Caltex Oil (S.A.): Assessing the costs of HIV/AIDS

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We certify that this report represents our own work and that all references used are accurately reported.

________________               ________________
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Caltex Oil (S.A.): Assessing the costs of HIV/AIDS

ABSTRACT

South Africa has one of the highest numbers of people living with HIV/AIDS in the world (Chege, 2002). This fact has serious consequences for government, business and the people of South Africa in general. The cost of this illness has to be taken seriously. However there seems to be a general apathy with regards to this issue in this country.

While poor socio-economic conditions tend to promote the spread of the disease, the lack of financial resources prohibits effective treatment of the disease. The South African government, amongst others, lacks the financial resources to deal with the pandemic comprehensively. Business being another major economic power besides government can offer an answer to the rampant spread of the disease. Their intervention may not be a ‘sunk cost’ but may also impact favorably on their own operations and their industries.

This case study covers an exercise by a company human resources manager in attempting to assess the costs of HIV/AIDS to his company. By comparing some of the more significant costs of not intervening, with the cost of providing an anti-retroviral programme for employees, he attempts to provide insight for management on their options for combating the effects of the disease on the company.

One of the significant outcomes of the study is that the savings generated from lowered death benefit payouts, as a result of an anti-retroviral assistance programme, forms the greatest proportion of the total measured costs saved. The proportion is so great that the savings generated from lowered death benefit payouts alone may be justification for the provision of a comparatively lower cost anti-retroviral assistance programme to employees. Further, the company, based on the costing done, may actually gain financially with the successful implementation of an anti-retroviral program.
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1 INTRODUCTION

1.1 Background to the management challenge

According to the World Health Organisation, 29.4 million adults and children will be living with HIV/AIDS in sub Saharan Africa by the end of 2002. At present, 1600 people are infected daily with HIV in South Africa. According to the ASSA 2000 model (SABCOHA, 2002), the current South African HIV prevalence rate of 22.6% is amongst people between the ages 20 to 65 who are known to be the most productive. Recent projections have shown that this rate will increase to 26% by 2005. This coupled with the fact that sub-Saharan Africa is host to 70% of the world’s population living with HIV/AIDS, is reason enough for action. The social and economic consequences are far reaching, and affect every facet of the lives of all South Africans. It is crucial that an effective infrastructure is developed in all workplaces in South Africa to address the challenges posed by HIV/AIDS (SABCOHA, 2002).

The government, with its limited resources, is at present not in a position to confront the HIV/AIDS epidemic in the comprehensive manner that is required. The onus falls on the private sector to get involved and lend support to the government in the fight against the epidemic. Within South Africa approximately 12 million people are employed directly, with a further 20 million dependants. As a consequence, workplace initiatives can effectively reach a significant percentage of the at-risk population (Deloitte & Touche Human Capital Corporation, 2002). The private sector is thus in a position to make a real and significant contribution in decreasing the spread of HIV/AIDS.

A recent survey by Deloitte & Touche Human Capital Corporation however showed that only 27, 3% of companies in South Africa have assessed their risk to the epidemic (Deloitte & Touche Human Capital Corporation, 2002). This is an alarming statistic and raises the question as to why there is such apathy towards this pressing issue in the private sector?
This case study highlights two of the more common reasons for the inertia of business with respect to addressing the problem. Firstly the method of costing the impact is technically difficult and the methodology for assessing prevalence and the costs based on the prevalence are not widely documented at present.

Secondly, there appears to be a perception by most companies that the costs associated with intervention are high and probably too costly for most companies to bear. The thinking therefore may be that, given that the cost of interventions are expected to be unaffordable, what would be the point of expending energy on a costing exercise in the first place. Because companies feel that the costs of intervention are too high and that they are not going to intervene, they don’t bother with costing the intervention in the first place.

If it can be shown that by intervening, there exists a genuine financial incentive in addition to the obvious social and humanitarian reasons, then perhaps the apathy associated with the issue of HIV/AIDS will be greatly reduced and genuine progress can be achieved in curtailing the catastrophic effects of this epidemic.

This case study will give practical insights into, underline the appropriate measures needed for, and the difficulties encountered in, estimating the cost to Caltex Oil (S.A.) if the company chooses not to intervene. This will then be directly compared to the case of intervention with an anti-retroviral programme. By contrasting the intervention versus the non-intervention case, Caltex will be in a position to make an informed decision on this vital issue facing the company.

As an issue of great importance, the significance of the case to students and to business managers is clearly evident. The literature review will give a broad overview of the prevalence of HIV/AIDS, the financial impact of the illness and the costs associated with HIV/AIDS.
2 LITERATURE REVIEW

2.1 The magnitude of the problem

AIDS - acquired immunodeficiency syndrome - was first reported in the United States in 1981 and has since become a major worldwide epidemic. AIDS is caused by the human immunodeficiency virus (HIV). By killing or damaging cells of the body's immune system, HIV progressively destroys the body's ability to fight infections and certain cancers. (NIAID, 2001).

UNAIDS figures reported in June 2000 estimated that globally there were 34.3 million people living with HIV, 5.4 million of which became infected in 1999 alone. This brings the cumulative number of estimated HIV infections worldwide to over 50 million since the beginning of the epidemic (SABCOHA, 2002).

Sub-Saharan Africa is the worst affected region, constituting 70% of people living with HIV/AIDS in the world and 85% of the estimated deaths due to HIV/AIDS since the beginning of the epidemic (SABCOHA, 2002). South Africa has the highest number of people living with HIV/AIDS in the world - an estimated 4,74 million people (Chege, 2002)

2.2 The economic effects

It is important to identify the macroeconomic impact of HIV/AIDS as it has a considerable effect on business operations through its influence on markets, savings, investment, services and education. Principally, HIV/AIDS affects people within their most productive years of life (most infections before the age of 25), and through reduced earnings as a result of illness, care demands, higher expenditure on health care and premature death; the result is a reduction in savings rates and disposable income.

The South African Business Coalition on HIV and AIDS (SABCOHA) believes that in the long-term this has the combined effect of reducing the market size for business, particularly in markets outside of the basic necessities of food, housing and energy,
and reducing total resources available for production and investment, and thus declining economic growth.

2.3 The effect on business

According to SABCOHA, approximately half of all people who become infected with HIV do so before they reach the age of 25 and most will die of AIDS or related illnesses before they are 35. This means that HIV/AIDS is affecting some of the most creative and economically active people (SABCOHA, 2002).

Farrier & Weber (1998) believe that corporations will face many new challenges in the coming decades and, by far, one of the most challenging and complex issues is the changing workforce and the impact it brings to bear on escalating health care costs. Cascio (1995) draws attention to the fact that the vast majority of HIV/AIDS sufferers will be of working age and cites Alliton (1992) who describes this issue as a bottom-line business issue.

AIDS-related illnesses and deaths of employees affect a firm by both increasing expenditures and reducing revenues. Expenditures are increased for health care costs, burial fees, and training and recruitment of replacement employees. Revenues may be decreased because of absenteeism due to illness, attendance at funerals and time spent on training. Labour turnover can lead to a less experienced labour force and is less productive (ESKOM, 1999).

