

**UNDERSTANDING THE EXPERIENCES OF DOCTORS WHO  
UNDERTAKE ELECTIVE OPERATIONS ON HIV/AIDS PATIENTS.**

**BY**

**JACQUELINE NOMASWAZI GWALA**


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## **DECLARATION**

**This study is original work and has not been submitted previously to  
this or any other university. Master's Thesis prepared and revised  
solely by Jacqueline Nomaswazi Gwala**

**in partial fulfillment of requirements for the degree Master in Public  
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**Jacqueline Nomaswazi Gwala**

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## LIST OF ABBREVIATIONS

ANC	Antenatal Clinic
AORN	Association of Pre-operative Registered Nurses
CDC	Centers for Disease Control and prevention
DHS	District Health System
DOH	Department of Health
EPTB	Extra pulmonary tuberculosis
NHS	National Health System
NTP	National TB Program
HPCSA	Health Professional Council of South Africa
HST	Health Systems Trust
HIV/AIDS	Human Immune Deficiency Virus / Acquired Immune Deficiency Syndrome
KZN	Kwazulu-Natal
LUDWMH	Lower Umfolozi District War Memorial Hospital
NGO	Non Governmental Organisations
OHSA	Occupational Health and Safety Act, 1994
PEP	Post Exposure Prophylaxis
PHC	Primary Health Care
PPE	Personal Protective Equipment
PMTCT	Prevention of Mother to Child transmission of HIV infection
RDP	Reconstruction and Development Program
SA	South Africa

SD	Standard Deviation
TB	Tuberculosis
UNAIDS	United Nations Program on AIDS
VCT	Voluntary Counselling and Testing



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## **Summary of the study**

### **The problem**

UNAIDS estimates that at the end of 2003 there were 5.3 million people in South Africa living with HIV, equivalent to 21.5% of the adult population (UNAIDS, 2004).

The average density of the population works out at 29 people per square kilometer, with 60% of these in urban areas and 40% in rural areas. Some parts of the country, especially in the rural areas, are very isolated and underdeveloped. This lack of infrastructure is one of several factors that make it difficult to get a clear picture of the size of the population and the HIV prevalence. A common method of measuring HIV prevalence in South Africa is through surveys of HIV test results taken from pregnant women who attend antenatal clinics. It is estimated that about 600 people in South Africa die of HIV-related illnesses each day. Whatever the precise levels of HIV infection and mortality, what is certainly clear is that the epidemic is a major one, and impacts on clinical practice in public sector hospitals.

This study was designed to investigate and understand doctors' experiences when electively operating on HIV / AIDS patients.

### **The aim of the study was:**

To investigate the experiences of doctors undertaking elective surgery on HIV/AIDS patients.

### **Methodology**

This study uses a narrative and hermeneutic approach to explore the experiences of fourteen doctors undertaking elective surgery on HIV/AIDS patients. Participants in this

study were doctors from three hospitals serving district 26, 27 and mainly district 28, in Northern Kwazulu Natal, where most people in these communities are disadvantaged.

Using an interview guide developed by the researcher, narratives from doctors were collected. The narratives were analysed using a reading guide (Tappan and Brown, 1992).

This method involved reading each narrative a number of times, focusing on a particular aspect of the respondent's narrative with each reading.

### **Findings**

Three major themes emerged through the process of interpretation, 1) doctors' personal factors, 2) structural factors, such as the health system, health service delivery and risk of exposure 3) patient related factors and lack of protocols and guidelines in surgical care of HIV/AIDS patients, these factors contribute to the challenges doctors encounter when operating on HIV/AIDS patients. Further research is warranted.

## CHAPTER ONE

### 1. Introduction

#### 1.1 Motivation for the study

The HIV/AIDS epidemic has become a serious health and development problem in many countries around the world. The joint United Nations Program on AIDS (UNAIDS) estimates the number of HIV infections worldwide at about 38.6 million by the end of 2005. An estimated 4.1 million became newly infected with HIV and an estimated 2.8 million lost their lives to AIDS (UNAIDS, 2006).

The annual South African Antenatal HIV Sero-prevalence Surveillance has reflected a sharp rise in the epidemic over the last ten years and continually reported KwaZulu Natal as the epicentre of the AIDS pandemic. In 1991 the survey of women attending antenatal clinics in Northern KwaZulu-Natal found that only 0.8% were HIV infected in 1991. The rapid increase in prevalence of women attending antenatal clinics in KwaZulu-Natal, from 1994, (7.6%), to 22.4% in 2000 and 40,7% in 2004 (Department of Health, 2005). In contrast to the annual antenatal surveys which have consistently found KwaZulu-Natal (KZN) to have the highest prevalence, in a national survey the province ranked 4<sup>th</sup> (11.7%). A possible explanation for the discrepancy is the fact that the sites for KZN's antenatal survey are along major transport routes, known to be high-risk areas for HIV. This study included rural and urban households. In addition, a relatively small percentage of people in KZN (5%) live in informal settlements where HIV prevalence is high (Shishana, 2002).

A cohort study was undertaken at a sugar mill located in Northern KwaZulu- Natal during 1999-2000, to determine a package of care for HIV/AIDS in an occupational setting in Africa. It revealed that amongst those receiving voluntary counselling and testing the sero-prevalence of HIV was 54% (Morris, Edward and Cheevers, 2001). This suggests that Northern KwaZulu Natal has a high prevalence of HIV/AIDS and this results in a high number of HIV/AIDS patients being operated on in the hospitals of Northern KwaZulu Natal, where the present study was conducted.

The study conducted by McCann at 1999, which looked at the willingness to provide care and treatment for patients with HIV/AIDS, revealed themes of the positive attributes associated with caring for and treating patients with HIV/AIDS. However these professionals (both nurses and doctors) voiced their major concern regarding surgical management in HIV/AIDS patients and the lack of policy guidelines and protocols.

The uncertainties of HIV infection and its relentless progression places an enormous burden on those affected. The current trend in health care research related to HIV/AIDS generally focuses on the treatment rather than on the care of the patients (Morgan et al, 1999). Many doctors are faced with, and give treatment to the patients who have HIV/AIDS and confront a myriad of challenges directly related to the disease processes, medical and surgical interventions, and diseases associated with AIDS. Many HIV/AIDS patients need operations. Disease prevention and surgery

are significantly affected by the experiences of these doctors in respect of the disease and the patient (Fuller, 1999).

Doctors are in a unique position to provide the information and education needed prior to operating on HIV/AIDS patients, since they are perceived as among the most trusted source of health care information by the general public. However, little is known about doctors' experiences when electively operating on HIV/AIDS patients in South Africa and in particular on such patients from a disadvantaged community, which in this context is very important. This is because most South Africans are malnourished and lack household food making them very weak to withstand operations (Habadaios et al, 2003). There is a rapidly growing body of research related to professionals' attitudes towards HIV/AIDS in Western countries (Morgan et al, 1999).

In South Africa, however, there is limited research about the experiences of health care personnel about HIV/AIDS and in particular, concerning the experiences of practitioners.

## **1.2 Statement of the problem**

Practitioners do not have a platform to verbalize or ventilate their fears, problems, and experiences in operating on HIV/AIDS patients. No ventilation results in a "burnout" syndrome, and they may become less effective and the disadvantaged communities they serve, may suffer (Fuller,1999). The present study was directed at

understanding and clarifying the surgeons' problems, identifying possible solutions and making recommendations to address these problems.

### **1.3 Aim of the study**

To investigate the experiences of doctors who undertake elective surgery on HIV/AIDS patients in a rural district.

### **1.4 Objectives of the study**

1. To explore doctors' professional obligation to electively operate on HIV/AIDS patients .
2. To investigate doctors' empathy – altruism, fears and stress with respect to HIV surgery.
3. To investigate problems related to the health system, service delivery and risk of exposure that doctors encounter when electively operating on HIV/AIDS patients.
4. To explore patient related factors challenging doctors when electively operating on HIV/AIDS patients.
5. To ascertain which procedures or protocols doctors think should be followed when operating on HIV/AIDS patients.
6. To make recommendations based on the results of the study for doctors involved in surgical interventions with HIV/AIDS patients.

## **1.5 Definition of terms**

### **1.5.1 Understanding**

The term understanding is used in the study to mean grasping the meaning of doctors' feeling when electively operating on HIV/AIDS patients (Fowler & Fowler, 2000).

### **1.5.2 Experience**

The term experience is used in the study to refer to what doctors undergo or live through when electively operating on HIV/AIDS patients (Fowler & Fowler, 2000).

### **1.5.3 Doctor**

The term doctor is used in the study to refer to a qualified medical practitioner who treats diseases and impairments by electively operating on people (Fowler & Fowler, 2000).

### **1.5.4 Undertake**

The term undertake is used in the study to mean to take upon oneself to accomplish elective operations on HIV/AIDS patients (Fowler & Fowler, 2000).

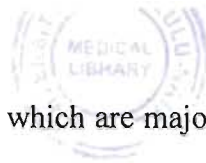
### **1.5.4 Elective operations.**

The term elective operations is used in this study to refer to a choice one has to make in order to operate on the body, usually with instruments, which aims to improve or restore health (Antsey, 1999).

### **1.5.5 HIV**

The term HIV in this study stands for Human Immune Deficiency Virus, which is a group of infectious organisms that cause Acquired Immune Deficiency Syndrome (AIDS). Once inside the host, which is the human body, HIV primarily infects





T lymphocytes and monocytes, which are major components of the immune system. The virus takes over the cell reproductive machinery to reproduce itself. The cell weakens and eventually dies, releasing the newly made viruses into the blood stream. Other white blood cells are invaded and die. The body is left vulnerable to opportunistic diseases as the HIV mutates at such a fast rate that by the time an antibody is produced, the virus has changed its appearance and the antibody is unable to recognise its target (Barnett & Whiteside, 2002).

### **1.5.6 AIDS**

The term AIDS in this study stands for Acquired Immune Deficiency Syndrome, which is the weakening of the body immune system, that is caused by HIV (Human Immune Deficiency virus). The body is thus left vulnerable to opportunistic infections, which are easily fought off by a normally functioning immune system. The disease, however can become highly disabling and potentially fatal if the immune system is infected by HIV (Barnett & Whiteside, 2002).

### **1.5.7 Disadvantaged Community**

The term disadvantaged community in this study refers:

a) To a group of people with more social interaction compared to other groups, (i.e., a community) who typically hold a common vision and share responsibilities and resources. Such a group of people are in Northern KwaZulu-Natal and they lack power, money, or other means of influence. They are similarly called “the poor”, and constitute the majority of the population who have been affected by apartheid and its legacy (Chambers, 1991).

b) To a lack of advantage, handicap, with a physical or mental impairment that interferes with the ability to lead a happy, productive life which may affect his or her personal life, and community life (Chambers, 1991).

## CHAPTER TWO

### 2. BACKGROUND OF THE STUDY – LITERATURE REVIEW.

#### 2.1 HIV/AIDS Pandemic

##### 2.1.1 Global summary of the HIV /AIDS epidemic, end 2005

**TABLE 2.1 UNAIDS summary of the HIV/AIDS epidemic (UNAIDS, 2006)**

<b>People living with HIV infection in 2005</b>	<b>Total</b> 40 million [34.6 – 42.3 million] <b>Adults</b> 38.7 million [32.7– 39.8 million] <b>Women</b> 20 million [15.8 – 18.8 million] <b>Children &lt;15 years</b> 2.1 million [1.9 – 2.5 million]
<b>People newly infected with HIV in 2005</b>	<b>Total</b> 5 million [4.2 – 6.3 million] <b>Adults</b> 4.9 million [3.6 – 5.6 million] <b>Children &lt;15 years</b> 630 000 [570–740 000]
<b>AIDS deaths in 2005</b>	<b>Total</b> 3.2 million [2.6 – 3.3 million] <b>Adults</b> 2.8 million [2.2 – 2.7 million] <b>Children &lt; 15 years</b> 490 000 [440 – 580 000]

HIV/AIDS has fundamentally changed our world, killing 2.9 million men and women, orphaning millions of children, and killing more than 440 000 children, hindering population growth. More than 40 million people are living with HIV/AIDS, more than half of them are women and children (UNAIDS, 2006).

#### 2.1.2 HIV / AIDS in Africa

In 16 African countries more than one-tenth of the adult population (aged 15-49) is infected with HIV (UNAIDS, 2004). In six countries of Southern Africa, AIDS was

expected to claim the lives of between eight and twenty five percent of today's practising doctors by the year 2005. In seven countries, all in the southern cone of the continent, almost 80% of all deaths in young adults, aged 25 - 45 years will be associated with HIV. Infection rates in young African women are far higher than young men. The average rates of infection in teenage girls were over five times higher than in teenage boys. In 1997, public health spending for AIDS alone already exceeded two percent of gross domestic product (GDP) in seven African countries – and total health expending accounts for three to five percent (Barnett & Whiteside, 2002).

### **2.1.3 HIV/AIDS in South Africa**

South Africa has a serious HIV/AIDS (Human Immune deficiency Virus/Acquired Immune Deficiency Syndrome) epidemic, with millions of its people living with the disease. For the country to respond effectively to prevent new infections and provide care and treatment to those who are already living with HIV/AIDS, it is vital to have accurate data and a comprehensive understanding of the epidemic (DOH, 2004).

Historically, South Africa has had a turbulent past, and this history is relevant to the explosive spread of HIV in the region the content is described below. Apartheid was legislated into force in the 1950s, with the prohibition of mixed-race marriages, and the categorisation of separate areas in which different races might live. Sex between different ethnic groups was prohibited. In 1955 the African National Congress (ANC) demanded equal political rights, and 1956 Nelson Mandela and other

political activists were arrested for high treason. A period of increasing unrest followed, arising from the increasingly militarised discrimination growing in South Africa. In 1985 and 1986, a State of Emergency was declared in response to serious riots, and the violence increased. (Barnett & Whiteside, 2002).

Migration, mobility and HIV/AIDS are major global phenomena at the beginning of the new millennium. The 2002 UNAIDS *Report on the global HIV/AIDS epidemic* highlights relevant and crucial links between HIV/AIDS and Mobile Populations. The United Nations Population Division estimates that approximately 175 million people worldwide are considered migrants in that they live outside their country of birth. People move for a variety of reasons – some voluntary – some not. The dramatic political, economic, social and demographic changes in Africa over the past few decades have been accompanied by rapid urbanization, significant population displacement, and migration. Improved transport and communication systems, the increased exchange of goods, and the launching of large-scale development projects have prompted millions of young women and men to move within and beyond their countries (UNAIDS, 2003).

