
2. GROUP SCHEMES & PENSION FUNDS	
2.1 Lump sums	
2.1.1 Investment only	4,912,021
2.1.2 Other	6,724,722
Total Lump Sums	11,636,743
2.2 Other premium income	
2.2.1 Investment only	5,133,347
2.2.2 Other	6,308,082
Total other premium income	11,441,429
TOTAL GROUP PREMIUMS	23,078,172
3. INVESTMENT INCOME	16,823,240
4 Other fees and sundry income	330,329
TOTAL INCOME	75,022,533
OUTGO	
5 BENEFITS	
5.1.1 Death	2,830,194
5.1.2 Disability	751,912
5.1.3 Maturity claims	11,583,155
5.1.4 Annuity payments	5,513,629

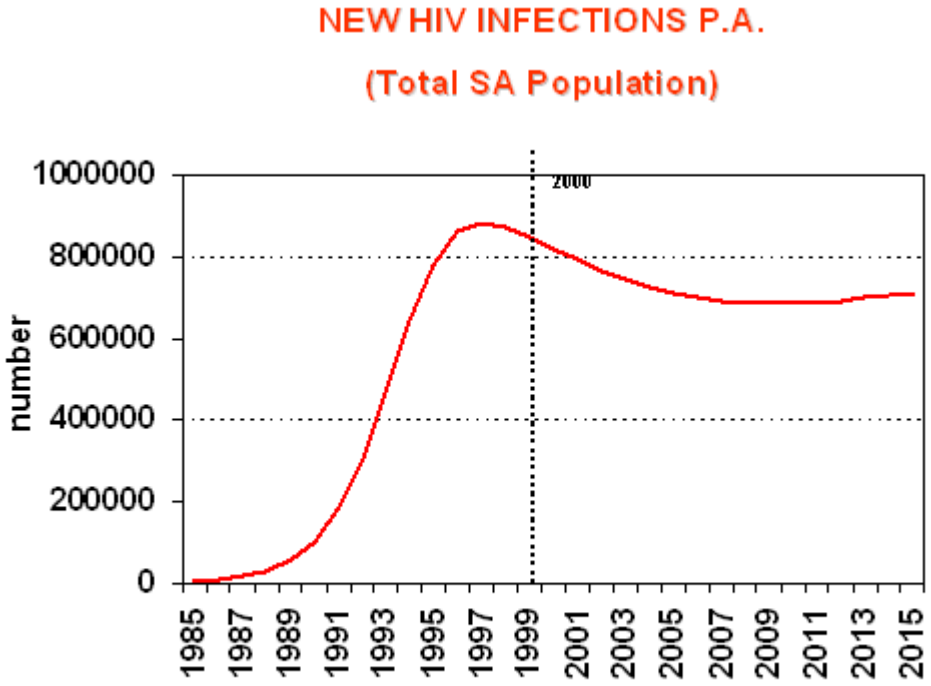
5.1.5 Individual surrenders	7,693,204
	28,372,094
5.2.1 Death	1,820,070
5.2.2 Disability	1,212,465
5.2.3 Annuity payments	1,209,892
5.2.4 Retirement Benefits	1,893,807
5.2.5 Group member withdrawals	2,953,987
5.2.6 Group scheme surrenders	19,665,910
Total group benefits	28,756,131
Total benefits	57,128,225
6 EXPENSES	
6.1 Sales Remuneration	
6.1.1 Individual business	2,863,316
6.1.2 Group business	222,097
Total Sales Remuneration	3,085,413
6.2 Admin. And marketing Expenses	4,522,877
6.3 Asset Management fees paid	234,758
TOTAL EXPENSES	7,843,048
7 TAXATION	
7.1 Income tax	1,326,533
7.2 Regional services levy	46,712
7.3 Stamp duty - policy contracts	96,477
7.4 Input VAT paid	376,669
7.5 Financial Services Board Levy	28,188
7.6 Skills development levy	21,852
	1,896,431

Source - LOA: www.loa.co.za/tradefigures/doc.