2.4 Strategic Human Resource Management perspective

Dealing with the pandemic as part of managing a company’s workforce strategically is becoming a challenge for many companies. As the immune system of an infected person deteriorates, complications start to manifest. These include lack of energy and short-term memory loss, serious impediments to a person performing productively at work. It is in the interest of human resource managers to keep the workforce that they manage at their most productive state. Thus, the management of the programmes instituted fall within the bounds of the human resource function.
Strategic human resource management may be described as “the pattern of planned human resource deployments and activities intended to enable an organization to establish its goals” (Wright & McMahan, 1992, cited in Noe et al.; 2000: 43). A pandemic like HIV/AIDS impacts on staff’s ability to perform at optimum levels in meeting organizational goals and therefore becomes a priority. Noe et al. (2000) go on further to comment that failure to deal with the effects of the pandemic carries economic and morale costs for companies.

Human resource departments are faced with the unenviable but highly critical task of deciding on how to intervene within the parameters of what the company can afford. The question that needs to be addressed is what is affordable, given the costs associated therewith.

2.5 Business’s response to the disease

SABCOHA believes that business leaders in South Africa must ‘wake up’ to the financial impact that this disease is going to have on their companies. It is, thus, imperative for these companies to understand the intervention options available to them and, further, the cost implications of these options. (SABCOHA, 2002)

In a recent study by Deloitte & Touche Human Capital Corporation of 110 South African companies from various sectors of industry, the results showed that larger companies tend to have formal HIV/AIDS policies in place with 82 percent of the respondents, with more than 500 employees indicating as such. Only 51.7 percent, or 15 respondents, of companies with employee numbers between 100 and 500 and 6.5 percent, or 2 respondents, of companies with fewer than 100 employees indicated they had a formal policy in place (Deloitte & Touche Human Capital Corporation, 2002, cited in SABCOHA, 2002).

It has been suggested that long-term sustainable business responses will only be achieved if all stakeholders (leadership, managers, personnel, shareholders) within companies are convinced of the real business rationale for action. In particular, a committed and knowledgeable leadership is paramount (SABCOHA, 2002).
Businesses do not work in isolation, so the impact of HIV/AIDS on all productive sectors, on the business supply chains, the effective labour supply and intellectual capital directly impacts on individual companies. These impacts can significantly affect the ability of business to operate (SABCOHA, 2002).

As the epidemic progresses, the death of the employees will have further direct and indirect impact on productivity. Multi-skilling of strategic staff and accommodating staff who are partially incapacitated in less strenuous or less strategic positions will be necessary. According to a report on ESKOM, the impact on employees’ benefits, especially group life cover, disability, pension and medical insurance may be significant. Health care costs are clearly destined to rise, as well as the need for psychosocial support, especially of, but not restricted to, employees with HIV/AIDS. The human tragedy will also require a major employee assistance programme (ESKOM, 1999).

Given that HIV/AIDS is going to have a major impact on all companies in South Africa, the question that needs answering is why have less than 30% of companies attempted to address this issue (SABCOHA, 2002). The answer lies, perhaps, in the fact that the issue of the cost of non-intervention has not been researched by many companies. Further, the costs of different interventions are also unknown and, therefore, strategic decisions regarding HIV/AIDS cannot be made.

2.6 Interventions

Employee assistance/education programmes designed to help employees overcome personal crises are offered by many large companies internationally (Sing, 1990, cited in Carrel et al.; 1998: 427). Such programmes have helped valued and skilled employees with their problems, including those that are medically related. Health care costs, being one of the biggest costs to employers today, are not the only incentive for such programmes, with others being legal requirements, employer goodwill and the increased employee productivity and morale that result from health programmes.
The main reason employee assistance programmes have increased is that they enhance a company’s profitability by reducing absenteeism, turnover, tardiness, accidents and medical claims (Carrel et al, 1998). Wagner (1982, cited Carrel et al.; 1998) estimates that a troubled employee costs the employer at least five per cent of the employee’s annual salary.

2.7 Measuring prevalence

In 1990, Peter Doyle, current managing director of Metropolitan, pioneered a far-reaching statistical model that estimated the prevalence of HIV/AIDS amongst the workforce of a company. As a result of this proprietary model, companies were better placed to make provision for their own workforce as the impact of HIV/AIDS was more clearly anticipated, making strategic planning a reality (www.redribbon.co.za).

The Doyle model of establishing prevalence of HIV/AIDS forms the basis of analyzing how many persons are afflicted by the disease and the cost of non-intervention in this case study. The model also predicts the changes in prevalence for a given intervention and thus also forms a basis for comparing the different interventions available. Greater detail on the Doyle model is available in Appendix 1.

2.8 The cost of HIV/AIDS

Metropolitan has estimated that HIV/AIDS could triple employee benefit costs by 2010 (Parker, 2002). Actuaries from Old Mutual estimated that the overall direct costs to the Electricity Supply Commission (ESKOM) would reach 15% of payroll from 2005 onwards. By that year HIV/AIDS would increase the cost of ill-health retirements to almost 10% of the salary bill; it would raise the cost of insured benefit schemes by 1% to 4.1% or more of the payroll (ESKOM, 1999).

The ESKOM study examined the expected impact of HIV/AIDS on employee benefits, and thus on corporate profits. It found that at current levels of benefits per employee, the total cost of benefits would rise from 7 percent of the salaries bill in 1995 to 19 percent by 2005. Since these additional costs will be paid at the same time
that productivity is declining, due to HIV/AIDS, the net impact on profits could be significant (ESKOM, 1999).

Whiteside and Sunter (2000), outline the costs to a company as a result of HIV/AIDS, an adaptation of which is presented in Case Table 2. As is evident from the table, there are a host of factors affecting the company that can be associated with the illness. The factors can be categorised as follows:

1. Direct costs

Direct costs lead to a direct increase in company expenditure. With HIV/AIDS, the mortality amongst staff would be higher, and as a result, staff turnover would be higher. Cascio (2000) describes the fully loaded cost of turnover as not just separation and replacement costs, but also an exiting employee’s lost leads and contacts, the new employee’s lowered productivity while they are acclimatising and the time co-workers spend on mentoring.

2. Loss of revenue

Other factors are indirect costs that lead to a decline in a company’s ability to generate revenue. For example, absenteeism in the form of sick leave can be expected to be higher as HIV/AIDS prevalence amongst employees increases. This results in decreased productivity and ultimately a loss in revenue for companies.

3. Systemic factors

Systemic costs are factors that are intangible and difficult to measure directly. With prevalence of HIV/AIDS increasing and the resultant morbidity and mortality, employee morale begins to drop. This would have a negative impact on productivity. Poor job attitudes therefore lead to lowered productivity and organizational performance (Cascio, 2000). This decrease in productivity would, however, be difficult to quantify.
In this case study, nine factors from Case Table 2 were chosen to quantify the financial impact of HIV/AIDS on a company. These nine factors were chosen on the basis that they were financially significant, readily quantifiable and not unduly time consuming to access. Some other factors were excluded by default. For example, company-health clinics and funeral expenses are benefits that are not offered by the company specified this case study. Still other factors, such as a decrease in the average skill level, were not easily quantifiable and thus, were not measured. Therefore, costing is therefore only a partial estimate, and the modeling is not “fully specified”. However, the literature suggests that a substantial proportion of the costs of HIV/AIDS to a company were quantified in the case study.