Armed conflicts, political instability, economic crises, natural disasters and environmental degradation have forced many millions more to flee their homes and run a gauntlet of dangers which, for many, could include much higher risks of HIV infection. Population mobility facilitates the spread of STIs, including HIV as documented in the UNAIDS Technical Update on population mobility and AIDS. In

many countries, areas reporting higher seasonal and long-term mobility also have higher rates of HIV infection, and rates of infection also tend to be higher along main transport routes and in border regions. Southern Africa has significant levels of migration and the world's highest rates of HIV infection. The latest statistics from UNAIDS indicate that 14.7 million out of the total 42 million adults living with HIV/AIDS are living in southern Africa (UNAIDS, 2003).

The current epidemic started off very slowly with low prevalence reported in South Africa. The rapid increase in HIV prevalence has impacted dramatically on the health services, health policies and programmes and the implementation thereof have not kept pace with the rapid escalation of the epidemic, a summary of the history of HIV/AIDS from 1982 to 2004 is presented, which helps to explain the background to this study. In 1982, the first cases of HIV were diagnosed in South Africa. For the first few years of the epidemic, cases were mainly amongst white gay men. Following the same trends seen in other countries, as the number of cases increased, the virus began spreading to all other areas of society (Barnett & Whiteside, 2002).

The Advisory Group for AIDS was appointed in 1985 and in 1990 the first antenatal surveys to test for HIV were carried out, and 0.8% of women were found to be HIV positive. It was estimated that there were between 74,000 and 120,000 people in South Africa then living with HIV. Since this time, antenatal surveys have been carried out annually (Barnett & Whiteside, 2002). The number of heterosexually contracted infections equaled the number homosexually contracted in 1991. Since

that point, heterosexually acquired infections have dominated the epidemic. The prevalence rate was 1.4% based on antenatal testing. Several AIDS information, training and counselling centres were established (Barnett & Whiteside, 2002).

The prevalence rate was 2.4% in 1992 based on antenatal testing. The first governmental response to AIDS came when Nelson Mandela addressed the newly-formed National AIDS Convention of South Africa (NACOSA), although there was little action from the government in the following few years. The purpose of NACOSA was to begin developing a national strategy to cope with AIDS. The free National AIDS helpline was started (Barnett & Whiteside, 2002).

The prevalence rate was 4.3% in 1993 based on antenatal testing. The National Health Department reported that the number of recorded HIV infections had increased 60% in the previous two years and the number was expected to double in 1993. A survey of women attending health clinics indicated that nationally some 322,000 people were infected (Barnett & Whiteside, 2002).

Based on antenatal testing in 1994 the prevalence rate was 7.6%. The Minister for Health accepted the basis of the NACOSA strategy as the foundation of the government's AIDS plan. There was criticism that the plan, however well intended, was poorly thought-out and disorganised. The South African organisation Soul City was formed, developing media productions with the intention of educating people about health issues, including HIV/AIDS (Barnett & Whiteside, 2002).

The prevalence rate was 10.4% in 1995 based on antenatal testing. In 1996 the prevalence rate was 14.2% based on antenatal testing. The International Conference for People Living with HIV/AIDS was held in South Africa, the first time that the annual conference had been held in Africa. The then Deputy President, Thabo Mbeki, acknowledged the seriousness of the epidemic, and the South African Ministry of Health announced that some 850,000 people - 2.1% of the total population - were believed to be HIV positive, and that in some groups, such as pregnant women, the figure had reached 8% and was rising (Barnett & Whiteside, 2002).

The prevalence rate was 17.0% in 1997. based on antenatal testing. A national review of South Africa's AIDS response to the epidemic found that there was a need for political leadership (Barnett & Whiteside, 2002).

The pressure group Treatment Action Campaign (TAC) was started to advocate for the rights of people living with HIV / AIDS and to demand a national treatment plan for those who were infected, as the prevalence rate in 1998 was 22.8% based on antenatal testing. The then Deputy President Thabo Mbeki launched the Partnership Against AIDS, admitting that 1,500 infections were occurring every day. That year (2001) alone, 49,280 incidences of rape and sexual assault were reported, indicating that sexual violence is likely to be an important factor involved in the transmission of HIV. Sexual assaults in South Africa are thought to go largely unreported, so the true figure is undoubtedly much higher (Barnett & Whiteside, 2002).



Gugu Dlamini, a health worker and AIDS activist, made her HIV status public on World AIDS Day, and was stoned to death by a mob which included her own neighbours. Some 50% of adult medical admissions in hospitals in Gauteng Province were AIDS related (Barnett & Whiteside, 2002).

The prevalence rate of 22.4% based on antenatal testing was reported in 1999. Over 160 million free condoms were distributed. An educational campaign called 'Lovelife' was launched, a national programme targeting 12- to 17-year-old South Africans and in 2000 the prevalence rate was 24.5% based on antenatal testing. At the International AIDS Conference in Durban, the South African president Thabo Mbeki said that AIDS was a disease caused by poverty, not by HIV. While poverty can be more harmful to people who are HIV positive and lack adequate nutrition, this comment is untrue. It was also extremely unhelpful in promoting the adequate provision of HIV education in South Africa (Barnett & Whiteside, 2002).

President Mbeki set up a group charged with solving the country's AIDS problems which included HIV 'dissidents' such as Peter Duesberg, who believe that anti-AIDS drugs such as AZT actually cause AIDS, and that lifestyle choices such as homosexuality or drug addiction can cause AIDS. In 2001 the prevalence rate was 24.8% based on antenatal testing. South Africa's High Court ordered the government to make the drug nevirapine available to pregnant women to help prevent the transmission of the virus to their babies. Despite international drug companies

offering free or cheap AIDS drugs, the Health Ministry still refused to provide these drugs on a large scale (Barnett & Whiteside, 2002).

In 2002 the prevalence rate was 26.5% based on antenatal testing and in 2003, data showed that the HIV prevalence rate amongst pregnant women was 27.9%. TAC campaigners embarked on a strategy of civil disobedience and demonstrations to try to embarrass the government into acting. In March 2003, TAC laid culpable homicide charges against the Health Minister and her trade and industry colleague. TAC claims the pair are responsible for the deaths of 600 HIV-positive people a day in South Africa who have no access to antiretroviral drugs (Barnett & Whiteside, 2002).

These figures show that there was clearly an explosion in HIV prevalence between 1993 and 2000. This was a time when the country was distracted by the major political changes through which it was going, it is possible that the severity of the epidemic might have been lessened by prompt action at this time. Whilst the attention of the South African people was focused on the political and social changes occurring in South Africa, HIV was escalating. Although the results of these political changes were positive, the spread of the virus was not given the attention that it deserved, and policy makers and service providers didn't realise the impact of the epidemic in South Africa until prevalence rates had begun to accelerate rapidly.

Over the past decade, HIV prevalence estimates in South Africa have been largely derived from an annual survey of pregnant women attending antenatal clinics, supplemented by additional estimates from workplace and other studies. International consensus considers that antenatal surveys are a useful tool to assess HIV prevalence in areas with high prevalence of HIV in order to provide trend data. A further study augmented the Department of Health's (DOH) annual antenatal survey of pregnant women, through a population-based sample of South Africans including men, women, children, all races and ethnic groups, people living in urban areas, rural areas and farms, as well as people living in hostels (Winner, 2000).

To deal effectively with HIV/AIDS it is crucial to understand the social, cultural, political and economic context that contributes to vulnerability to HIV infection, and numerous studies have examined factors that contribute to this vulnerability in South Africa and internationally (Bartlet, 2003). These studies have utilized different methodologies, different measures and indicators, and sample sizes have been limited (DOH, 2004).

**TABLE 2.2 HIV Prevalence by sex and race in South Africa with 95% confidence intervals (Shisana, 2002).**

<b>Sex</b>	<b>n</b>	<b>HIV+ (%)</b>	<b>95% confidence interval</b>
Male	3772	9.5	8.0-11.1
Female	4656	12.8	10.9-14.6
Total	8428	11.4	10.0-12.7.
<b>Race</b>	<b>n</b>	<b>HIV+ (%)</b>	<b>95% confidence interval</b>
African	5056	12.9	11.2-14.5
White	701	6.2	3.1-9.2
Colored	1775	6.1	4.5-7.8
Indian	896	1.6	0-3.4
Total	8428	11.4	10.0-12.7.

Table 2.2 presents the overall HIV prevalence in the South African population (over the age of two) was estimated to be 11.4%. The HIV prevalence among those aged 15-49 was 15.6% (Shisana, 2002).

Gender: Females accounted for 12.8% of those testing HIV positive, while 9.5% of males tested positive. Among the youth (15-24 years), 12% of females were HIV infected as compared to 6% of males. Women are biologically more susceptible to HIV infection than men and difference in age distribution shows that women are infected at an early age. Men are also more effective at transmitting the virus as semen is more infectious than vaginal fluid. Women may also have undetected sexually transmitted infections, which increase the risk of HIV infection (Shisana, 2002).

HIV prevalence amongst Africans was highest (12.9%). This can be explained by historical factors, such as labor migration and relocation, as well as the fact that more African people live in informal settlements (DOH, 2004 & Shisana, 2002).

The infection rate among whites was 6.2%. This is considerably higher than countries with predominantly white populations such as the US, Australia and France, where prevalence amongst whites is less than 1%. Prevalence among Colored people was 6.1% and among Indians, prevalence was 1.6% (DOH, 2004).

South Africa is experiencing an HIV/ AIDS epidemic of shattering dimensions.

#### **2.1.4 South Africa AIDS Mortality Report**

Reliable statistics on HIV/AIDS deaths in South Africa are not available despite Government's extensive, efforts to improve the national vital registration system. The most recent official death statistics available are those for 1996. By 1996 the proportion of deaths due to AIDS was too low to tell us much about the shape of things to come. Even if the numbers of AIDS deaths were substantial, vital registration statistics may well be an unreliable source of cause of death information because the true cause of death of someone who died of AIDS can be expected to be frequently misreported (Bradshaw et al, 2001).

Standard indirect techniques have been adapted for estimating the extent of under-reporting of deaths to allow for different levels of completeness at different ages which can be expected in South Africa, in order to estimate the extent of under-registration in both the routine vital statistics reported by Statistics South Africa as well as the data obtained from home affairs. The coverage of adult death registration appears to have improved from 54% of deaths occurring in 1990 being reported to 89% of adult deaths (in those older than 15 years) occurring in the 12- month period

to the end of June 2000. The data show that there has been a steady increase in adult mortality during the 1990s. The mortality of young, adult women has increased rapidly in the last few years with the mortality rate in the 25-29 year age range in 1999/ 2000 being some 3.5 times higher than in 1985 (Bradshaw et al, 2001).

The mortality of young men has also increased, however, the pattern suggested that this may be a combination of a rise during the early 1990s in injury-related deaths, that typically occur among men in their twenties, that began to fall in the late 1990s, and a more recent increase in deaths due to AIDS in a slightly older age group. Mortality in the 30-39 year age range in 1999/2000 was nearly 2 times higher than in 1985, but obviously this is off a much higher base (Bradshaw, 2001).

The pattern in the empirical data is largely consistent with that predicted by models of the AIDS epidemic, in particular the ASSA600 model developed by the Actuarial Society of South Africa, suggesting that it is reasonable to interpret an increase in young, adult mortality as being essentially a consequence of HIV/ AIDS (Bradshaw, 2001).

It is estimated that about 40% of the adult deaths aged 15- 49 that occurred in the year 2000 were due to HIV/ AIDS and that about 20% of all adult deaths in that year were due to AIDS. When this is combined with the excess deaths in childhood, it is estimated that AIDS accounted for about 25% of all deaths in the year 2000 and has become the single biggest cause of death. The projections show that, without

treatment to prevent AIDS, the number of AIDS deaths can be expected to escalate, within the next 10 years, to more than double the number of deaths due to all other causes, resulting in 5 to 7 million cumulative AIDS deaths in South Africa by 2010 (Bradshaw, 2001).

**Table 2.3 Provincial HIV prevalence (Shisana, 2002)**

Provinces	n	HIV+ (%)	95% confidence interval
KwaZulu-Natal	1579	11.7	8.2-15.2
Gauteng	1272	14.7	11.3-18.1
Western Cape	1267	10.7	6.4-15.0
Eastern Cape	1221	6.6	4.5-8.7
Northern Cape	694	8.4	5.0-11.7
Limpopo	679	9.8	5.9-13.7
North West	626	10.3	6.8-13.8
Mpumalanga	550	14.1	9.7-18.5
Free State	540	14.9	9.5-20.3
Total	8428	11.4	10.0-12.7.

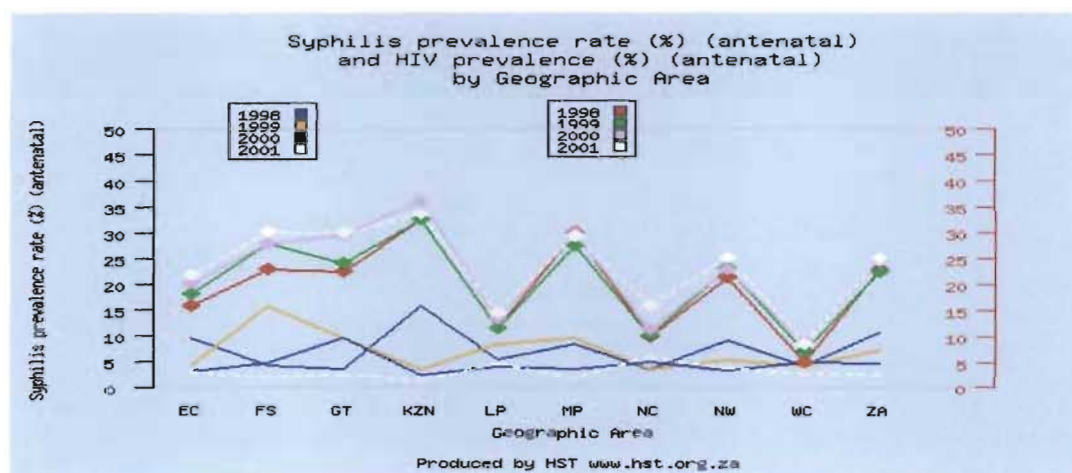
When considering the provinces, HIV prevalence was highest in these provinces Free State (14.9%), Gauteng (14.7%) and Mpumalanga (14.1%) (Table 2.3). Gauteng and Free State have the highest proportion of their HIV positive residents living in informal settlements, which is a significant risk factor for HIV (Shisana, 2002). It should be noted, however, that in terms of population numbers, KZN is a populous province (9.4 million people) as a result it has the second highest number of people living with HIV/AIDS after Gauteng (Shisana, 2002).