Appendix 2: HIV/AIDS Statistics

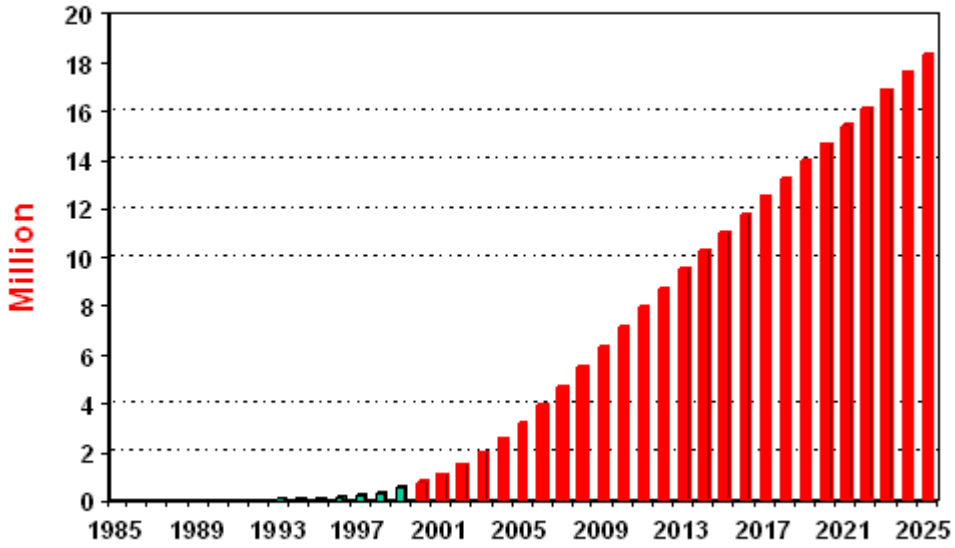


Source: ASSA



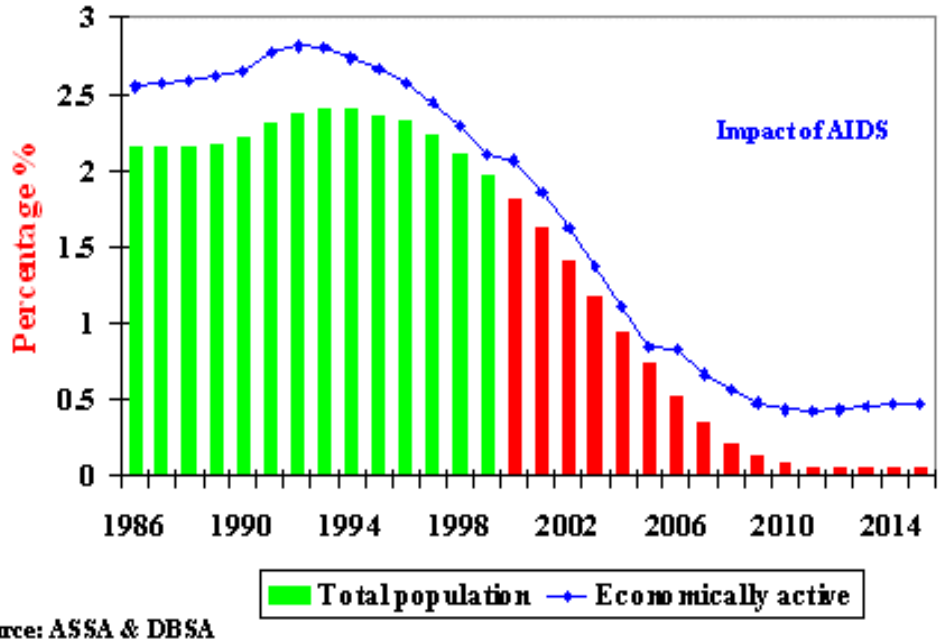
Source: ASSA

CUMULATIVE AIDS DEATHS

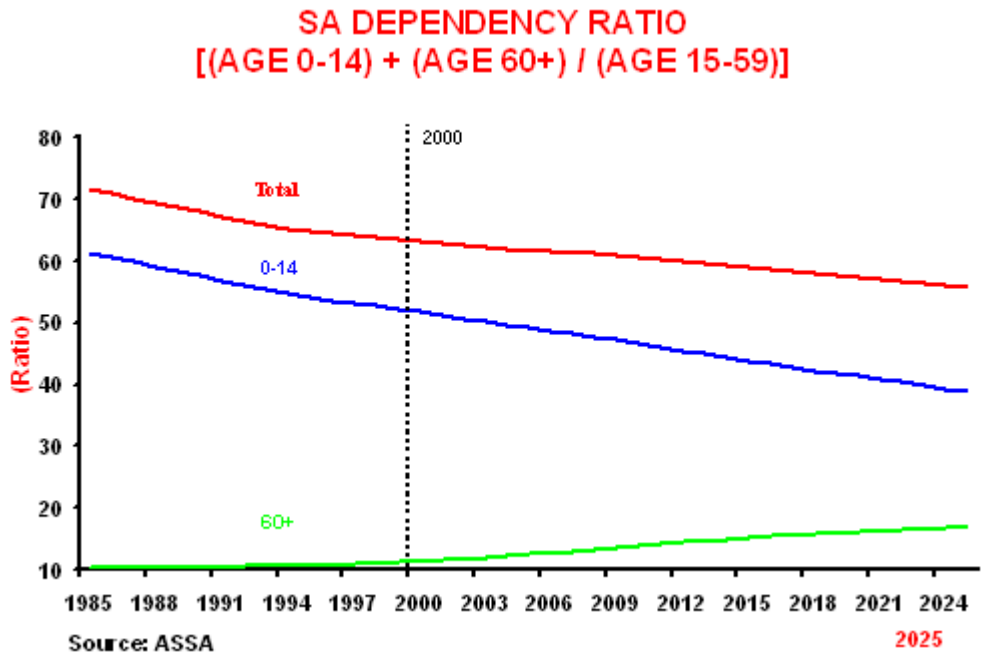


Source: ASSA

SA POPULATION & LABOUR FORCE GROWTH
(annual % change)



Source: ASSA & DBSA


SA DEPENDENCY RATIO
[(AGE 0-14) + (AGE 60+) / (AGE 15-59)]
2000
Total
0-14
60+
(Ratio)
80
70
60
50
40
30
20
10
1985 1988 1991 1994 1997 2000 2003 2006 2009 2012 2015 2018 2021 2024
Source: ASSA
2025

Appendix 3: Employment Code of Good Practice (Heywood, 1996)

CODE OF GOOD PRACTICE ON KEY ASPECTS OF HIV/AIDS AND EMPLOYMENT

10. EMPLOYEE BENEFITS

10.1. Employees with HIV or AIDS may not be unfairly discriminated against in the allocation of employee benefits.

10.2. Employees who become ill with AIDS should be treated like any other employee with a comparable life threatening illness with regard to access to employee benefits.

10.3. Information from benefit schemes on the medical status of an employee should be kept confidential and should not be used to unfairly discriminate.

10.4. Where an employer offers a medical scheme as part of the employee benefit package it must ensure that this scheme does not unfairly discriminate, directly or indirectly, against any person on the basis of his or her HIV status.