The factors that were measured are:

1. Death benefit payouts

Companies need to pay an employee’s beneficiaries a death benefit upon the death of an employee. Insurance premiums for this employee benefit are a cost to the company. With a higher proportion of employees dying as a result of HIV/AIDS this insurance cover for employees would become more expensive.

2. Medical non-antiretroviral costs

When employees contract HIV/AIDS they will incur additional medical costs relating to the illness. Pathology testing, increased doctor’s visits, treatment of opportunistic infections and hospitalisation will result in higher medical costs. These costs will partially accrue to the company in the form of higher medical aid premiums that are often company subsidized.

3. Recruitment productivity

New employees need time to acclimatize to the new work environment. As a result, there is a loss in productivity and this results in a loss of revenue to the company.
4. Compassionate leave

With the higher morbidity and mortality amongst employees, there would be a greater demand for compassionate leave. Employees would need more to time away from work to visit doctors or to attend funerals of colleagues or relatives. The demand on compassionate leave would exceed the normal provision allowed by the company and would thus result in a loss of revenue.

5. Management time lost

The demand on managerial time will grow as result of HIV/AIDS. Managers will spend more time on recruitment, counseling employees with HIV/AIDS and attending funerals of employees who have died. As a result, manager time will be lost and there would be an associated loss in productivity.

6. Productivity

With the increase in HIV/AIDS prevalence amongst employees, the morale of employees is going to taper off. This will result in a lowered productivity and a loss in revenue.

7. Recruitment cost

Each employee that dies as a result of HIV/AIDS will need to be replaced. This involves costs like advertising the position, interviewing time, training and the like. This would result in further costs to the company.

8. Sick leave cost

Companies offer a minimum sick leave benefit to employees. With the chronic nature of HIV/AIDS, companies could expect employees to use more than the allowed minimum sick leave. Increased absenteeism would thus be a factor for loss in revenue.
9. Anti-retroviral cost (assumed to be nil in the non-intervention case)

If a company chooses to intervene in response to HIV/AIDS, the cost of the intervention would accrue to the company. This would be a direct cost that the company would incur.

2.9 The cost of interventions

The cost of intervention escalates substantially as one progresses from an awareness programme through to a comprehensive medical programme. It is for this reason that many companies only offer limited programmes.

Wood et al. (2000) found that a triple-combination treatment for 25% of the HIV-stage 1-positive population could prevent a 3.1-year decline in life expectancy and more than 430 000 incident AIDS cases.

Although there are barriers to widespread HIV-1 treatment, limited use of anti-retrovirals could have an immediate and substantial impact on South Africa's AIDS epidemic (Wood et al, 2000).

According to Floyd and Gilks (2001), despite the large costs associated with ARVs, it is possible that their provision would actually deliver overall cost-savings through reducing costs associated with HIV-related illnesses.

2.10 Contrasting intervention and non-intervention

A belief exists that if business is to have any significant influence over the prevention of HIV/AIDS in the workplace and amongst its stakeholders, it has to act early and engage in genuine activities that go beyond mere public relations exercises in order to maximise the efficacy of its intervention and awareness programmes. HIV/AIDS has no barriers and will continue to impact on current and future business operations and markets if responses remain localised, uncoordinated and low-key affairs. HIV/AIDS awareness and prevention have to be positioned at the core of the business strategy of any forward thinking company. (SABCOHA, 2002)
Farrier & Weber (1998) contend that “cost is a half word”. This speaks to the decision to intervene being not purely cost driven but incorporating social and moral benefits. The benefits of intervening also include a host of factors whose cost savings are not clearly distinguishable. How does one cost the overall benefit of invention to society?
3 REVIEW OF THE COMPANY: CALTEX OIL

3.1 Introduction to Caltex Oil

The California Texas Oil Company (Caltex) was founded in 1936, a joint venture of the companies Standard Oil of California (now Chevron) and the Texas Oil Company (now Texaco Inc). Its name is derived from both California and Texas. Drawing on the technology and expertise of each of its shareholders it has become the oldest and most successful joint venture in the industry.

Operating in more than 60 countries, primarily in Africa, the Asian/Pacific region and the Middle East, Caltex sells 1.5 million barrels of crude oil and petroleum products per day. The Company has stakes in 13 fuel refineries, 2 lubricant refineries and 17 lubricant blending plants, 6 asphalt plants, and more than 500 ocean terminals and depots. It markets products through 8000 retail outlets, including 425 Star Mart convenience stores. In 1999 Caltex moved its headquarters from Dallas, Texas, to Singapore to be closer to its core markets. This move coincided with a change of name from Caltex Petroleum to Caltex Corporation to acknowledge the importance of non-petroleum operations, particularly the Star Marts (www.caltex.co.za).

3.2 Caltex Oil (S.A.)

Through its predecessor, Texaco, which started operations in South Africa in 1911, Caltex has shared an historic link with South Africa. Caltex Oil South Africa, a leader in the oil industry, has been recognised for pioneering efforts, one of the most notable being the establishment of the first filling station in Sea Point, Cape Town. Today, Caltex's network of service stations has grown to over 1000, with representation at 92 depots. Caltex has been one of South Africa's most competitive marketers of petrol since the launch in 1973 of CX3, and enjoys a major share of the market in all other sectors of the petroleum business.

Caltex's head office is located in Cape Town. It’s lubricating oil and grease-manufacturing plant is located in Durban. (www.caltex.co.za)
Caltex South Africa is one of the major players in the South African petroleum industry and has both marketing and refining interests. The company has approximately 1400 employees, which includes all levels of staff. This case study confines itself to the activities and staff of Caltex Oil (S.A.).

3.3 Application to estimating cost for Caltex Oil (S.A.)

Caltex, being a proactive and forward thinking company, took the decision to further investigate the cost implications of HIV/AIDS. The decision to implement an anti-retroviral (ARV) program rests on obtaining an accurate estimation of the cost to the company for not intervening with an ARV program. This must be accompanied by an estimation of the cost of implementing an ARV program and the potential savings that such a program can deliver.

Three years ago Caltex commissioned Metropolitan to perform prevalence projections of HIV/AIDS amongst employees. Based on the projected prevalence, the company embarked on an HIV/AIDS awareness and education program achieving encouraging results. The employees engaged in the program with enthusiasm and the positive results inspired management to investigate the feasibility of an ARV assistance program. Confident in the knowledge that they could expect good participation from employees and being aware of the possibility of making a meaningful difference in the prevalence profile of its employees with an ARV program, Caltex began with the task of estimating the costs of this epidemic using a more comprehensive prevalence and costing exercise.
4 CASE STUDY

4.1 Background

Hermann Mumbeck, the Compensation and Benefits Human Resources manager for Caltex Oil (S.A.) sat at his desk reading the Cape Times newspaper. Dominating the headlines was a report on De Beers, the mining giant, and its decision to supply anti-retroviral (ARV) drugs to its employees. This was yet another of a host of companies that had made a similar decision in the year 2002.