Age: The highest prevalence rate was among the 25-29 age group (28%), followed by the 30-34 group (24%). The prevalence rate for children 2-14 years was unexpectedly high at 5.6% and it remains unclear how these children were infected.

Locality type: People living in urban informal settlements had the highest HIV prevalence (21.3%), followed by formal urban areas (12.1%). Tribal areas had a rate of 8.7% and farms 7.9% (Shisana, 2002)

### 2.1.5 HIV/AIDS in KwaZulu-Natal

Antenatal (ANC) HIV sero-prevalence surveillance reflects KwaZulu-Natal as the epicenter of the HIV/AIDS pandemic. Figure 2.1, below illustrates HIV and prevalence among ANC attendees per province from 1998 to 2001 (cited DOH, 2003).



**FIGURE 2.1** HIV and Syphilis prevalence among ANC attendees in KZN: 1998-2001 (cited DOH, 2003)

### 2.1.6 HIV/AIDS prevalence in “Disadvantaged communities

"The mobility and transient nature of life in informal settlements, rather than socio-economic status, makes those living in these areas most vulnerable to HIV," says Dr Shisana. This is reflected in the finding that 23.5% of men living in informal settlements reported more than one sexual partner in the past year, in comparison to 19.2% in tribal areas, 10.2% in urban formal areas and 8.2% in farms. Youth (15-24



years) in informal settlements also showed a significantly higher rate of sexual experience (74%) than their peers in rural areas (58.3%) and formal urban areas (53.2%). There was no significant difference in HIV prevalence between those working (14.2%) and not working (12.1%). Wealthy Africans and less wealthy Africans had similar levels of risk (Shisana, 2002).

In summary, although socio-economic status might be seen as one of HIV/AIDS determinants, mobility and the transient nature of life in informal settlement makes people more vulnerable to HIV infection.

## **2.2 The background of South African Health System.**

### **2.2.1 Apartheid Structures that Affected Health Status.**

Inadequate state of the current health facilities arose because of the tremendous backlog resulting from South Africa's history and previous policies. The inadequacies of the health system have been emphasized by the current HIV/AIDS and TB epidemic, this is further explained below.

The apartheid policies of the South African government had a deleterious effect on the health of the majority of South Africans. When government created the homelands and forcibly relocated people to these and other rural places, it did so with little concern for the capacity of these areas to sustain a population or to develop an economic base. The government did not provide adequate housing, water, sanitation, schools, hospitals, and other public services (Van Rensburg, 2001).

### **2.2.2 Fragmentation, Privatization and Access to Care.**

After the formation of the South African state in 1910, health services in South Africa were characterised by a multiplicity of authorities and systems responsible for providing health care, rather than a unified system. The South African health system was divided according to race, geographic area, the public sector (further divided into local, provincial and central health authorities), and the private sector. Each of the ten subsequent homelands had its own health departments (Van Rensburg, 2001)..

Significant inequalities in the provision of health care therefore emerged between blacks and whites, between rural and urban areas, between primary and tertiary health care programs. The second Carnegie Inequality into Poverty and Development in South Africa characterised the South Africa Health Service as “not a federal arrangement with rational, clearly defined regional boundaries (Van Rensburg, 2001).

Most blacks in South Africa have not had access to health professionals and health care facilities. In 1990, there were approximately 22 000 doctors registered in South Africa, of whom only 1000 were black. At that time there were 3581 dentists, of whom only 25 were black. Socio- economic factors induce most doctors to practise in the developed areas of South Africa where potential patients can afford the fees and where more patients are likely to be covered by medical aid schemes. Thus in 1990 the ratio of general practitioners to population was 1: 900 in the urban areas

compared with 1: 4100 in the rural areas. The segregation of hospital care was one of the most visible manifestations of apartheid practices in health. Almost all public hospitals in South Africa had segregated wards or were designed entirely for specific “race” group (Van Rensburg, 2001).

Groote Schuur Hospital, an internationally renowned medical centre affiliated with the University of Cape Town, was the only South African hospital that offered services to all races. The hospital which opened in the 1930s, originally had separate entrances and wards for black and white patients. The result was severe overcrowding in the black wards and empty beds in the white wards. In the mid-1980s, the hospital staff began to integrate its services without official permission (Bond & Pillay, 2005).

### **2.2.3 Segregation in Medical Education**

Segregation prevented black medical students from attending to white patients on the same basis as white medical students. Only in the final years of apartheid were some black medical students allowed to attend to white patients at all, and even this varied from medical school to medical school. White medical students at the Afrikaans-speaking universities were allowed to rotate through both white and black hospital wards. However, the small number of black medical students (usually Asians) who attended these universities were not allowed to rotate through the white hospitals. Some medical students at several universities refused to rotate to hospitals that cared

only for white patients, as a means of pressing for desegregation (Van Rensburg, 2001).

For many years, blacks had a difficult time gaining admission to medical schools. From 1959 to 1984, the Extension of the University Education Act provided that everyone accepted by a medical school had to obtain individual ministerial consent from the ethnically relevant ministry in order to attend the university. Such consent was not readily given to all qualified applicants, and was disproportionately denied to Africans (Van Rensburg, 2001).

The loss of trained medical practitioners due to emigration was another serious problem. Physicians at the University of Witwatersrand estimated in 1989 that 50 percent of its medical graduates, white and black, left the country within ten years of graduation. A similar situation existed in other universities. A considerable number of white male graduates left to avoid military service, which was mandatory (Van Rensburg, 2001).

#### **2.2.4 White Paper on Transformation of the Health System for South Africa**

The White Paper for Transformation of the Health System in South Africa was published as Notice 667 of 1997 in the Government Gazette no. 17910. It was preceded by a document called “Towards A National Health System” and was widely consulted on before publication. Its basis formed the RDP and the African National Congress’s National Health Plan ( cited in DOH, 2000).

The objective of the White Paper was to “present to the people of South Africa a set of policy objectives and principles upon which the unified National Health System of South Africa will be based.” In addition the document contains a series of implementation strategies designed to meet the needs of South Africans within the constraints of available resources (DOH, 2000).

Five key strategies are outlined in the White Paper based on the principles of the RDP. These are : -

- The health sector must play its part in promoting equity by developing a single, unified health system;
- The health system will focus on districts as the major locus of implementation, and emphasise the PHC approach;
- The three spheres of government, NGOs and the private sector will unite in the promotion of common goals;
- The National, Provincial and District levels will play distinct and complementary roles; and
- An integrated package of essential PHC services will be available to the entire population at the first point of contact (DOH, 2000).

The mission of the Health sector is to “provide leadership and guidance to the National Health System in its efforts to promote and monitor the health of all people in South Africa, and provide caring and effective services through a primary health approach”(DOH, 2000).

The White paper spells out seven key goals (and a range of related objectives). The goals are:

- To unify fragmented health services at all levels into a comprehensive integrated National Health System (NHS);
- To promote equity, accessibility and utilisation of health services;
- To extend the availability and ensure the appropriateness of health services;
- To develop health promotion activities;
- To develop the human resources available to the health sector;
- To foster community participation across the health sector; and
- To improve health sector planning and the monitoring of health status and services (DOH, 2000).

The White Paper; Transformation of the Health System in South Africa aimed to remedy the segregation of health services, inequalities, lack of facilities and resources and change from a hospicentric to a District Health System. However, simultaneously occurring with changes to health system, the HIV/AIDS /TB epidemics have engulfed the country (DOH, 2000).

The South African health system, has components such as national health, provincial health and district health. National health ensures the implementation of national health policy and issues national guidelines. They liaise with national health departments in other countries and promote adherence to norms and standards on health matters, including the training of human resources for health. It is the duty of the national health to identify goals, prioritise and monitor progress of the

implementation of policies. The national health department co-ordinates health and medical services during national disasters, and co-ordinates health services rendered by the national department with the health services rendered by provinces. They facilitate and promote the provision of health services for the management, prevention and control of communicable disease as well as promoting health and healthy lifestyles (DOH, 2002).

The provincial departments of health, in accordance with national health policy and the relevant provincial health policy (in respect of or within the relevant province)-:

- Provide specialised hospital services;
- Plan and manage the provincial health information system.
- Provide technical and logistical support to the district health council.
- Conduct or facilitate research on health and health services, etc. (DOH, 2002).

The health system consists of various health districts, and the boundaries of health districts coincide with the district and metropolitan municipal boundaries. The district health system (DHS) is the vehicle through which the delivery of Primary Health Care takes place (DOH, 2002). As Primary Health Care is the foundation of the health system it is critical for the overall functioning of the system that there is a well- functioning DHS in place. The three hospitals where this study was conducted are part of Uthungulu and Zululand districts, previously they were called district hospitals. They provide some primary care, but mostly secondary and tertiary health

care. They are central to the health care system and adequate health care cannot be provided without them (DOH, 2002).

In this regard since hospitals are parts of the health system, understanding the health system requires knowledge of the purpose of the health system which aims at optimal health for all, and hospital goals are thus in line with those of the health system. Furthermore surgical specialties such as general surgery, gynaecologic and obstetric surgery, urology surgery, orthopaedic surgery, ophthalmic surgery, plastic and reconstruction surgery, otorhinolaryngologic and head and neck surgery, neurosurgery, thoracic surgery, cardiac surgery, peripheral vascular surgery and organ procurement and transplantation surgery are part of surgery, which is also part of the health system. It is important to note that if one part of the health system does not function well then the whole system is affected. Patton (2002) suggests that the foundational question is how and why does this system as a whole functions as it does? (Patton, 2002).

The thrust towards the National Health System and the move away from a hospicentric system in South Africa has detrimentally affected the distribution of resources to hospitals (DOH, 2002).

### **2.3 Surgery and HIV/AIDS**

The management of surgical disorder requires not only the application of technical skills and training in the basic sciences about the problems of diagnosis and



treatment, but also a genuine sympathy and indeed love for the patient (Way, 1998). Morgan et al, (1999) suggest that the surgeon must be a doctor in the old-fashioned sense, an applied scientist, an engineer, an artist, and a minister to his or her fellow human beings. Patients' lives depend upon the validity of surgical decisions, and the surgeon's judgment must be matched by courage in action and by a high degree of technical proficiency (Morgan et al,1999).

Way (1998) summarizes the research literature on the approach to the surgical patient. At their first contact the surgeon must gain the patient's confidence and convey the assurance that help is available and will be provided. The surgeon must demonstrate concern for the patient as a person who needs help, not just as a "case" to be processed through the surgical ward. Most patients are eager to meet a sympathetic and understanding doctor. Some surgeons are able to establish a confident relationship with the few words of greeting; others can only do so by means of a carefully acquired bedside manner. It does not matter how rapport is established as long as it is established (Morgan et al, 1999).

Way and Human (2000) further emphasize the importance of taking a past-medical history, and the physical examination. They say taking a history is detective work; preconceived ideas, snap judgment, and hasty conclusions have no place in this process. The diagnosis and decision for treatment must be established by inductive reasoning. The interviewer must first determine the facts and then search for essential cues, realizing that the patient may conceal the most important symptoms e.g. opportunistic infections related to HIV/AIDS. The complete examination of the

surgical patient includes the physical examination, certain special procedures such as gastroscopy, laboratory tests, x-ray examination, and follow up examination. These examinations can indicate or confirm whether the surgical patient is HIV positive and this will help the surgeon to make the decision to operate (Way and Human, 2000).

Equally important is the need for these doctors to find ways of coping effectively with their own concerns and levels of lived stress. These doctors serve the disadvantaged communities, who are poor. This poverty, in all its shapes and forms, remains the fundamental health problem of South Africa and indeed the whole world. Most of these areas that were poor 30 years ago are still poor today. Despite their valiant efforts it is impossible to expect people in such areas to pull themselves up by their own bootstraps. Poverty, whether at national or international level, is not just children in rags, or tramps drinking raw alcohol. Poverty is a product of the way we run the whole society. It is still endemic in South Africa and still the biggest cause of ill health and conversely sickness, like unemployment, is a significant cause of poverty. Hospitals will not remove poverty; they only cover its disease patches until they break out in another place or as in this case in HIV/AIDS (Whiteside & Sunter, 2000).

A myth has grown up around the helping professionals that they are not immune to the same sort of stress related problems as their patients (Rousseau & Tafelberg, 2000). This may influence the doctor's own health and the quality of service

provided to those in their care. People are said to be HIV positive when the HIV antibodies are detected in their blood. In areas where CD4 counts and viral loads can be measured, people are regarded as having AIDS when CD4 count falls below 200 cells mm<sup>3</sup>. AIDS can also be defined clinically, i.e. by examining the patient and making an assessment of his or her condition. There are a number of opportunistic infections that take particular advantage of a depleted immune system, some of which are fairly unique to HIV infections; TB is one of the diseases which is increasingly seen in HIV positive people (Rousseau & Tafelberg, 2000).

A growing body of theory and research suggests that operating on HIV/AIDS patients is risky to both the surgeon and the patient. These operations increase post-operative complications and death due to infection in patients with immune deficiency disorders. Many deficiency states are linked to malnutrition, which can cause delay in wound healing and other complications (Rousseau & Tafelberg, 2000).

Wilson and Glaros (1998); Human and Tafelberg (2000) and O'Donnel (1998), further state that the surgeons strive to help their patients to cope with their lives and stay healthy as they pledged on the completion of their medical degree.

A body of theory and research (Bailey and Bailey 2001; Parkhouse 2002 and Whiteside and Sunter 2000), indicates, that many diverse groups of professionals may be experiencing difficulties in coping with the care which they provide. These

frustrations can range from being mildly discomforted to the more seriously alarming “care giver burnout”, a complex stress state peculiar to individuals which can paralyze their functioning as helping professionals (Bond & Pillay, 2005).

### **2.3.1 Testing patients for HIV before surgery**

The only effective way to increase the protection of health care workers against the risk of occupationally acquired HIV infection lies in the adoption of internationally recognised and approved universal precautions in all institutions and in all clinical situations (Bailey & Bailey, 2001).

The HIV serostatus of any patient should not be determined as a routine prior to surgery or other interventions. In those procedures, which are perceived by the surgical team to pose an exceptionally high risk of percutaneous inoculation injury, or of skin/mucous membrane contamination despite the application of standard universal precautions, appropriate additional special precautions must be universally applied. However, where pre-treatment HIV testing is clearly necessary for determining which treatment may be in the patient’s best interest (i.e., operations in which a state of immunocompromise would effect the outcome), HIV testing with the patient’s free and informed consent is obviously acceptable (Bailey & Bailey, 2001).