Hermann and his company had realised years before that the HIV/AIDS threat was escalating. To date, the company had mainly embarked on awareness and education programmes. Hermann, tasked with shaping the company’s strategy towards coping with the epidemic, realised the time for strong action had come. But what could be done? How would the prevalence of HIV/AIDS amongst staff at Caltex be estimated? What would be the cost implications if Caltex were not to intervene? How much would it cost for an ARV programme, like the one De Beers had implemented? If Caltex implemented an ARV programme was the company going to benefit financially?

4.2 History of Caltex

The California Texas Oil Company (Caltex) was founded in 1936, as a joint venture of the companies Standard Oil of California (now Chevron) and the Texas Oil Company (now Texaco Inc) and thus derived its name from both California and Texas. It had become the oldest and most successful joint venture in the industry, drawing on the technology and expertise of each of its shareholders.

Caltex Oil (S.A.)’s head office was located in Cape Town, with its lubricating oil and grease-manufacturing plant located in Durban. Caltex Oil (S.A.) was one of the major players in the South African petroleum industry and has both marketing and refining interests.
The company had approximately 1400 employees that included all levels of staff. The company, recognising the threat of the disease to its workforce, had instituted an awareness programme to attempt to increase condom use to 30% amongst staff. They also embarked on a direct training and education drive. Realising that the effectiveness of such programmes were limited, the company began exploring the options of providing a comprehensive assistance programme, which would include the provision of anti-retroviral drugs, and would be more effective.

4.3 Charting the process

To begin the process of the estimating the cost of HIV/AIDS to the company, Hermann had to map out a logical progression to get to a meaningful answer. Firstly, he had to get reliable data on HIV/AIDS prevalence amongst his employees. Secondly, based on this data, costs would be calculated, but the issues of which factors to measure and how these factors would be estimated needed attention. During this process various assumptions would have to be made and justified. Thirdly, a decision could be made based on the estimated costs to the various factors. Finally, based on the decision, a plan for implementation would have to be considered.

4.4 Prevalence estimation: The Doyle model

In projecting prevalence the only alternatives to Hermann were:

1. the Doyle model of Metropolitan Life Assurance company  or
2. a simplified, spreadsheet model developed by the Actuarial Society of S.A.

Metropolitan’s AIDS unit, under the leadership of Steven Kramer had made huge strides in modeling the projected prevalence of the HIV/AIDS disease amongst staff in companies. Many companies had used Metropolitan to project the prevalence of the disease within their organizations.

The model used by Metropolitan Life was the most up-to-date version of the Doyle model developed by Peter Doyle. This model had the longest track record of use in
South Africa and was the most flexible model for projecting the HIV/AIDS epidemic in South Africa.

The Doyle model also proved to be one of the more robust models available. Using a combination of macro as well as micro simulation elements it provided more reliable results than other models. Purely macro-simulation models used broad inputs and were not defensible in terms of specific factors. A micro-simulation model was founded on scientific data that considered the risk behavior of individuals within a given population and aggregated their effects to produce projections of HIV/AIDS for whole groups or populations through complex calculations. One of the problems however was that pure micro simulation models depended on a range of input parameters for which little reliable information could be found.

The other alternative, a free simplified, spreadsheet model developed by the Actuarial Society of SA (2002), was based on the approach used in the Doyle model. Because the model was in the public domain, projections made using the model were left to the company itself, making the validity and accuracy of such data more difficult to estimate.

Because the Doyle model lowers the risk of error in an estimation of prevalence, the decision to use Metropolitan was easy. Hermann approached Metropolitan to get prevalence projections. Two weeks later, he received the prevalence projections from Metropolitan. They consisted of two sets of projections:

1. Non-intervention projections
2. Intervention projections
   - high success outcome
   - low success outcome

The Doyle data in both the intervention and non-intervention cases contained projections that were made from year 2000 through to year 2015 and contained the following categories:

- Number of employees that were HIV negative.
• Number of employees that were HIV positive.
• Number of employees that were AIDS sick.
• Number of employees that would have normal deaths.
• Number of employees that would have AIDS related deaths.

The prevalence in the intervention case assumed a 100% uptake of the ARV programme by all infected employees (i.e. assumed that all employees would partake in the program). Implicit in this assumption was that all employees would have themselves tested. Even though this seemed highly unlikely, Stephen Kramer stressed that Metropolitan’s “implementation unit” for the ARV programme, had been achieving a high level of success in both testing and uptake of the programme. Metropolitan, apart from doing prevalence projections, offered an implementation service where a trained team of ARV program specialists would implement and manage the ARV program. The team had experienced great success at many other companies in South Africa.

Furthermore, the intervention case had two outcomes i.e. high success and low success. These outcomes were based on compliance rates by employees to the ARV programme, which is presented in Case Table 1. It was assumed that because of side effects to the ARV drugs and lack of compliance, employees would fall-out of the program. In the low success outcome the fall-out rates were assumed to be high when compared with the high success outcome. For example, in the first year, 40% of employees were expected to fall-out in the low success outcome, whilst only 15% were expected to fall-out in the high success outcome. Of the 60% remaining in the low success outcome, a further 15% of employees would fall-out of the program in the second year, and so on for both success outcomes.

Having got the data back, Herman could clearly see that while prevalence would remain similar, there would be a substantial decrease in mortality. The data generated from the Doyle model suggested that in 2014 the mortality with intervention would be reduced from 25 employees to only 5 employees. The ARV programme was thus highly successful in reducing mortality, but at what cost? This was the next issue facing Hermann.
### Case Table 1: Fallout Rates

<table>
<thead>
<tr>
<th>Year</th>
<th>Low Success</th>
<th>High Success</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fail p.a.  Remainder</td>
<td>Fail p.a.  Remainder</td>
</tr>
<tr>
<td>1</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>2</td>
<td>15%</td>
<td>51%</td>
</tr>
<tr>
<td>3</td>
<td>8%</td>
<td>47%</td>
</tr>
<tr>
<td>4</td>
<td>4%</td>
<td>45%</td>
</tr>
<tr>
<td>5</td>
<td>7%</td>
<td>42%</td>
</tr>
<tr>
<td>6</td>
<td>7%</td>
<td>39%</td>
</tr>
<tr>
<td>7</td>
<td>7%</td>
<td>36%</td>
</tr>
<tr>
<td>8</td>
<td>7%</td>
<td>34%</td>
</tr>
<tr>
<td>9</td>
<td>7%</td>
<td>31%</td>
</tr>
<tr>
<td>10</td>
<td>7%</td>
<td>29%</td>
</tr>
<tr>
<td>11</td>
<td>7%</td>
<td>27%</td>
</tr>
<tr>
<td>12</td>
<td>7%</td>
<td>25%</td>
</tr>
<tr>
<td>13</td>
<td>7%</td>
<td>23%</td>
</tr>
<tr>
<td>14</td>
<td>7%</td>
<td>22%</td>
</tr>
<tr>
<td>15</td>
<td>7%</td>
<td>20%</td>
</tr>
<tr>
<td>16</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>17</td>
<td>7%</td>
<td>18%</td>
</tr>
<tr>
<td>18</td>
<td>7%</td>
<td>16%</td>
</tr>
<tr>
<td>19</td>
<td>7%</td>
<td>15%</td>
</tr>
<tr>
<td>20</td>
<td>7%</td>
<td>14%</td>
</tr>
<tr>
<td>21</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>22</td>
<td>7%</td>
<td>12%</td>
</tr>
</tbody>
</table>
**Case Table 2: Economic Impact on workforce of HIV/AIDS**

<table>
<thead>
<tr>
<th>Benefits package</th>
<th>Absenteeism</th>
<th>Loss of workplace cohesion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sick leave</td>
<td>Reduction in morale,</td>
</tr>
<tr>
<td>Direct costs</td>
<td></td>
<td>motivation and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>concentration</td>
</tr>
<tr>
<td>Indirect costs</td>
<td>Other leave taken by sick</td>
<td></td>
</tr>
<tr>
<td></td>
<td>employees</td>
<td>Disruption of schedules</td>
</tr>
<tr>
<td></td>
<td>Bereavement and funeral leave</td>
<td>and work teams or units</td>
</tr>
<tr>
<td></td>
<td>Leave to care for dependants</td>
<td>Breakdown of workforce</td>
</tr>
<tr>
<td>Systemic costs</td>
<td></td>
<td>discipline</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruitment</td>
<td>Reduced performance due to sickness</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morbidity on the job</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Management resources</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workforce performance &amp; experience</td>
<td></td>
<td>Reduction in the average level of skill, performance, institutional memory, and experience of workforce</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>Managers time and effort responding to workforce impacts, planning prevention and care programmes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Legal and human resource staff time for HIV-related policy development and problem solving</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV/ AIDS programmes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Time employees spend in prevention programmes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Studies, surveys, and other planning activities</td>
<td></td>
</tr>
</tbody>
</table>

*Adapted from: Whiteside, A. & Sunter, C. (2000) p. 112*
4.5 **Measuring costs based on predicted prevalence**

With the prevalence data, Hermann now had to calculate the total cost to the company in both the non-intervention and the intervention scenario. The first problem he faced was deciding on what factors to cost. Sunter and Whiteside had developed a comprehensive table of factors that would impact on a company’s financial well being, an adapted version of which is presented in Case Table 2.

From the table it was evident that the costs were numerous and often difficult to quantify. Hermann used the criteria of selecting the factors that would have the greatest financial impact, be readily quantifiable and not overly time consuming on the company. Hermann finally settled on nine factors, which are discussed below. From Case Table 2 it could be seen that any estimation of total cost was going to be under-estimation since a lot of the costs were not easily measurable.

*Death benefit payouts costs*

Businesses needed to pay an employee’s beneficiaries a death benefit upon the death of an employee. Rosen employed the assumption that the cost of these death benefits were estimated to be three times the average annual salary of the deceased worker (Rosen et al.; 2000:302). In the case of Caltex, company policy dictated that the deceased employee receive 26 months of salary as a death benefit. The number of AIDS deaths was used directly from the Doyle model outputs. The total value of benefits related to AIDS deaths was thus calculated as follows:

\[
(26 \times \text{Avg. monthly salary workers}) \times (\text{No. of AIDS deaths})
\]

It should be noted that the company only contributes fifty percent of the total death benefit insurance premium, the employee been responsible for the other fifty percent. In the case study only changes in costs relating directly to the company are measured.
The Anti-Retroviral programme costs (assumed to be nil in the non-intervention case)

The costs of the anti-retroviral programme were based on the estimations given by QUALSA Healthcare for the provision of a comprehensive programme in the workplace. It included the following:

- A cocktail of ethical anti-retroviral agents
- All doctors consultation fees with regards to HIV/AIDS
- All diagnostic and pathology costs
- All costs relating to ARV treatment literacy

It did not include an HIV/AIDS prevention and a condom use programme. The ARV programme advocated by QUALSA Healthcare assumed that the average employee with HIV/AIDS would have a life span of 10 years. The employee would go on from being HIV positive to having the full-blown AIDS syndrome at the beginning of year 8. Employees on the ARV programme would receive ARV drugs from the beginning of year 8, that is, just before they developed AIDS. The estimated costs for the ARV programme was R15 000 per annum. This probably represented an overestimation because the costs of ARV were expected to decrease in the future, especially if government endorsed the use of generic medication. The costs in that case would be approximately R 3500 (Medicins Sans Frontiers, 2002).

The formula employed by Hermann was:

\[(R15 \, 000) \times (\text{No. of AIDS sick employees})\]

Medical costs due to HIV/AIDS other than antiretroviral costs

The costs measured here included all other medical costs that were not included in the ARV programme. These included:
• Hospitalisation costs
• Costs for treating opportunistic infections

These expenses were to be incurred by those employees that had the full-blown AIDS syndrome. HIV positive employees were essentially healthy and did not incur any costs attributable to HIV/AIDS. Metropolitan staff and other industry experts’ opinions varied from about R25 000 to R75 000 as a cost per annum. Taking note of the opinions and from his personal experience, Hermann estimated that the cost to Caltex per person dying from AIDS would be approximately R50 000. The formula Hermann used was thus:

\[(R50 000) \times (\text{No. of AIDS sick employees})\]

Recruitment productivity

This covered the acclimatization time associated with a replacement employee getting to a proficient level of productivity. It was assumed that a new employee would be less productive for 6 months. Metropolitan and others believed that a company lost 20% in productivity for each new employee for a period of 6 months. The appropriate calculation was thus:

\[(\text{No. of AIDS deaths}) \times (\text{Avg. monthly salary}) \times (6 \text{ months}) \times (20\%)]\]

Compassionate leave

This was calculated assuming that 20 days would be lost monthly to compassionate leave per AIDS death in the company. This was an acceptable estimation amongst people in the industry. Although this assumption was very conservative, it would present an acceptable proxy of the additional working days lost as a result of funeral attendance resulting from AIDS deaths. The formula used was thus:

\[(20/240 \text{ days}) \times (\text{Avg. annual salary}) \times (\text{No. of AIDS deaths})\]
Management time lost
This estimated the time expended by management in covering the gaps caused by employees being away, as well as time spent in recruitment, funeral attendance and the like. After consulting Metropolitan, Hermann decided to allocate 20 days per annum of lost manager productivity for each AIDS death within the company. The appropriate formula would then be:

\[(20/240) \times (\text{Avg. annual salary}) \times (\text{No. of AIDS deaths})\]