Where any risk of virus transmission exists, universal precautions must be applied. These should be applied with sufficient uniformity as to render the pre-treatment

knowledge of a patient's HIV status irrelevant. In regard to the prevention of HIV transmission in the health care setting, doctors (and other health care workers) have an ethical duty to apply universal precautions in every clinical encounter, and to act as if every patient whom he/she treats, is HIV positive. The doctor has a responsibility not only to himself/herself and his/her family, but also to all other health care workers who could become infected as a result of the doctor's neglect of universal precautions. It must be noted that, to date, the majority of health care workers sustaining occupationally acquired HIV infection have been non-professional workers infected as a result of the carelessness of professionals in disposing contaminated sharps. Failure to apply universal precautions also poses a significant risk of patient-to-patient transmission of infection resulting from the doctor's or nurse's activities (Bailey & Bailey, 2001).

### **2.3.2 General guidelines for health care workers on HIV**

The following guidelines are available (DOH, 2002):

- The South African Medical Association's revised HIV/AIDS Ethical Guidelines (Draft, 1999);
- The Health Professions Council of South Africa's document: The Management of Patients with HIV Infection or AIDS (1999);
- Other Professional Boards of the Health Services Professions;
- The South African Nurses' Council;
- The South African Law Commission's reports on HIV/AIDS;
- Responses of the Department of Health regarding HIV/AIDS;

- Legislation and regulations regarding the handling of persons with HIV/AIDS(1999);
- A Draft National Policy on Testing for HIV (1999);

The recognition by our Supreme Court of Appeal of the legal status of guidelines set down by a professional board (2000).

The Health Professional Council of South Africa (HPCSA) acknowledges that although infection with the HIV/AIDS viruses is incurable at the moment, HIV/AIDS is considered as a manageable life-threatening disease. The health care worker has a big responsibility towards the individual patient, the other health care workers, other parties that might be in danger of contracting the disease from the patient, the community, himself/herself and his/her family. Universal precautions should be adhered to in all health care encounters to try and minimise all the exposure of health care workers and their patients (Parkhouse, 2002).

There is no persuasive evidence that knowledge of a patient's HIV positive status diminishes the incidence of exposure incidents. Routine or universal testing of a patient in the health care setting is therefore unjustifiable and undesirable.

Pre-testing may be approved of when certain well-defined, high-risk procedures are to be undertaken (Whaleside, 1999).

Post-exposure treatment of health care workers in whom inoculation or significant contamination might have occurred, may be beneficial and should be considered in

consultation with the Infection Control Medical Officer of the Institution, or other designated person (Fuller, 1999).

A good patient-doctor relationship and mutual trust are essential pre-requisites for the implementation of reasonable and equitable guidelines that will ensure that the requirements of both health care workers and patients are satisfied. Education and training are essential components of the successful implementation of universal precautions, that is those precautions which should be universally applied to prevent transmission of HIV and other diseases in the health care settings (Fuller, 1999).

**a) Consent to HIV testing**

As a general rule, a doctor should investigate or treat a patient for HIV infection only with the informed consent of the patient. Every effort should be made to adhere to this principle, including provision for skilled pretest counselling by the doctor or an appropriate counselor. The patient should whenever possible, clearly understand what advantages or disadvantages testing may hold for him/her, why the doctor wants this information and what influence the result of such test may have on his/her treatment. The counselling procedure should be one that is appropriate to the setting and is the least burdensome to the person being tested, as well as to those responsible for testing. Guidelines on appropriate counselling may be found in the South African Medical Association HIV/AIDS Clinical Guidelines booklet (Way, 1998).

When the patient is unable to give consent (i.e. in emergency settings), vicarious consent must be sought where possible (i.e. the consent of another person legally competent to give consent on behalf of the patient). If this is not possible under the circumstances, the doctor may decide what is in the best interest of the patient. If the patient is unwilling to consent to an investigation necessary for accurate diagnosis, the doctor is free to discontinue treatment of the patient. However, the doctor must be able to prove that he cannot proceed with appropriate treatment without knowledge of the HIV status. In this situation, however, it remains the doctor's duty to ensure that the patient continues to receive all necessary symptomatic or palliative care, provided either by himself or by other sources. Where it is appropriate and practicable, the doctor should treat a patient who refuses the necessary HIV testing as if the patient is HIV seropositive (Way, 1998).

The South African Medical Association urges all doctors to respect the patient's right to decide whether he/she will undergo HIV testing or not. Nonetheless, when a doctor or other health care worker has sustained an injury, which carries the risk of transmission of HIV, he/she has a right to information about the HIV serostatus of the patient whose body fluid may have contaminated him/her. If in this situation, the patient refuses consent to HIV testing, or is not in a fit state to give consent (for example: unconscious or confused) the doctor is advised to have the test performed on blood obtained for other purposes, and to inform the patient that the test has been performed. All requests for consent to testing must be accompanied by full



counselling concerning the possible consequences to the patient of a positive result (Fuller, 1999).

When a doctor has gained knowledge of a patient's HIV serostatus against that patient's wishes (for example: where a risk bearing "exposure" of a health care worker has occurred), or without the patient's consent (for example: in an emergency situation involving an unconscious patient), he/she should inform the patient that a test has had to be performed, but he/she must convey the result of the test to the patient only with the patient's informed consent and after counselling. In other words, the patient must be told that he/she has the right to refuse to be informed about the result of the test, and that the result will then be known only to the at-risk health care workers. In this way, the conflicting rights of the patient (not to be tested) and of the health care workers (to information crucial to his/her welfare) are reconciled (Fuller, 1999).

If a health care worker is inoculated during the course of patient management and the HIV status of the patient is unknown and the patient refused consent, in view of the fact that immediate post-exposure measures may be beneficial to the health care worker, information as to the HIV status of the source patient may be obtained in the following way:

Testing any existing blood samples - this should be done with the source patient's consent, but if consent is withheld, the specimen may nevertheless be tested. If, in the latter situation, the test is positive, the source patient must be counseled and, if

requested, informed about the result. Testing a blood specimen to be collected from the source patient - the informed consent of the patient must be obtained but, if he/she refuses to give it, the Medical Officer of Health should be approached in terms of the communicable diseases regulations for the necessary statutory authorization. If the patient is unable to give informed consent, and is likely to remain unable for a significant length of time in relation to the prophylactic needs of the health care worker or other patients, then every reasonable attempt should be made to obtain appropriate vicarious consent. Vicarious consent means the consent of the patient's closest relative or, in the case of a minor, the consent of the medical superintendent in the absence of a relative (RSC, 1999 ).

#### **b) Confidentiality**

According to the Royal Surgeons' College (RSC), guidelines for HIV Voluntary Counselling and Testing (1999), the results of HIV positive patients should be treated at the highest possible level of confidentiality. The transmission of clinical data to those medical colleagues and health care workers directly involved, or who will probably become involved with the care of the patient, will dictate the extent of disclosure of such confidential information and the health worker will use his or her discretion whether or not to divulge the information to other parties involved. Such a decision must be made with the greatest care, in accordance with the principle of professional secrecy that applies in respect of the patient. The decision whether to divulge the information to other parties involved must therefore be in consultation with the patient.

The report of HIV test results by a laboratory as is the case with all laboratory test results, should be considered as confidential information. Breach of confidentiality is however, more likely to occur in the ward, hospital or doctor's reception area, than in the laboratory. It is therefore essential that health care institutions, pathologists and doctors formulate a clear policy as to how such laboratory results will be communicated and how confidentiality of results will be maintained (RSC, 1999).

### **c) Confidentiality between health-care workers**

Doctors should use their discretion whether or not to confidentially discuss a patient's serostatus with any other health care worker who is at risk of infection from the patient. It is essential to attempt to obtain the patient's free and informed consent to this disclosure, but exceptional circumstances may necessitate the transmission of this information to other health care workers without the patient's consent (RSC, 1999).

Doctors may divulge information on the sero-status of a patient to other health care workers without the patient's consent only when all of the following circumstances exist:

An identifiable health care worker or team is at risk. The doctor is not certain that universal precautions are being applied. The doctor has informed the patient that under the circumstances he/she is obliged to inform the other health care workers involved. The health care workers or team thus informed are duty bound to maintain confidentiality. Where such information may affect the treatment of the patient in the patient's own best interest, the doctor should be duty bound confidentially to discuss

the patient's serostatus with all members of the health care team administering such treatment, but only with the patient's consent (RSC, 1999).

**d) The doctor's duty towards HIV positive patients**

No doctor may ethically refuse to treat any patient solely on the grounds that the patient is, or may be HIV seropositive. No doctor may withhold normal standards of treatment from any patient solely on the grounds that the patient is HIV seropositive, unless such variation of treatment is determined to be in the patient's interest and not by perceived potential risk to the health care worker. A doctor is not ethically or legally obliged to put his/her life at risk by undertaking interventional treatment of a patient in circumstances where facilities for the application of universal precautions do not exist (Fuller, 1999).

**2.3.3 HIV/AIDS and reasons for surgeon's stress**

The pandemic of HIV/AIDS would feasibly make the work of the surgeon stressful. South Africa has probably the largest number of HIV infected people of any country in the world. The rapid increase in prevalence of women attending antenatal clinics in KwaZulu-Natal, from 1994, (7.6%), to 22.4% in 2000, has proved a challenge for everyone especially the health providers and has had many deleterious consequences (DOH, 2002). Anecdotal information and a few recent studies suggest that the epidemic's impact on the health system is devastating, particularly as it affects human resources (DOH, 2002). Effects include attrition due to illness and death, absenteeism, low morale, increased demand for provider time and skills due to

increasing case loads of HIV/AIDS patients, diverting provider from care of other illnesses, budgetary and managerial inadequacies, and other effects of managing systems under stress (DOH, 2002). The scope and quality of health becomes vulnerable unless commitment can be mobilised and resources optimised (DOH, 2002).

The possibility exists that doctors performing surgery will be exposed to the HIV virus by infected blood and body fluids as the epidemic expands. The Worcestershire Infection group considered the use of pre-operative risk assessment to predict potential higher risk needle stick injuries. The average risk of a general surgeon sustaining a needle stick injury was 4.14. For consultant general surgeons, the average risk was 1.98. For orthopaedic surgeons the average risk was 1.14 and for consultant orthopaedic surgeons was 1.28 (Bhanduri, 2001).

Doctors, nurses and other health care workers are increasingly exposed to HIV/AIDS patients and it is, therefore, necessary that clear and definite guidelines be laid down. For years official guidelines at national level existed for medical practitioners to guide them in surgical management with patients who are affected with HIV/AIDS and/or the Hepatitis B virus. For nurses and other health care professions, no such official guidelines exist.

The serious legal implications, both criminal and civil, which surround HIV/AIDS, confirm the urgent need for acceptable uniform guidelines for the whole spectrum of

health care workers. The HIV/AIDS Ethical Guidelines of the South African Medical Association, which currently is the only representative body of practising physicians in South Africa, are practical and to the point. They give specific guidance for specific circumstances and enable the practitioner to do his or her duty towards the patient who is infected by HIV/AIDS or the Hepatitis B virus, in a legally and ethically correct manner (DOH, 2000).

#### **2.3.4 Duties of doctors infected with HIV**

Any doctor, who has reason to believe that he/she is likely to have been exposed to infection with HIV, has a responsibility to have his/her HIV status ascertained, and/or to act as if their serostatus were positive. Any doctor who finds or suspects himself/herself to be HIV positive must regularly seek counselling from an appropriate professional source, preferably one designated for this purpose by a medical academic institution. This is to ensure that there is no risk to the patients, and no compromise in the physical or mental ability of the doctor to perform his or her professional duties competently or safely. Counselors must of course be familiar with current recommendations so that unnecessary, onerous, and scientifically unjustifiable restrictions are not placed on the professional activities of the HIV positive doctor (Antsey, 1999).

Infected doctors may continue to practise, after they have sought and implemented the counselor's advice on the extent to which they should limit or adjust their professional practice in order to protect their patients. Any doctor who has counseled

a colleague who is infected with HIV and is aware that the advice is not being followed, has a responsibility to inform an appropriate body that the doctor's fitness to practice may be seriously impaired (Egan, 1999).

The HIV positive doctor has the same right to confidentiality as does any other patient. Knowledge of his/her serostatus may only be shared with others under the circumstances defined above in the section dealing with confidentiality. It is important to bear in mind that in case of the health care workers it is particularly difficult in an institution to maintain full confidentiality and great care must be taken in this respect (Egan, 1999).

Health care workers who are exposed to possible virus transmission should record the injury and must undergo serial blood tests to ascertain their serostatus at the time of injury, thereby they should rule out / confirm seroconversion with subsequent blood tests at three and six months after the injury (Hogan et al, 2005).

The Health Professions Council of South Africa (HPCSA previously the South African Medical and Dental Council) also issued a document regarding guidelines for handling HIV/AIDS (1989 and revised in 1993). The document, The management of patients with HIV infection or AIDS, states that HIV infection and AIDS have emerged as the most challenging health matter of modern lifetime (Antsey, 1999).

### **2.3.5 Knowledge of the HIV status of patients**

If a patient is known to be HIV seropositive, “extended” universal precautionary measures, such as special gloves, clothing and face masks, should be used. The number of assistants at operations should be limited and inexperienced personnel should not be allowed to perform the surgery. The selective use of such expensive measures will be cost effective (Egan, 1999).

### **2.3.6 Exposure to HIV infection**

The possibility that doctors performing surgery will be exposed to the HIV by infected blood and body fluids is increasing as the pandemic expands.

The implementation of infection control procedures as used for other infectious diseases such as hepatitis B can minimise the risk of HIV transmission during surgery. These involve the avoidance of contact with potentially infected body fluid and tissues. Such precautions include wearing gloves for procedures involving contact with blood and body fluid and, as the rate of glove puncture has been estimated to be as high as 30%, double gloving has been recommended and has been found to reduce the number of perforations of the pair next to the skin and therefore reduce skin contamination by blood /body fluids (Matta et al.,1998).

Masks and protective eyewear can be worn to protect the face especially the conjunctiva from splashing or contact with blood-containing aerosols such as those generated by orthopaedic drills and fluid-resistant drapes and gowns worn in order to contain blood/body fluid spills and to minimise skin contact. Beyond these



guidelines, which are necessary to protect from many infectious pathogens not just HIV is the avoidance of hand-to-hand passage of sharps (placing them in a dish first) and the use of means of dissection other than scalpels when such can be implemented successfully (Stotter et al., 2000).

However, objections to the implementation of such precautions in all surgical procedures have been made, including the increased financial costs because of additional equipment and the disposal required. The increased time necessary for each action may also result in a possible impairment of the surgeons' ability: for example, double gloving may result in less sensitivity, vision may be impaired when eye protection is worn and visors & facial mask may impair communication between members of the surgical team. Alternatively, it has been suggested that such precautions could be taken selectively, i.e. when there is a perceived high risk of HIV infection being present. The difficulty here is in the identification of 'high risk' patients. This is not efficiently achieved by taking case histories as many people may not acknowledge, or may not even know, that they have been exposed to the virus (Williams et al., 1997; Hargreaves et al., 1994).

Kelen (1994) have shown that clinical suspicion is not sufficient to identify patients who are infected with HIV. Indeed, any reliance on the concept of 'risk group' to identify patients with HIV infection may be unsound: HIV transmission results from engaging in high-risk behavior rather than membership of a 'risk group'.

Many surgeons have called for the facilitation of HIV antibody testing for patients prior to surgery so that additional infection control procedures can be implemented for those who are HIV positive (Stotter et al., 2000).

A reliance on voluntary testing would not identify all people who were HIV positive; indeed, there is some evidence that those people most likely to be infected are least likely to consent to take the test (Hale, 1999). On the other hand, any form of compulsory testing would be associated with serious ethical difficulties regarding confidentiality, loss of civil rights and loss of privacy (Miller, 1996).

The study conducted by Chapman in London (1998), investigating the attitude of doctors performing surgery who are working in an area with one of the highest HIV seroprevalence rates in UK, confirmed that the level of knowledge regarding transmission and prevention was generally good, although there were a number who believed that HIV could be transmitted by the respiratory and oral routes. However, knowledge regarding surgical management was unsatisfactory. Although a large majority felt they had the ethical obligation to surgically treat HIV patients, only half of them indicated their willingness to do so if they were given a choice. The majority (62%) supported the idea of routine preoperative HIV testing for patients, but fewer (40%) supported mandatory HIV testing for health care-workers. Dentists seemed more sensitive to issues involving transmission in the workplace, and 95% of them practised universal precautions. Continuing surgical education on HIV infection is

required to improve and maintain the level of knowledge and competency of doctors and dentists (Stotter et al., 2000).

Muskin & Goodwin (2001) conducted a survey in Philadelphia (US), looking at the surgeon's attitude and practices concerning HIV- infected patients. This survey revealed that 40-60% of the hospitals coped inadequately with operating on HIV/AIDS patients. Therefore it is important to arrange a system so that HIV infected patients will be able to receive necessary surgical treatment. For that purpose, a surgical educational program for health care professionals is needed.

Exposure to HIV in Muskin & Goodwin's study was described as: needlestick immediately after it was used in a HIV/AIDS patient, injury with a surgical needle while operating on an HIV infected blood, and work without protective gloves, performing surgery on HIV positive patient, or contact of HIV infected blood with damaged skin. The following conclusions were drawn from the study: 1. Health care workers undertake safety precautions only when they are informed about the HIV seropositivity of the patient. 2. Patients whose HIV serologic status is not known are considered not to create health risk for medical staff. 3. The level knowledge of health care workers about the risk of acquiring HIV infection, lack of risk and ways of diminishing the risk was poor (Hale, 1999).

### **2.3.7 Doctors infected with HIV**

Any doctor who finds himself to be HIV positive must seek counselling from an appropriate professional source, preferably one designated for the purpose by a

medical academic institution. Counselors must of course be familiar with recommendations such as those of the Centre for Disease Control so that unnecessary, onerous and scientifically unjustifiable restrictions are not placed on the professional activities of an HIV positive doctor. Infected doctors may continue to practise. They must however seek and implement the counselor's advice on the extent to which they should limit or adjust their professional practice in order to protect their patients (Stotter et al., 2000).

### **2.3.8 Post operative complications in HIV/AIDS patients.**

Ferrero & Bentivoglio did a study in 2003, which evaluated complications associated with caesarian section in HIV positive women. Most positive women (64,5%) had a complicated recovery after surgery. A higher incidence of major and minor postoperative complications was observed in the HIV positive group than in the control group. There was a statistically significant greater incidence of mild anaemia, mild temperature or fever, urinary tract infection and pneumonia in the HIV seropositive group (Stotter et al., 2000).

HIV seropositive women with less than  $500 \times 10^6$  CD (+) lymphocytes/ml had higher post-caesarian section morbidity than HIV seropositive women with higher CD4 counts and the median duration of hospital stay was significantly higher in the HIV positive group (median 7 days) than in the HIV negative group (median 4 days). The rate of HIV vertical transmission was 8.8%. Higher post caesarian section morbidity was found in HIV seropositive women than controls. "Unfortunately", concluded the

authors, “ the HIV positive women (with low CD4 lymphocytes counts whose infants theoretically will benefit most from caesarian delivery, are also the women who are most likely to experience post –operative complications” (Stotter et al., 2000).

Hajek et al, (2003) have made extensive investigation into HIV/AIDS patients in surgery. They reported that the main risk for surgical patients related to decreased immunity is not due to complications in the wounds and anastomoses, but in the severe opportune infections like tuberculosis.

Saunder & Scott (1999) in U.S.A, noted that pathologies directly related to the HIV infection were found in 81% of AIDS patients and 35% of asymptomatic HIV infected patients ( $p < 0.05$ ). These included opportunistic infections, non-Hodgkin’s lymphoma, Kaposi’s sarcoma, immune disorders, lymphadenopathy and pancreatic pseudocysts. It was noted that AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis. The hospital mortality was 12% (Saunder & Scott (1999).

### **2.3.9 Surgeons’ attitudes toward HIV/AIDS.**

Willingness to give care and treatment to surgical patients with HIV/AIDS is an important personal and professional requirement for health care professionals. It is acknowledged that there are many factors, which can influence the attitudes of

doctors towards operating on HIV/AIDS patients. Some of these are internal to the workplace while others are dependent on more external and broader influences.

Studies which asked respondents to indicate their willingness to provide care and treatment for surgical patients with HIV/AIDS, found that most, though not all, doctors were prepared to work with these individuals (Bredfeldt et al, 2004), which influence their willingness to care for and treat, include a belief in a professional obligation of a duty to care, and that providing care and treatment for such patients is a rewarding experience.

Every doctor takes an oath, and an example of the traditional hippocratic oath requires that; "I will exercise my profession to the best of my knowledge and ability for the good of all persons whose health may be placed in my care and for the public welfare. I will not knowingly or intentionally do anything to any person to their hurt or prejudice for any consideration or motive what so ever. I will keep in due regard the honorable obligations of the medical profession and will do nothing inconsistent there and I do also declare that I will keep silence about those things, which I have seen or heard while visiting the sick, which ought not be divulged."(Medical University of Southern Africa: Faculty of Medicine Declaration 1997).

Studies by Byrne & Murphy (1999), Steinborg (1998) and Van Wissen & Woodman (1999) also indicate that previous social and work experience with people with HIV/AIDS can have a positive influence on decisions about caring for and treating

such patients. There is also a common belief expressed in other studies that health care professionals should have the right to choose whether to provide care and treatment, and that care and treatment must be provided voluntarily and without coercion from more senior colleagues. Generally, however, these studies found that when it comes to questions about providing or withholding surgical care and treatment, only a small minority will actually refuse to provide care and treatment (Kerr & Horrocks 2000, Lewis & Montgomery 2000).

It is not only the ability to provide surgical care and treatment, and the conditions of surgical caring for and treating which influence the willingness of health care professionals. The stigma of caring for and treating patients with HIV/AIDS also inhibits certain individuals from being involved. This is illustrated in the findings of a study by Bredfeldt (2004) in North America, which shows that 40% of family physicians believe that they might lose patients if it was known that they are treating HIV –positive patients.

A survey of previous literature (Adeleka, 1998; Ope, 1999; Eriguch, 2000; Chan, 1998 and Mandelbrot, 2000) reveals a remarkable consistency in the way the knowledge of a patient's HIV positive status affects the doctor's attitude and management. The study has highlighted that doctors working in a situation where the epidemic has only recently emerged perceive themselves as being inadequate with regard to managing HIV infection in operated patients. There are indications that doctors may be influenced by the HIV positive status of patients when making

decisions regarding their surgical management. One of the major concerns with regard to the management of surgical patients with HIV, expressed by doctors in these studies, was the lack of management protocols and policy guidelines (Maxwell, 2001).

The literature review revealed a dearth of management protocols and policy guidelines in many countries, and generally, information is lacking if such protocols / policy exist (Brown & Gilligan, 1999).

Ideally what should happen?:

- Evaluation and staging of the patient and associated nutritional status and complications, and weigh the advantages of operating on the patient following an appropriate protocol that needs to be formulated.
- If the patient cannot do without the operation, an appropriate method of surgical intervention should be selected, for an example endoscope surgery instead of open surgery, to prevent wound healing complications that might occur with open surgery.
- If the patient is on antiretroviral drugs proper precautions in anaesthesia should be taken to prevent complications. Presently there are no protocols guiding these surgical interventions, doctors' discretion are considered right.

## **2.4 THEORETICAL FRAMEWORK**

The development of a framework of interaction and experience as it relates to surgical intervention of HIV/AIDS patients is presented to better understand



surgeons' experiences. The themes were selected after a review of literature and based on the author's experiences as a theatre sister for seven years. Theories provided a framework for the study.

#### **2.4.1 Motivation, helping experiences and consequences**

In response to the plight of others, many doctors regularly contribute their time and skills to help those in need. Whether in emergencies or in long-term prosocial behavior, the five cognitive steps are followed as summarised below. For example, the surgeons are aware of the HIV/AIDS problem because elective patients are tested before operated; they make the correct interpretation of the difficulty concerning the need for an operation; decide that they are responsible for helping fellow human beings; decide what to do (namely to operate on these patients); and then actually engage in the necessary operating behaviors (Tappan & Brown, 1999). But why do these doctors engage in helping these patients?

Some doctors choose general surgery, orthopaedics, ophthalmology, medicine, obstetrics and gynecology, while others choose disciplines without any surgical interventions like anaesthesia, and they may also specialise in the chosen discipline. There is also a choice that the doctor makes as to whether to operate or not, with elective operations depending on the condition of the patient and possible complications. Doctors however are unable to apply the same principle to emergency operations, in that they do the needed operation to stabilise the patient without an

HIV test on such patients unless it has major significance on the kind of operation to be performed.

Snyder and Omoto (1992) have identified five different basic motivations that lead individuals to engage in this kind of pro-social response to the HIV pandemic. These five underlying factors include values “because of my humanitarian obligation to help others”, the need to understand “because I want to learn how to cope with AIDS”, community concern “because of my concern and worry about the community”, the desire for personal growth “I want to challenge myself and test my skills”, and attempts to enhance one’s own self-esteem “I want to feel better about myself”.

Why do some people continue to help while others do not? Snyder and Omoto (1992) contacted a set of AIDS volunteers/helpers, asked them about the details of their work, and then contacted them again a year later. About half had quit during this period. The researchers then interviewed both the continuing volunteers/helpers and those who had dropped out. Both groups were satisfied with the work they had done, and both remained committed to the purposes of the organizations with which they worked. One differentiating factor was their original motivation. Those who continued as volunteer workers/helpers were more likely to be motivated by self-esteem enhancement or personal development, and this turned out to predict continued helping better than the “selfless” motives.

Another major difference was that those who quit simply perceived the costs being too high. That is, it took too much of their time and they felt embarrassed and uncomfortable about working with HIV/AIDS patients (Manither & Doucet, 2001). These volunteers seem to feel that the stigma of the disease might rub off on them. Social rejection based on mere association with stigmatized individuals is known as responding to a courtesy stigma (Goffman, 1963). That is, it is as if a sympathetic outsider (the volunteer/helper) becomes a “courtesy member” of the stigmatized group and hence becomes the target of whatever negative stereotypes may be associated with that group. The findings on volunteerism/helping can now be used to make more recruiting more efficient.

#### **2.4.2 Empathy-Altruism theory: unselfish helping**

Empathy is defined, as responding to another person’s emotional state with a vicarious emotional reaction that resembles what the other person is experiencing distress in response to the distress of others. This appears to be an evolutionarily useful response, and it has been observed in monkeys and apes (Brothers, 2000) and in some children as young as twelve months of age (Ungerer et al., 2000). By the time we reach adulthood, this capacity for empathic concern is a common one, especially if we have grown up in a supportive family in which such reactions are encouraged.

### **2.4.3 Egoistic Theory: helping others reduces uncomfortable feelings**

The basic idea is that individuals who are experiencing negative emotions are motivated to help the victims as a way to relieve themselves of such feelings. It does not matter whether the negative emotions are already present when the emergency arises or if they are aroused by the emergency itself. Either way, helping is motivated by a desire to make oneself feel better. In support of this model, Cialdini and his colleagues (2002) provided evidence that when empathy occurs, sadness is also aroused. When these researchers examined the effects of empathy and sadness separately, they found that helping increases, if sadness increases, but not when feelings of empathy increase.

The empathy-altruism theories counteracted with additional research designed to show that sad feelings were irrelevant. They demonstrated that empathy leads to helping even when study participants know that their unpleasant mood will be relieved by other means—that is, when researchers have told them that they will be engaging in a mood-enhancing experience very shortly. As is often true with such controversies, the final conclusive answer is still a matter of debate (Cialdini, 2002).

### **2.4.4 Empathic Joy; an alternative to egoistic theory**

According to Smith, Keating and Scotland (1999), empathy leads to helping- but not because of a selfless concern for the welfare of others or because helping reduces uncomfortable emotions. Instead, prosocial behavior is motivated by the joy one experiences when observing that someone's needs have been met. These theories

explain the reason why surgeons want to help by operating on the HIV/AIDS patients.

The overall health of the patient should, of course, be a physician's main concern, and so it follows that a "good" doctor should be willing to at least seriously consider new ideas or treatment approaches which a patient may suggest, no matter how unusual these may at first seem to be. Physicians, who quickly dismiss such ideas out of hand, without taking the time to hear the patient out, are not the kind of physician a person with AIDS needs. People with HIV/AIDS need a physician who is willing to become a partner with his/her patients in developing a coherent plan for medical treatment. Such a relationship is a powerful weapon with which to efficiently fight illness. The elements of this relationship are flexibility, imagination and balance (Smith, Keating and Scotland 1999).