Productivity

In his discussions with Metropolitan, Hermann estimated that 5 days were lost per 20 employees annually for each AIDS death because of poor morale amongst staff associated with the effects of HIV/AIDS. The formula he employed was thus:

\[(5/240) \times (\text{Avg. monthly salary}) \times (12) \times (1400/20) \times (\text{No. of AIDS deaths})\]

Recruitment cost

Hermann having recruited a number of new employees over the past five years estimated that an average spend was R6000 per new recruit. This amount was substantially lower than the estimate of R8405 quoted by Rosen et al. (2000:302) and which was obtained from a study of five companies conducted in Botswana. Hermann thus calculated the AIDS-related cost pertaining to recruitment and training as follows:

\[(\text{No. of AIDS deaths}) \times \text{R6000}\]

Sick leave cost

One of the major costs of AIDS was as a result of the increased absenteeism of infected workers. The company indicated that they offered employees 15 days of paid sick leave per annum stipulated in the Basic Conditions of Employment Act. It was
impossible to distinguish AIDS-related absenteeism from non-AIDS-related absenteeism without knowing the identity of infected workers. It was estimated that employees that were AIDS sick took an additional 10 days of sick leave (in addition to the normal 15 days allowed) per year. The following calculation was used:

\[
\frac{10}{240} \times \text{(No. of AIDS sick employees)} \times \text{(Avg. annual salary)}
\]

4.6 Intervention vs. non-intervention

Having explored what the costs of the chosen nine factors would be in the intervention and non-intervention cases, Hermann was in a position to make an informed judgment.

The main results are summarised in Case Tables 3 to 5. From the results, it became apparent that in a case where the company did not intervene with an ARV programme, the cost from 2002 through to 2014 would be approximately R69.2 million. With a “high success” outcome, savings of approximately R26.4 million could be generated over the same period. In a low success intervention, savings were projected at approximately R23.6 million.

Interestingly, as represented in Case Chart 1, using the year 2005 as a basis, 55 percent of the savings would be generated as a result of the drop in death benefit payouts and this was a consistent feature throughout the years. Case Chart 2 reflects the huge disparity between intervention and non-intervention where death benefit payouts are concerned. The pertinent issue, considering that lowered death benefit payouts locked in the greatest potential savings, was how much of the savings would actually accrue to the company, considering that death benefits were administered through an insurance company. Success of an ARV intervention programme would, from a cost point of view, be dependant on the company realizing a significant proportion of savings from assisting in lowering death benefit payouts. Hermann was aware of products being developed by the insurance industry related to lowering health care insurance costs to a company where, through an ARV intervention programme, death benefit payouts were lowered. If the company could realize such
savings, then from a cost point of view it was clear that implementing an ARV intervention programme was a strong option.

Hermann realized that, although the company would be increasing its spending by providing an anti-retroviral programme, the potential savings that such a programme could generate by lowering mortality due to HIV/AIDS would, if passed on to the company, more than compensate for the cost of the programme. In fact, the company might even stand to gain financially and this point could help in convincing the rest of the management team.

It became apparent to Hermann that a clear argument existed for providing comprehensive ARV programmes for afflicted employees. The money that the company could potentially save in lowered premiums, by lowering death benefit payouts alone, was justification enough for such programmes. In fact, it was a financial imperative!

4.7 Going forward

The final step for Hermann was to prepare a presentation for the next budgetary meeting of the board. Having gone through the costing exercise and learning more about the complexities of such a task, he felt more confident in making a proposal.

Knowing full well that the financial officer was eagerly awaiting the chance to take his proposal apart on financial grounds, Hermann just smiled to himself and thought about a quote from a book by Farrier and Weber where it read “cost is a half word”.

**Case Chart 1 – Cost breakdown 2005**

### Breakdown of costs - 2005

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Death Benefits</th>
<th>ARV</th>
<th>Other medical</th>
<th>Other costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Intervention</td>
<td>5,037,685</td>
<td>-</td>
<td>629,229</td>
<td>1,249,543</td>
</tr>
<tr>
<td>Low Success ARV</td>
<td>3,096,643</td>
<td>471,954</td>
<td>92,119</td>
<td>274,944</td>
</tr>
<tr>
<td>High Success ARV</td>
<td>2,937,503</td>
<td>499,206</td>
<td>48,688</td>
<td>191,246</td>
</tr>
</tbody>
</table>
Case Chart 2 – Death Benefit Payouts (Intervention & non-intervention cases)

![Death Benefit Payouts Graph]

<table>
<thead>
<tr>
<th>Year</th>
<th>No Intervention</th>
<th>High Success ARV</th>
<th>Low Success ARV</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>3,611,086</td>
<td>3,612,368</td>
<td>3,612,368</td>
</tr>
<tr>
<td>2001</td>
<td>3,824,080</td>
<td>3,825,703</td>
<td>3,825,703</td>
</tr>
<tr>
<td>2002</td>
<td>4,075,918</td>
<td>4,077,921</td>
<td>4,077,921</td>
</tr>
<tr>
<td>2003</td>
<td>4,364,885</td>
<td>4,119,850</td>
<td>4,116,868</td>
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<tr>
<td>2004</td>
<td>4,687,891</td>
<td>2,888,743</td>
<td>2,987,102</td>
</tr>
<tr>
<td>2005</td>
<td>5,037,685</td>
<td>2,937,503</td>
<td>3,096,643</td>
</tr>
<tr>
<td>2006</td>
<td>5,405,419</td>
<td>2,993,992</td>
<td>3,170,764</td>
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<tr>
<td>2007</td>
<td>5,779,445</td>
<td>3,056,292</td>
<td>3,281,761</td>
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<td>2008</td>
<td>6,146,898</td>
<td>3,123,132</td>
<td>3,397,550</td>
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<tr>
<td>2009</td>
<td>6,496,967</td>
<td>3,194,047</td>
<td>3,517,367</td>
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<td>2010</td>
<td>6,825,148</td>
<td>3,267,492</td>
<td>3,638,774</td>
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<td>2011</td>
<td>7,116,741</td>
<td>3,342,366</td>
<td>3,759,820</td>
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<td>2012</td>
<td>7,364,122</td>
<td>3,416,905</td>
<td>3,877,479</td>
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<td>2013</td>
<td>7,564,232</td>
<td>3,490,331</td>
<td>3,990,621</td>
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<td>2014</td>
<td>7,703,652</td>
<td>3,560,094</td>
<td>4,094,737</td>
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</table>
### Case Table 3: Cost to Company – Non-Intervention Scenario