#### **2.4.5 Flexibility**

Flexibility, mean the ability to change, and the willingness to try new and different surgical approaches. In operating HIV infected patients, flexibility is of paramount importance to the patient and his or her doctor, due to the incredible diversity of the virus and its highly variable course in each operated case. Every surgery in HIV infected patients is completely different in its effects upon the human body. No two operated patients respond to HIV infection in quite the same way. Some operated HIV positive persons live, with few opportunistic infections and an overall high quality of life (Baron & Byne, 1999).

Others are just the opposite, deteriorating rapidly while constantly plagued with a variety of opportunistic infections. The vast majority of patients fall somewhere in between these two extremes, and display greatly varied symptoms in the course of their disease after the operation. Thus there is a tremendous variance in clinical outcome between the infected human body, and physical differences between individual patients. What this means is that each person with HIV is unique in many ways. Only a doctor who understands the incredible diversity of HIV infection and is prepared to deal with it flexibly can be effective enough to be of real help to the patient with HIV when it comes to surgical interventions (Baron & Byne, 1999).

#### **2.4.6 Seed and Soil Germ Theory**

Post-operative complications related to wound healing can be explained using seed and soil germ theory.

In negotiating "the constructions, meaning and uses of germ theories and practices", Worboys is striving to "place early work on tropical medicine and parasitology in the wider context of the development of microbiology and new theories of disease" In so doing, he clearly demonstrates the range of germ theories of disease that were prevalent between 1865 and 1900. But Worboys goes beyond a mere discussion of germ theories, as he considers practices relating to germs as well that is, how germs were viewed, killed, cultured, altered, and represented in medical practice (Worboys & Lister, 2000).

Antiseptic surgery is the main topic, attempting to place the ideas and work of Joseph

Lister into the wider technical and ideological development of the larger field of surgery and germ theories. In particular, the developing innovations and ideas on wound management are discussed (Worboys & Lister, 2000).

He looks at the ways surgeons increasingly used bacterial germ theories, namely how to avoid germs and how to destroy them, as well as the laboratory research on germs and sepsis that would inform a revision in germ theory understandings.

The evolution of theories of sepsis (Listerism and its transitions) is considered and Worboys argues that "instead of just focusing on combating the 'seeds' of sepsis coming from outside, surgeons had also to consider the human soil in which they might 'germinate' and produce disease" (Worboys & Lister, 2000).

According to Worboys' theory HIV/AIDS patients "soil" are likely to experience and "germinate" wound sepsis this will "seed" post-operatively even if other surgical protocols are observed such as aseptic technique as "a way of combating the seed from outside"

#### **2.4.7 Systems' theory**

Systems theory is basically concerned with problems of relationships, of structures, and of interdependence, rather than with the constant attributes of object. Kahn defines a system as a "regularly interacting or interdependent group of items forming a unified whole," which "is in, or tends to be in, equilibrium"(p. 56). Katz says that "a system's attributes, which are the interdependence and interlinking of various subsystems within a given system, and the tendency toward attaining a balance, or equilibrium forces one to think in terms of multiple causation in contrast to the common habit of thinking in single-cause terms" (Katz and Kahn,1966, p. 787)

Since 1994 the health system in South Africa has undergone transformation towards a National Health System (NHS) (HST, 2001). However this has occurred as the HIV/AIDS epidemic has escalated (DOH, 2002).

Some of the problems of surgical intervention on HIV/AIDS patients stem from the health system. A system is, as defined by Van Bertalanfy, 2000 "a dynamic order of parts and processes standing in mutual interaction with each other"(p.381). A system cannot be understood by studying each part individually. Understanding the whole requires knowledge of the purpose of the system and how its parts interact to attain that purpose. In short to look at doctors' problems when operating on HIV/AIDS requires us to look at the whole health system, since the whole is different from the sum of its parts (Mcwhinney, 1998).



The three major perspectives of organizations are a rational system, a natural system and an open system. The rational system and the natural system tend to view the organization as a closed system, that is, separate from the environment. In contrast to closed system in the open system, organization is open to and dependent on the environment, especially, connections with external and internal components. This is how the previous health system is viewed before the White Paper Transformation of Health services. The systems are independent of environmental influences. Tanner and Williams suggest that a closed system allows most of its problems to be analyzed with reference to its internal structure and without reference to its external environment.

Closed systems focus on internal components such as variables of size, technology, location, ownership, managerial strategies, and leadership style. Thus, this approach can be applied at the technical level of the organization because it is necessary to reduce uncertainty. However, the nature the health system is not isolate rather than dependent on environment. Negandhi has stated that closed systems overemphasize principles of internal organizational functioning with consequent failure to develop and understand the processes of feedback which are essential to survival. (Tanner and Williams,1972)

A natural system includes many client-oriented service organizations - i.e. rape-counseling centre, HIV/AIDS comprehensive care, management, treatment and support. Miskel suggests that these systems deny the authority of office, seek to minimize the promulgation of rules, and procedures, attempt to eliminate status

gradations among participants, and do away with role differentiation and specialization of function. In natural systems, individual members and their personal qualities are great importance. Hence, Hoy defined a natural system as "an organization whose participants share a common interest in the survival of the system and who engage in collective activities, informally structures, to secure this end. Therefore, organizations share with all collectivities and focus attention on the behavioral structure" (Hoy and Miskel, 1978, p. 1850)

The type of system can be determined on the basis of how the boundaries of the system are defined. Levine and Fitzgerald note "Whether a given system is open or closed depends on how much of the universe is included in the system and how much in the environment" (Levine and Fitzgerald, 1992, p. 55).

A system is a functional whole composed of set of subsystems and components, when coupled together, generate a level of organization that is fundamentally different from the level of each individual subsystem. General systems theorists believe that, in spite of the obvious differences among the many kinds of living and nonliving systems, they share very general characteristics and that it is important to discover what these are.

The study of systems is by definition concerned with change. Components of a system are the factors or elements that are involved in the processes of a system. They can affect the system and may be affected by it. A component of a system may be a part of the process of more than one subsystem, e.g. structures in an

organization, the skin in a living creature, etc. (Levine and Fitzgerald, 1992).

Subsystems or parts of a system, are systems at the level below the one of which they are parts. Each of a living system's subsystem, like the system as a whole, keeps a number of variables in steady state (Levine and Fitzgerald, 1992). A system's function and structure may be studied, analyzed and described through basic subsystems. Tanner and Williams (1981) presented the subsystems developed by Katz and Kahn (1966) and integrated them with genotype functions outlined by Hoy and Miskel (1978).

Production and technical is concerned with converting inputs into outputs and may also be classified as a productive or economic part, which provides services, that is an organization that provides services like the health system. Supportive Subsystem are concerned with two major functions which are procuring input and disposing output; and promoting and maintaining good relationships with the between the organization and its environment (for example, getting new operating theatre equipment for endoscopic surgery, educating HIV patients about possible complications resulting from operating on HIV positive patients and educating surgeons on how to assess patients who can survive operations and how to deal with possible complications there of.

Maintenance Subsystem. Activities of this subsystem deal with personnel in the organization in all facets (e.g. role, arrangements, recruiting, selecting, motivating, disciplining, and socializing). The focus is on maintaining stability of the organization.

Adaptive subsystem. The functions of this subsystem are designed to insure that the organization can meet the changing needs of the environment (e.g. research, planning, development and so on). Adaptive organizations may include educational organizations that are responsible for the development and testing of theories, the creation of knowledge and for applying information in a limited extent to problems.

Managerial subsystem. The function of this subsystem is to coordinate the functions of the other subsystems, settle conflicts among them and hierarchical levels, and relate the total organization to its environment. This subsystem, cuts across all subsystems of the organization in its goal to encourage all the subsystems to obtain a concerted effort to achieve the highest level of functioning of the total system.

Whether we like it or not, doctors are enmeshed in many systems. It is to their benefit to gain some basic understanding of how systems work. They can more effectively care for HIV patients pre, intra and post operatively, families and communities when they do understand. they can more effectively bring about desired changes in their workplace if they are able to step back & consider how best to accomplish this within their workplace system.

## **2.5 Summary of Themes arising from Literature review.**

The increasing HIV/AIDS pandemic has become a serious health and development problem in many countries around the world, and these problems have been noted when doctors are electively operating on HIV/AIDS patients. In summary, it is essential that treatment of HIV/AIDS patients, like this study, begin to take

cognisance of dynamics involved in elective surgery of HIV/AIDS patients. Ignoring facts like South Africa's serious HIV epidemic, with millions of its people living with the disease, because of its turbulent past makes the situation worse for HIV patients who need elective surgery.

Theoretical framework in this study assist the understanding why the complexities surgical interventions of HIV/AIDS patients are aggravated by structural, personal, lack of guidelines and protocols in HIV/AIDS surgical care and patient related factors arising from the operated patients. Structural factors include, the challenge of recasting apartheid social and health policies, transforming a moribund bureaucracy's mode of governance and restructuring public institutions. Personal factors include how doctors perceive these problems, their fears of contracting the disease and their relationship with their patients.

Factors arising from the operated patient are complications pre, intra and post-operatively, such as anaesthetic difficulties because of respiratory infections, sepsis, delay in wound healing etc. In addition the literature review suggests which factors, and when and how such factors may motivate or constrain operating doctors. This study will compare the experiences of doctors when electively operating on HIV / AIDS patients with the evidence found in the literature review.

## CHAPTER 3

### 3. RESEARCH METHODOLOGY

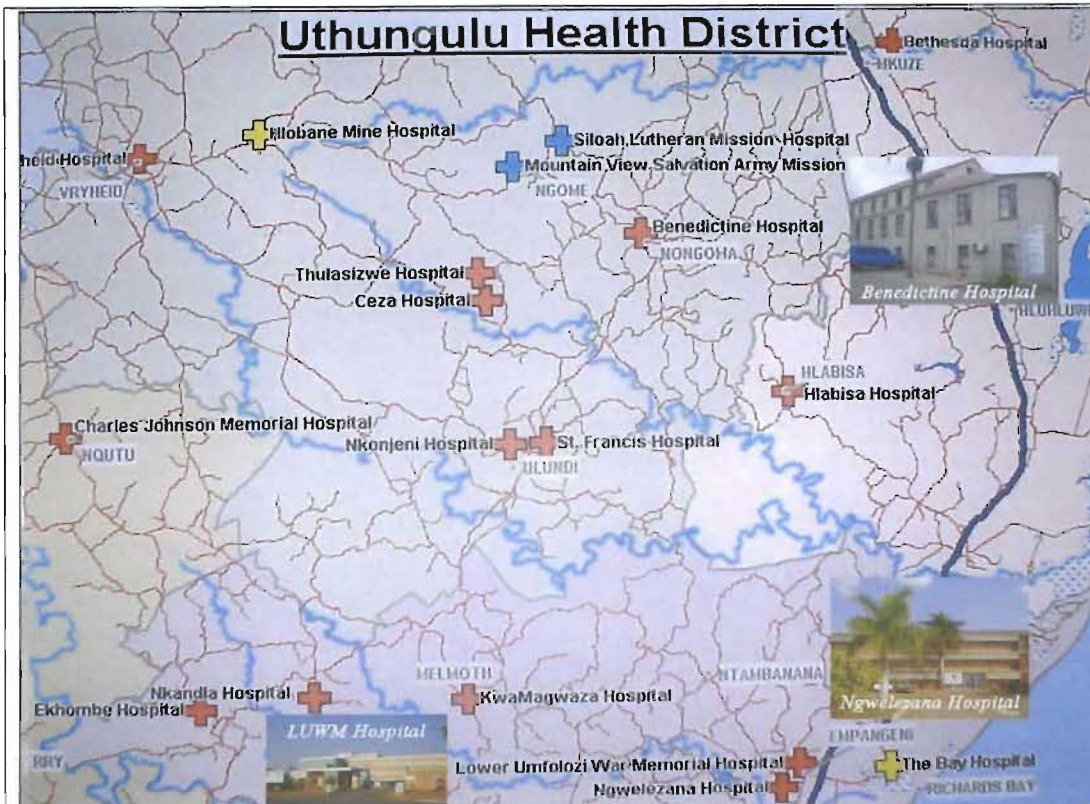
This chapter will describe the methodology used in this study. A narrative analysis was undertaken. The research process is viewed as a potential source of change in the health system and empowerment for the research participants (who are surgeons) as well as a process for influencing professional practice. The view that all knowledge has social, cultural and historical contexts has given rise to the qualitative paradigm. According to Patton (2002) the qualitative research method has part of its foundation in phenomenological philosophy, which is a doctrine characterized by the belief that people both create their own social world and are also created or shaped by external social processes (Patton, 2002).

The objective of the phenomenological philosophy in this study is to reveal and accurately outline the fundamental meanings inferred from the objective description of the experience of surgeons when operating on HIV/AIDS patients. This will permit general statements to be researched phenomenologically without losing any integrity of meaning of each individual subject's idiosyncratic experience. Since this qualitative research was undertaken within the surgical doctor's contexts, it can produce results that directly represent how such people feel. During this process the aim will be to get closer to the feelings and functioning of surgical doctors in the HIV/AIDS era (Patton, 2002).

The results obtained are descriptions of real experiences rather than statistical measures, and will be useful for the production of new ideas and may provide information for other studies. Using probes allows flexibility of the qualitative method to pick up on verbal cues. Qualitative research methods are thus useful and a valuable addition to an epidemiologist's collection of skills. Epidemiology has traditionally focused on the use of quantitative methods but qualitative methods provide a research opportunity to extend the quality of information that may be gathered, particularly as it provides a greater level of understanding of the processes that affect the result we seek in the health field (Patton, 2002).

### **3.2 Study area and sites**

This study was conducted in Northern KwaZulu-Natal at Zululand and Uthungulu health Districts. The study sites were three hospitals, two hospitals at Uthungulu health district, one at Zululand health district. Each of these hospitals will be further described below.



**FIGURE 3.1 Map showing the location of Benedictine, Lower Umfolozi District War Memorial and Ngwelezana hospitals.**

Uthungulu health district has a population of 917451 and comprises six local authority areas. The district has two regional hospitals, six district hospitals, 44 fixed clinics and 14 mobile clinics with 256 visiting points. The district also has six local authority clinics (Uthungulu Health District, 2005). Zululand health district has a population of 833037 and has six local authority areas. The district has seven district hospitals, 50 fixed clinics and 13 mobile clinics (Zululand Health District, 2005).





**FIGURE 3.2 Photograph showing Ngwelezana hospital, Uthungulu Health District.**

The hospital is at the Lower Umfolozi Sub-district the hospital is situated five kilometers away from Empangeni, faces the Ngwelezana township and is surrounded by the Madlebe Tribal Authority Community under Chief Zungu.

The hospital shown in figure 3.2 began to operate in 1970 as a convalescence hospital. In 1974 the hospital was taken over by the State Health, since it had previously been operating under Empangeni hospital. In October 1977, all services were taken over by the KwaZulu Government. Initially Ngwelezana hospital was intended to be one of the T.B settlements in the Province. The hospital has grown to be one of the largest hospitals in District 28. The hospital has a staff of over 1500 and it services about 8000 patients per month including referrals from other hospitals (Ngwelezana hospital, 2005). Ngwelezana hospital is situated in an urban area although patients are from both urban and rural constituencies.

The hospital provides a referral service for adults and children (excluding maternity) to the district hospitals of district 26, 27, 28 and a district (which is level two) level service to Ngwelezana and is moving towards becoming a tertiary hospital (which is level three). This hospital serves a 440 000 catchment population. Ngwelezana has 550 beds and offers the following services; medicine, general surgical, intensive care, medical laboratory services, operating theatres, occupational therapy, orthopaedics, physiotherapy, psychiatry, specialist services, tuberculosis, x-ray department and telemedicine. Ngwelezana hospital has six operating theatres, one recovery room and pre-operating room. These operating theatres are run by 60 nurses and 17 doctors including specialists, medical officers, community service doctors and interns. They do an average of 550 operations per month both minor and major operations (Ngwelezana operating theatre statistics for 2004). It is important to note that half of these doctors (17 doctors) are involved in other respective outpatient clinics while others continue with operations so each doctor will do a minimum of eight operations per day (Ngwelezana hospital, 2005).

Resources such as the latest technology equipment, which is the equipment for level two hospitals are not available in the hospital, and doctors struggle to get equipment because of budgetary constraints.



**FIGURE 3.3 Photograph showing Lower Umfolozi District War Memorial hospital, Uthungulu health district.**

Lower Umfolozi District War Memorial hospital (figure 3.3) started as a three roomed wood and iron shack in the backyard of the home of Dr G. K. Moberly in 1912. He was the second District Surgeon of the area. During 1964 there was a threat to close the hospital and due to shortage of staff the Empangeni Hospital Advisory Board was given 57 hours to close the white section of the hospital. Again in September 1992 the hospital was facing closure due to lack of funds. The hospital amalgamated with Ngwelezana Hospital in 1998 to become one Regional Hospital Complex. On 1<sup>st</sup> April 1998, obstetrics and gynecological services moved over to LUDWM hospital. All other disciplines moved to Ngwelezana hospital (LUDWMH, 2005).

The Lower Umfolozi District War Memorial Hospital is a district hospital (which is level 2) moving toward being a tertiary institution (level 3), dedicated to the highest quality of customer services to meet the challenges of maternal and child health in

Uthungulu, Zululand and part of Zululand district. They offer the following services; maternity, obstetrics, gynecology and neonatal and also clinical psychology. There are 9800 deliveries and 2000 gynecological operations carried out per year. The hospital has four operating theatres, three for major cases and one for minor cases. These operating theatres are served by 25 nurses and 12 doctors, only four of these doctors were involved in the study (LUDWMH, 2005).



**FIGURE 3.4 Photograph showing Benedictine hospital, Zululand health district.**

Benedictine hospital was as shown in figure 3.4 started in 1937 by African Benedictine sisters better known as Twasana sisters. They devoted themselves mainly to the care of the sick. In 1938 they opened a maternity wing, further sections were added in the course of time, a general hospital, a children's ward, a TB patient ward and finally a training school for nurses. In June 1976 the hospital was handed over to the Government (Benedictine hospital, 2005).

Benedictine Hospital has developed into a District hospital (which is level two), that provides a sustainable, co-ordinated, integrated, comprehensive and compassionate

health service based on the Batho Pele principles through the district health system. The hospital has 250 beds and offers the following services: dental facility, general medical and surgical, high care and intensive care, maternity, medical laboratory services, neo-natal intensive care, operating theatres, orthopaedic, psychiatry, special services, tuberculosis and x-ray (Benedictine hospital Information, 2005). There are three operating theatres run by 15 nurses and six doctors, they do an average of 100 operations per month including both minor and major cases (Benedictine operating theatre statistics, 2004). Three of the six doctors were involved in this study and these were the doctors who had been at the hospital for more than two years.

### **3.3 The study sample.**

Purposeful sampling was used to select participants for this study. This sampling strategy illustrated characteristics of particular subgroups of interest and it also facilitated comparisons (Patton, 2002). Maxwell, (2001) argues that this strategy “in which particular setting, persons, or events are deliberately selected for the important information they provide that cannot be given by other choices” It has already been noted in the preceding literature review that much of HIV/AIDS research in South Africa has focused on nurses (Barman, 1999). A sample of doctors was therefore chosen for this study. A fundamental aim of this study was to explore doctors’ experiences when operating on HIV/AIDS patients. Doctors, who have been involved in operating HIV/AIDS patients, over the past couple of years were therefore chosen as the sample for this study as it was felt that their narratives would

allow for an exploration of the way in which contextual factors impact on operating on HIV/AIDS patients.

Participants of the study were doctors who were currently working and had worked at Ngwelezana, Lower Umfolozi Memorial and Benedictine hospital operating theatres (ophthalmic, orthopaedic, and general surgery) for at least for two years, were set as selection criteria, and fifteen doctors met this selection criteria. The researcher felt after discussing with a number of her colleagues that two years in surgery is enough time for doctors to have a rich experience. The researcher also realised that two years experience in surgery will be different in different hospitals depending on the number of surgical patients the hospital sees annually, but two years experience in surgery was seen as sufficient<sup>1</sup>.

All fifteen doctors were recruited by the researcher. Of the fifteen doctors who were involved in electively operating on HIV/AIDS patients who were interviewed for this study, seven had been in the Department of Health service for more than twenty years, and they had experienced doing operations in the era with lower HIV/AIDS prevalence. They could therefore compare the changing times, and their narratives show many commonalties.

The researcher was employed at the Ngwelezana hospital operating theatre. This position allowed for easy access to individuals who met the study criteria. Being familiar to most of the participants, as opposed to a complete stranger had the added advantage of ensuring certain levels of trust. Although interviewing people with

whom one is familiar may have problems of its own, and as a nurse interviewing doctors, the researcher was aware that she might be met with distrust or skepticism. This was overcome by being receptive and listening non-judgmentally. It is suggested however that the opportunity to interview social contacts “facilitated greater disclosure and reflexive commentary” (Barman. 1999, p. 123).

The interviewer contacted each doctor separately and set up convenient times and a venue to conduct the interviews, and each interview conducted took one hour. Most of the interviews were conducted at the hospitals during lunch or immediately after work, and conducive areas, promoting the respondents to relax were chosen. Fewer, about a quarter of interviews were conducted at the coffee shops around the hospitals after official working hours, the rest of the interviews were conducted at the operating theatre resource centre and the rest at the hospital library, in the discussion room.

### **3.4 Ethical considerations**

Each of the participants was informed about the purpose and the procedure of the interview, through the information leaflet (see appendix A). The researcher explained that the narratives were to be used for research purposes only and that they would be used in the write up of the study and possible future publications. Each participant gave informed written consent before the interview (see appendix B). Interviews were tape-recorded and these tapes were locked away ensuring confidentiality. The

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<sup>1</sup> Personal information: Dr B. Lawal

final report, containing anonymous quotations, will be made available to all participants at the end of the study.

Subsequently one of the fifteen selected participants asked to have the interview removed from the study, as the doctor felt uncomfortable about having revealed so much about her experiences when electively operating on HIV/AIDS patients in the narrative. This request was respected and the final sample size on which this report is based consists of a total of fourteen doctors.

Permission to conduct research at the different hospitals was obtained from the hospitals' ethical committees (see Appendix C). Further approval was also obtained from the Biomedical Research Ethics committee and Postgraduate Education Committee of the University of KwaZulu-Natal (see Appendix D).

### **3.5 Interview guide**

An interview guide was developed to conduct the study (see appendix E). The design of the guide was guided by the voice-centred-relational method developed by Brown and Gilligan (1999) and adapted by Manither and Doucet (2001). This method could be described as 'relational' because it explored interviewees' narratives in terms of their relationship with other people. In addition, it took into account the socio-cultural milieu in which the interviewee's exist. This method is also regarded as 'voice-centred' as it focused on the speaking subject that was, how the individuals speak about themselves (Gambu. 2000).



The interview guide opened with an invitation to the interviewees to tell a story about their experiences when electively operating on HIV/AIDS patients. This initial question was followed by a number of probes to gain a deeper understanding of social, historical, and other factors that might have influenced their experience in electively operating on HIV/AIDS patients. The interviews were conducted in English and tape-recorded with the permission of the respondents, the interviews were immediately transcribed by the researcher.

### **3.6 Data collection**

Performing an operation has to do with human action and our access to that action for hermeneutic study is through its expression in narratives (Young & Collin, 1999). Doctors made sense of their experiences in undertaking elective operations on HIV/AIDS patients by conveying their experiences through narrative. A narrative contains elements of their context, which they may not necessarily be aware of. Based on the ideas of Young and Collin (1999), this study chose to make use of narrative structure as a vehicle for capturing the meaningful narratives/ life-stories of the fourteen participants. The narratives thus provide the content for meaningful and hermeneutic study. Peacock and Holland (1999), suggest that narratives / life-stories, considered as content, “offer a window-though not a perfectly transparent one-on historical periods, cultural practices, and psychic events”.

During the interviews the researcher guided the interview and kept the doctors on the topic, by preparing open-ended questions before the first interview (see Appendix E). The researcher established rapport and developed trust during the first interviews,

and this process was facilitated by the provision of a quiet environment, being receptive and listening non-judgmentally.

When seeking the information the researcher listened for implicit and explicit meanings in the explanations and descriptions provided by the doctors involved in surgery in selected public hospitals. Limited information was identified during the interview and additional information was gathered through probing, to make associations and verify assumptions so that the topics were understood from the doctor's perspective.

All interviews conducted were done either during breaks in between operations or after working hours and they all one hour. Between interviews, the researcher listened to the tapes of the interviews, transcribed the interview word by word and planned direction of the next interview if necessary, ten of the fourteen participants had follow up interviews because of the gaps in the content of narratives. Transcripts were evaluated for quality by the researcher's supervisor.

### **3.7 Data analysis**

Qualitative data analysis was used to analyse the thematic content of the narratives to uncover themes, attitudes, hopes and fears of doctors.

Before the official interpretation and analysis of the narratives, each narrative was transcribed in full. It should be noted that the interpretation of the narratives began while the participants were sharing their narratives, as the data were collected by the researcher. The narratives of the doctors were further analysed during the

transcribing process, which was completed in full by the researcher. The involvement of the researcher highlights what Miles and Huberman (1994) refer to as the “interactive, cyclical nature of qualitative analysis. Analysis during the process of capturing of the narratives helps the researcher to cycle back and forth between thinking about the narratives that had already been collected and to develop strategies for the next interview. This provided a healthy corrective for built-in-blind spots, and aimed to make the analysis an ongoing, lively enterprise (Miles & Huberman,1999).

This methodology also provided a framework for the reading and interpretation of the interview narratives. Tappan and Brown (1999) refer to this methodology as a Reading Guide which is: “ A voice-method that attempts to record the complexity of narratives of conflict and choice, and attempts to capture the personal, rational, and cultural dimensions of psychic life” (Tappan and Brown, 1999, p.451).

The method and tool (interview guide) were not only the source of the story being told, but of the social and cultural framework in which the story was embedded as well. By focusing on the speaking subject, it became possible to listen and highlight the various voices (and the similarities, differences and struggle between them) of others that had been appropriated into the self. The researcher engaged in at least four readings of the interviews. All four of these readings were interdependent and in the process of interpretation, each reading fed into each other, rather than following an exact, sequential format so that the analysis and interpretation was grounded in

the data. Thus the discussion of results did not fall under neat categories that reflect the separate readings, but reflected the interdependent /cyclic nature of the reading/ interpretation process (Tappan and Brown, 1999 ).

A matrix was developed to provide a summary of the major interpretations and to enable the researcher to pull significant and re-occurring themes together across the interviews. An A4 landscape page was divided into four columns, the first column was used for recording recurrent images, metaphors and tensions picked up through the reading process. Column two recorded the sense of self that emerged from the narrative, column three recorded incidents where the interviewees describe themselves in relation to others, and column four recorded the emergence of broader social, political, economic, technical and cultural and gender factors through the reading process (see Appendix G).

Comprehensive data treatment was done in this study by actively seeking out, and addressing deviant cases and deviant-case analysis was done. The method began with a small batch of data. A provisional analytical scheme was generated. The scheme was then compared to other data, and modifications made in the scheme as necessary. The provisional analytic scheme was constantly confronted by ‘negative’ or ‘discrepant’ cases until the researcher had incorporated all the data in the analysis.

If engaged in four different approaches in the readings of the interviews. It is important to note that for the purposes of clarity in each of these readings is

discussed separately in this chapter. The data and interpretation were then reviewed by the supervisor to confirm that the analysis and findings were grounded in the data.

### **3.7.1 First reading**

In the first reading, the researcher concentrated on understanding the experiences of doctors when electively operating on HIV/AIDS patients as the narrator experienced it. In particular, attention was paid to the recurrent images, metaphors, and inconsistencies and contradictions in the story. Part of this reading involved reflecting on the impact the story had on the researcher who was privileged and in the powerful position of reading other stories. Tappan and Brown (1999) argue that interpretation is a relational activity. They argue that when interpretation is understood as entailing a relationship: i.e. there was, at one and the same time, both an attempt to understand the true meaning of another's text/experience, and a realisation that such understanding would necessarily be influenced by the researcher's standpoint and perspective, informed by her own values, biases, and assumptions.

Viewing interpretation as a relational activity suggests that both the interpreter and text share authority and responsibility for shaping the meaning of a given text. Tappan and Brown (1999) highlight the need for self-reflection by the interpreter during analysis. The aim is to enter into a "genuine relationship with the person whose text she is interpreting". In addition they highlight the responsibility of the researcher to be aware of her powerful position in analysing the narratives and

caution the researcher to be aware of the temptation to violate the symmetry of that relationship and to assume ultimate power to interpret another story. As a result, during the interpretation process, the researcher had to be constantly aware of how her position as a nurse, working in the operating theatre, could influence her interpretation.