<table>
<thead>
<tr>
<th>Years</th>
<th>Death Payout</th>
<th>ARV Costs</th>
<th>Medical - Non ARV</th>
<th>Recruitment Productivity</th>
<th>Compassionate Leave</th>
<th>Management Costs</th>
<th>Productivity</th>
<th>Recruitment</th>
<th>Sick Leave Costs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,805,543</td>
<td>-</td>
<td>111,381</td>
<td>35,518</td>
<td>29,598</td>
<td>22,669</td>
<td>147,990</td>
<td>46,173</td>
<td>126,409</td>
<td>2,325,280</td>
</tr>
<tr>
<td>2002</td>
<td>2,037,959</td>
<td>-</td>
<td>180,050</td>
<td>58,448</td>
<td>48,706</td>
<td>36,646</td>
<td>243,532</td>
<td>75,982</td>
<td>218,380</td>
<td>2,899,703</td>
</tr>
<tr>
<td>2003</td>
<td>2,182,443</td>
<td>-</td>
<td>221,373</td>
<td>72,534</td>
<td>60,445</td>
<td>45,056</td>
<td>302,223</td>
<td>94,294</td>
<td>277,358</td>
<td>3,255,725</td>
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<td>2004</td>
<td>2,343,946</td>
<td>-</td>
<td>266,648</td>
<td>88,177</td>
<td>73,481</td>
<td>54,271</td>
<td>367,405</td>
<td>114,630</td>
<td>344,613</td>
<td>3,653,172</td>
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<td>2005</td>
<td>2,518,842</td>
<td>-</td>
<td>314,615</td>
<td>105,008</td>
<td>87,507</td>
<td>64,034</td>
<td>437,534</td>
<td>136,511</td>
<td>418,950</td>
<td>4,083,000</td>
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<tr>
<td>2006</td>
<td>2,702,709</td>
<td>-</td>
<td>363,654</td>
<td>122,596</td>
<td>102,163</td>
<td>74,015</td>
<td>510,815</td>
<td>159,374</td>
<td>499,441</td>
<td>4,534,767</td>
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<tr>
<td>2007</td>
<td>2,889,723</td>
<td>-</td>
<td>412,153</td>
<td>140,394</td>
<td>116,995</td>
<td>83,886</td>
<td>584,977</td>
<td>182,513</td>
<td>584,055</td>
<td>4,994,695</td>
</tr>
<tr>
<td>2008</td>
<td>3,073,449</td>
<td>-</td>
<td>458,142</td>
<td>157,804</td>
<td>131,503</td>
<td>93,246</td>
<td>657,516</td>
<td>205,145</td>
<td>670,670</td>
<td>5,447,475</td>
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<tr>
<td>2010</td>
<td>3,412,574</td>
<td>-</td>
<td>537,886</td>
<td>189,751</td>
<td>158,126</td>
<td>109,476</td>
<td>790,628</td>
<td>246,676</td>
<td>841,503</td>
<td>6,286,619</td>
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<tr>
<td>2011</td>
<td>3,558,370</td>
<td>-</td>
<td>569,580</td>
<td>203,399</td>
<td>169,499</td>
<td>115,927</td>
<td>847,496</td>
<td>264,419</td>
<td>920,704</td>
<td>6,649,394</td>
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<tr>
<td>2012</td>
<td>3,682,061</td>
<td>-</td>
<td>594,919</td>
<td>214,903</td>
<td>179,086</td>
<td>121,084</td>
<td>895,431</td>
<td>279,374</td>
<td>991,694</td>
<td>6,958,552</td>
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<td>3,782,116</td>
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<td>613,566</td>
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<td>124,880</td>
<td>933,971</td>
<td>291,399</td>
<td>1,053,905</td>
<td>7,210,784</td>
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<tr>
<td>2014</td>
<td>3,851,826</td>
<td>-</td>
<td>625,023</td>
<td>230,511</td>
<td>192,092</td>
<td>127,211</td>
<td>960,462</td>
<td>299,664</td>
<td>1,101,403</td>
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<tr>
<td>TOTAL</td>
<td>43,002,084</td>
<td>-</td>
<td>5,912,334</td>
<td>2,063,597</td>
<td>1,719,662</td>
<td>1,203,342</td>
<td>8,598,317</td>
<td>2,682,675</td>
<td>8,974,257</td>
<td>74,156,264</td>
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</table>
**CaseTable 4: ARV Intervention High Success**

<table>
<thead>
<tr>
<th>Years</th>
<th>Death Payout</th>
<th>ARV Costs</th>
<th>Medical - Non ARV</th>
<th>Recruitment Productivity</th>
<th>Compassionate Leave</th>
<th>Management Costs</th>
<th>Productivity</th>
<th>Recruitment</th>
<th>Sick Leave Costs</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1,806,184</td>
<td>-</td>
<td>111,381</td>
<td>35,518</td>
<td>29,598</td>
<td>22,669</td>
<td>147,990</td>
<td>46,173</td>
<td>126,409</td>
<td>2,325,921</td>
</tr>
<tr>
<td>2001</td>
<td>1,912,851</td>
<td>-</td>
<td>143,230</td>
<td>46,076</td>
<td>38,396</td>
<td>29,152</td>
<td>191,982</td>
<td>59,898</td>
<td>168,109</td>
<td>2,589,694</td>
</tr>
<tr>
<td>2002</td>
<td>2,038,960</td>
<td>-</td>
<td>180,050</td>
<td>58,448</td>
<td>48,706</td>
<td>36,646</td>
<td>243,532</td>
<td>75,982</td>
<td>218,380</td>
<td>2,900,705</td>
</tr>
<tr>
<td>2003</td>
<td>2,059,925</td>
<td>157,032</td>
<td>189,994</td>
<td>61,084</td>
<td>60,445</td>
<td>38,670</td>
<td>254,517</td>
<td>79,409</td>
<td>19,814</td>
<td>2,920,890</td>
</tr>
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<td>2004</td>
<td>1,444,371</td>
<td>321,837</td>
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<td>5,126</td>
<td>73,481</td>
<td>3,114</td>
<td>21,358</td>
<td>6,664</td>
<td>32,018</td>
<td>1,923,270</td>
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### Case Table 5: ARV Intervention Low Success

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5 INSTRUCTOR’S GUIDELINE

5.1 Case synopsis

This case deals with the measurement of costs of the HIV/AIDS epidemic in two separate scenarios. Firstly, it covers the non-intervention case and secondly the case where Caltex decides to intervene with an anti-retroviral programme. It highlights the difficulties in measuring costs but also emphasizes the importance of performing the exercise with a view to strategic decision making.

5.2 Teaching objectives

A case study approach has been chosen because it provides a more thorough exposé of the practical steps of costing HIV/AIDS in a typical setting within a large South African based company. The method of assessing costs remains a stumbling block for most companies and through the case study the reader is able to develop an understanding of the complexities of costing HIV/AIDS within a company context.

Key issues to be emphasized are the tangible financial and humanitarian benefits directly related to the successful implementation of an ARV programme. The case study highlights some of the financial issues surrounding the introduction of an ARV programme. The costing exercise for the non-intervention case as compared to the intervention case shows that it is clearly more cost effective for Caltex to introduce an ARV programme. In addition it shows that of the various costs measured, by just concentrating on the difference in death benefits payouts between the two cases, the introduction of an ARV programme can be justified.

The case study would be appropriate teaching material on an executive programme or graduate level management education classes like the AIM or MBA. At a broader level, the idea that intervening with an ARV programme is cheaper than not intervening, even after taking the costs of the ARV programme into account is an important learning point for students and for managers in South Africa.
5.3 Teaching plan

5.3.1 Discussion questions

Question 1.

*Why have South African companies failed to mount an effective response to HIV/AIDS?*

Question 2.

*What are the possible reasons for the apathy shown by companies in dealing with the HIV/AIDS issue in South Africa?*

Question 3.

*What are the difficulties that a manager can encounter when considering the impact of HIV/AIDS on a company? Is it reasonable to measure some factors and not others?*

Question 4:

*Can companies expect a near 100% uptake of an ARV program by HIV/AIDS infected employees? If not, how could they encourage greater participation?*

Question 5:

*What were the important lessons that could be learned from the manner in which the financial impact of HIV/AIDS on Caltex Oil was measured?*
5.3.2 Case Analysis

Question 1:

Why have South African companies failed to mount an effective response to HIV/AIDS?

- The lack of prevalence data that allows companies to develop effective responses to the disease.

- There are no viable forums to share the private sector data and collaborate with Government in leveraging this data in the fight against HIV/AIDS.

- Very limited use is made of studies in South Africa. The studies are a primary tool in benchmarking and measuring initiatives and can provide valuable insight into formulating an HIV/AIDS strategy.

- There is a general absence of private sector specific mass media initiatives.

- With some individual exceptions and certain industry initiatives, there is virtually no community-based care response.

- Approaches in South Africa are typically uni-dimensional and with the synergies possible from a more multi-faceted approach absent.

- Behaviour modification, as a key thrust, should be strongly emphasized. Company initiatives are too limited to seriously impact on behaviour.
Question 2:

*What are the possible reasons for the apathy shown by companies in dealing with the HIV/AIDS issue in South Africa?*

- Failure to take responsibility in facing up to the challenge of HIV/AIDS by the companies - “this is not our problem” attitude.

- Buy-in from all stakeholders is essential. In particular, leadership within the business sector.

- The perception that this is a soft HR issue and not an important strategic issue facing the company.

- Lack of foresight and ignorance about the impact that HIV/AIDS will have in the not too distant future.

- Lack of funds to undertake the task of measuring the impact.

- Since HIV/AIDS affects the lower socio-economic groups to a greater extent, managers are less concerned.

- The lack of academic work in the area of costing the impact of HIV/AIDS.

- Lack of a clear stance on HIV/AIDS by government.

- Lack of uptake by employees when the ARV program is instituted.
Question 3:

_What are the difficulties that a manager can encounter when considering the impact of HIV/AIDS on a company? Is it reasonable to measure some factors and not others?_

- The manager will have to consider whether to intervene and if so, whether it is going to be cost effective for the company.

- The manager will have to consider whether the company has a moral obligation to its employees and to society in general.

- The decision to incur the cost of prevalence projections have to be made initially, even if the decision later is not to intervene. Are the projections accurate and can they be used to measure costs to the companies?

- Decisions regarding which costs to measure and what criteria should be used to decide which factors to include and which factors to exclude will have to be decided.

- Assumptions made have to be made where there are no firm guidelines. In this situation “best guess” is often the only way forward.

- Successful implementation of an ARV program is often more important than the task of costing. How can this be achieved?

- Lowered death benefit payouts form over two thirds of the overall cost saving. Should an anti-retroviral campaign be instituted?

- A lower cost for the measurement may make it more feasible for companies not wanting to spend a lot of financial and labour resources on such an exercise.
Question 4.

*Can companies expect a near 100% uptake of an ARV program by HIV/AIDS infected employees? If not how could they encourage greater participation?*

- Afflicted employees are hesitant to accept help for fear of being ostracized.

- Improving the workplace climate to encourage tolerance for those afflicted by HIV/AIDS may increase uptake.

- Employees have limited personal resources, assistance from a company may be their only option.

- Incentivisation for treatment may be an option to encourage employees to go on the programme.

- Free and confidential testing may be offered for employees to know their status and assess the option of going on an anti-retroviral programme.

- Cultural differences and mistrust may make some employees suspicious of the company’s intention albeit good.
Question 5:

What were the important lessons that could be learned from the manner in which the financial impact of the HIV/AIDS on Caltex Oil was measured?

- The task of measuring the impact is essential and should be undertaken by South African companies with the aim of decision-making.
- The need for undertaking the task of quantifying the impact of HIV/AIDS, in the light of the company sustaining losses, will make the concept easier to sell to the various stakeholders.
- The complete buy-in of management is essential; buy in from leadership is of paramount importance to success.
- The acceptance and understanding of the process, as well as the need for change, by trade unions is essential.
- Assumptions will have to be made and justified. But in the absence of alternatives this may be the only way forward.
- Not all costs may need to be estimated. Perhaps only factors that are reliably quantifiable and financially significant need to be considered. This does not give a complete costing but should allow managers to make decisions.
6 BIBLIOGRAPHY


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APPENDICES

Appendix A - The Doyle model – brief description by Fifth Quadrant Actuaries

The Doyle model has the longest track record of use in South Africa and is the most flexible model for projecting the HIV/AIDS epidemic in South Africa.

The Doyle model combines features of a macro-simulation model and a micro simulation programme. A macro-simulation model is calibrated in terms of inputs at a macro level; such as reported HIV prevalence levels at national or regional level. Pure macro-simulation models rely on inputs that can be very broad, and which are not directly defensible except through confirmation of the results they produce.

A micro-simulation model is built on comprehensive, scientifically defensible input parameters, which consider the risk behavior of individuals within a given population and aggregate their effects to produce projections of HIV/AIDS for whole groups or populations through complex iterative calculations. Pure micro simulation models depend on a range of input parameters for which little reliable information can be found and also have difficulty in producing reliable projections.

Combination of features of a macro and micro model thus make the Doyle model robust and better able to produce reliable medium and longer-term projections at a macro level without losing sensitivity to underlying micro parameters, which may be relevant to particular sub-populations. The epidemic in a province, region or the whole country is assumed to be an aggregation of many sub-epidemics in particular population sub-groups. Each of these is defined by its unique demographics (e.g. race, gender, age profile), its geographic location and the timing of the epidemic in the area relative to other areas, and risk in terms of sexual behavior patterns.

Of crucial importance to the projections is the notion that the epidemic moves through a population through interaction between various risk groups. Four behavioral risk groups are defined in the model: commercial sex workers and frequent clients; other people with high incidence of sexually transmitted diseases; people at risk of
infection; and people not at risk of infection. Sub-epidemics are initially fed by infected persons from outside a community and then multiply through contact between people in these risk groups.
De Beers to provide anti-retroviral treatment

August 12 2002 at 12:26PM

Diamond mining giant De Beers said on Monday that it would make HIV and Aids anti-retroviral treatment available to all its employees at the beginning of next year.

De Beers spokesperson Pride Mogorosi said all De Beers permanent employees, as well as their spouses or life partners would be allowed to join the programme.

Government, trade unions and other relevant stakeholders would be consulted before the treatment was made available.

Mogorosi said access to the drug treatment would initially run for a two-year pilot period after which the company would review its position.

She said employees and their partners would be encouraged to know their status through the company's free voluntary counselling and testing programme or through other facilities. - Sapa