### **3.7.2 Second reading**

In this reading the researcher paid particular attention to the sense that emerged from the doctors' experiences when electively operating on HIV/AIDS patients. The researcher paid attention to the voice of the 'I', the speaking subject in relation to the 'we': (groups and important others in the individual's life), the tensions between the two, and how they were negotiated.

### **3.7.3 Third reading**

During this reading the researcher paid close attention to how the self was/is experienced in relation to others (brought out in reading two), whether real or imagined. This involved exploring the feelings, actions and thoughts around the doctor's career development in relation to these others.

### **3.7.4 Fourth reading**

The last reading involved exploring the broader social, cultural and all other context in which the individual's experience in electively operating on HIV/AIDS patients

development had taken place. Issues of power, oppression, gender, the role of family and community were all explored in the narratives.

### **3.7.5 Reading matrix display**

In line with Miles and Huberman's (1999) recommendation, a matrix display was created for each analysed interview (see attached appendix G). A matrix provided a summary of the major interpretations and enabled the interpreter to pull significant and recurring themes together across the interviews. The used matrices facilitated the identification of recurring themes and tensions across each interview.

### **3.1 Justification for a qualitative approach**

This descriptive study was conducted using qualitative research methodology. Morse (2000) describes particular research purposes for which qualitative studies are especially useful. Three of these purposes centre around understanding the meaning of life experiences, the particular context within which people act, and the process by which events or actions take place. All three of these purposes were central to this study and it was partly for these reasons that a qualitative methodology was selected for this study. The relational nature of the qualitative research enabled the interviewer to probe the interviewees. In addition, it has been argued that a qualitative approach picks up on tensions and conflicts between different ideas and experiences that a quantitative study may overlook (Morse, 2000).

During this process the researcher explored and attempted to get closer to the feelings and the general social functioning of the persons/ doctors involved in surgical intervention. The hermeneutical approach, like experience construction, holds that all reality is historically, and socially constituted. This approach “shifts the focus of the study of human phenomena from an explanation of them to the process of their construction” (Collin & Young, 2000).

This shift requires an interpretation of social realities like experience. From this perspective the choice of a qualitative approach was not simply methodological, it was first and foremost a challenge to the existing approaches to this kind of research, which is situated within a modest framework. As Sketchley, (1999) puts it “the activity of interpretation is not simply a methodological option open to the social scientist, but rather the very condition of human inquiry itself”.



## CHAPTER FOUR

### RESULTS

#### Introduction

This chapter presents the major themes that emerged throughout the interpretation process of the narratives of fourteen doctors, involved in surgical interventions who participated in the study. Interview extracts are presented to illustrate the main themes that emerged through the process of interpretation. The reading process has already been discussed in chapter three. However, it is important to reiterate that the findings will show that all four readings are interdependent. During the process of interpretation each reading fed into each other, rather than following an exact, sequential format.

The researcher acknowledges that the interpretation of narratives reflects a relational activity. However, the researcher took the responsibility of her own assumptions and values that may have influenced the process of interpretation and thus engaged in an ethic of interpretation based on care and responsiveness. In addition it is important to note that the context in which the individuals reside constrains the number of alternative ways of understanding doctors' experiences when electively operating on HIV/AIDS patients, which prevent the interpretation from leading to total subjectivism.

A description of the study sample is presented in Table 3 and the results are presented in respect of the themes described in Table 4.

#### 4.1 DEMOGRAPHIC INFORMATION

**TABLE 4.1 Demographic profile of public sector doctors involved in surgery in the study.**

Gender	Female (35,7%; n =5) Male (64,3%; n =9)
Nationality	South African (57%; n=8) Foreign Country(43%; n=6)
Marital status	Single (50%; n=7) Married (50%; n=7)
Age	Mean (38 years) SD (5,9 Years) Range (28yrs – 64yrs)
Country where trained	South African (64%; n=9) Foreign Country (46%; n=5)
Professional Experience	Mean (10yrs) SD (5,6yrs) Range (2yrs– 25yrs)
Specialized Training Regarding operating on HIV/AIDS patients.	None
Number of consultants	5 (36%)
Number of medical officers	9 (64%)
Religion	Christian (57%; n=8) Other religious beliefs (43%; n=6)
Semi-urban / Rural	Semi-urban (71%, n=10) Rural (29%, n=4)

Table 4.1 indicates that the group of participants was mainly dominated by males (64%), mainly because the medical profession is mainly dominated by males. More than half of doctors are South African, this shows that there is a significant number of foreign doctors in the area, 64% of doctors were trained in South Africa. There was a wide range of age (28-64 years) and experience (2-25 years), although there were fewer consultants (36%). More than half of doctors considered themselves as

Christians and most of them (71%) worked in the semi-rural hospitals. No differences were found between the approaches of foreign or South African trained doctors in respect of elective surgery on HIV/AIDS patients.

**TABLE 4.2 Factors influencing doctor’s experiences in undertaking elective operations in HIV/AIDS patients.**

No	Theme
<p><b>4.2</b></p> <p>4.2.1</p> <p>4.2.2</p>	<p><b>Personal Factors.</b></p> <p>Professional obligation and perception of the problem of HIV/AIDS in surgery</p> <p>Doctors’ empathy, Relationship with patient, altruism, fears and stress when operating on HIV/ AIDS patients.</p>
<p><b>4.3</b></p> <p>4.3.1</p> <p>4.3.2</p> <p>4.3.3</p>	<p><b>Structural Factors.</b></p> <p>The Health System.</p> <p>Health Service Delivery.</p> <p>Risk of exposure.</p>
<p><b>4.4</b></p> <p>4.4.1</p>	<p><b>Patient Related Factors.</b></p> <p>Consequences of HIV/AIDS epidemic for surgery</p>
<p><b>4.5</b></p>	<p><b>Protocols and Procedure required when operating during an HIV/AIDS pandemic</b></p>

Table 4.2 shows the re-interpreted and clustered themes from the matrix display that was created for each analysed interview throughout the interpretation process of the narratives of fourteen doctors, involved in surgical intervention who participated in the study. These themes were re-interpreted so that they are easily understandable in the health system.

## **4.2 Operating Doctors Personal Factors.**

### **4.2.1 Exploring doctors' professional obligation to electively operate on HIV/AIDS patients.**

In response to the plight of others, most doctors in this study regularly contributed their time, and skills to help HIV patients through surgical intervention, and explained they do this because they feel sorry for their patients. Doctors in the study knew if the patient who needs an elective operation has HIV/AIDS because some elective patients are tested before being operated and other patients clinically show signs and symptoms of HIV/AIDS. Doctors in the study then made the correct interpretation that the patients require surgical operations even though they are HIV infected. All doctors stated that this interpretation is made through using the generic approach to surgical patients, which begins by history taking, since *“common symptoms of surgical conditions require special emphasis in the history taking”* (48-year old male consultant).

After history taking the doctors reported that they then do the elective physical examination, including laboratory and other examinations as they *“...decide that we are responsible for helping our fellow human and we dedicate our time, and skills and operate on these patients as it is our professional obligation as doctors”* (28 year old South African female doctor).

Doctors also stated that these examinations included the following objectives (1) screening for asymptomatic disease that may affect surgery (e.g. anaemia, which is common in HIV infected patients); (2) appraisal of diseases that may contraindicate

elective surgery or require treatment before surgery (e.g. blood transfusion in anaemic patients); (3) diagnosis of disorders that require surgery and (4) evaluation of the nature and extent of metabolic or septic complications.

In this study all the doctors indicated five different motivations that lead them to engage in their prosocial response to the HIV pandemic and the surgical interventions required for HIV/AIDS patients. These five underlying factors included their values e.g. *“because of my professional obligation to help sick people”*; the need to understand *“... I want to learn how to cope with HIV/AIDS in surgical intervention”*; community concern *“... my concern and worry about the community that is having HIV/AIDS, who need operations”*; the desire for personal growth *“I want to challenge myself and test my skills in HIV/AIDS surgical intervention”*; and attempts to enhance their own self-esteem *“I want to feel better about myself, knowing that I helped HIV/AIDS patients who need operations, since most health care workers are involved in other modes of care, like provision of ARV, but less attention has been given to surgical management of HIV/AIDS patients”* (63 year old male consultant).

Half of the doctors interviewed felt that surgeons or operating doctors must demonstrate concern for the patients as people who need help not just as cases to be processed through the surgical ward. *“HIV patients should be thoroughly assessed pre-operatively, not just rush through as we sometimes do to decrease the workload”* (male doctor with eight years of professional experience).

In this study Doctors from more rural areas appeared to be more caring than doctors from semi-urban hospitals, e.g. *“I do not think that it is actually important for the operation to establish rapport with my patients, this is a responsibility of a nurse in the ward”* (new male consultant). This might however be caused by the workload in the urban hospitals. From the three hospitals involved in the study it was found that doctors from the most rural hospital appeared to be more caring than doctors from the other two urban (referral) hospitals, as the following statement indicates *“It is important to establish rapport with patients pre-operatively so that they can verbalise their concerns”*( single, 28 year old doctor)

In this study, during interviews the researcher noticed that younger and less experienced doctors help HIV/AIDS patients who need surgical intervention because they want to learn how to cope with these patients and also challenge themselves and test their skills in HIV/AIDS surgical intervention. Older and more experienced doctors, including specialists help these patients because of their professional obligation to help patients and also because such actions make them feel better about themselves. In this study it was also observed that the doctors who were no longer happy or satisfied about operating on HIV/AIDS patients had initially different motivations, in that either they believed that surgeons earned more money, or appreciated the high status that goes with being a surgeon. On the other hand the doctors who are still happy to operate on HIV/AIDS patients were motivated by self-esteem enhancement or personal development which in this study predicted continued helping better than the other motives.

#### **4.2.2 Exploring - Doctors' empathy – Altruism, stigma, fears and stress.**

When asked the question whether they should feel their patient's pain, most of the doctors agreed that "*...it is human to feel the patient's pain, and to put yourself in the patient's place, although one should be careful, if too much caring is shown other people will think you are not sure of your skills and feel that the operation will be unsuccessful*" (female doctor). Doctors explained that this helps them in sharing proper or appropriate information with the patients and also to take proper decisions based on the patient's best interests. These doctors (operating doctors who feel their patient's fear and pain) responded to their HIV/AIDS patients' emotional state with a vicarious emotional reaction that resembles what the HIV/AIDS patients on whom they operate are experiencing, they feel the patients pain and fear, understanding the stigma attached to HIV/AIDS and to people who help such patients.

In this study most of the doctors were more than happy to help HIV/AIDS patients by operating on them. They were sensitive to their fears and pain. "*...being a doctor is a calling from God so it not fair to discriminate HIV/AIDS patients because they need help like any other patients, and I feel great fulfillment after helping such patients*" (48 year old male consultant). It was found that most of these doctors had strong religious beliefs and some of them were from a Christian background. Because of this strong religious background they felt joy when observing that the patients that they had operated on improved post-operatively, and this act reduced uncomfortable emotions. Thus feelings of joy and satisfaction that they experienced confirmed their beliefs about the career that they had chosen, and buffered them

from the stress resulting from the huge burden of disease experienced by patients as a result of the epidemic. This was established in the reasoning behind the consequences of the operation outcome e.g. “...*I always try to do my best and God does the rest*”.

Very few doctors in the study felt doctors operating on HIV/AIDS patients should not feel their pain. “*Doctors should not feel the patient’s fears and pain because that causes psychological stress and this will affect the doctors performance, and also embarrassing and uncomfortable to work with HIV/AIDS patients.*” (male doctor with four year professional experience). These doctors however, suggested that feeling a patient’s pain is very dangerous. They highlighted that if the HIV/AIDS patients complicate pre- and post- operatively that might cause too much stress and result in depression. This was established in some doctors narratives e.g. “...*how is one expected to go through day-to-day operations on patients when there are so many complications in surgery especially in the HIV/AIDS era*”. Feelings of guilt might also prevail thus causing work-related stress and the stigma attached to the disease is very hard to deal with. This becomes a problem when similar operating decisions should be taken for the next patient. These doctors strongly felt that there should be no attachment; this should be taken as another surgical case to be processed so that if things do not work out as planned, there will be no guilty feelings. In this study it was noticed that this group of doctors were relatively younger than the other group who had an opposite opinion.



A noticeable aspect in the study was the fact that those doctors who felt satisfied about operating on HIV/AIDS patients were all married and living with their families. They mentioned that sometimes they take work-related problems home and having an understanding and supportive family contributed to preventing their work related stress, caused by complications that arise in HIV/AIDS patients intra- and post-operatively.

Although older doctors were more willing to operate on HIV/AIDS patients, they were less willing to consider new ideas in surgery, especially when operating on HIV/AIDS patients. For instance, older doctors were used to open surgery, but wound healing is more of a problem in open surgery compared to endoscope surgery, which has smaller incisions. Most doctors agreed that people with *“HIV/AIDS need a surgeon, who is willing to consider new ideas and who is flexible to become a partner with their patients in developing a coherent plan for surgical treatment”* (34 year old male consultant). Such a relationship is a powerful weapon with which to efficiently fight complications that come from operating HIV/AIDS patients, and to reduce doctors’ stress.

The older doctors strongly believed that proper assessment of HIV/AIDS patients pre-operatively should be done, so that only patients who can survive and benefit from the operation can be operated. *“Do proper assessment pre-operatively of the clinical status of the patient, weigh advantages versus the disadvantages of the operation, and try to seek alternatives if there are any, thus increasing the quality*

*of patient's life*" (48 year old consultant) commented one of the surgical specialists who has been in the field for more than 25 years. Some of the specialists even suggested that CD4 counts, should be done pre-operatively, and if the CD4 count estimate is below 300 cells / mm<sup>3</sup> the patient should not be operated, although other clinical signs should also be considered.

They also added that the patient should be carefully monitored intra and post-operatively. For longer operations antibiotics for prophylaxis should be administered. If post-operatively there is any sign of opportunistic infections. vigorous actions should be taken. Other precautions should also be adhered to like decreasing the operating time, thus reducing exposure of the operated organ or area to micro-organisms. Adherence to aseptic technique will also prevent the spread of infection.

Doctors highlighted that they have to try their best to help these communities which they serve. They also emphasized that if the operation goes well both intra-and post-operatively their attempts enhance their self esteem "*I feel better about myself*" (50 year old female doctor), as one of the doctors commented. They also mentioned that working with a disease such as HIV is intellectually challenging as they strive to be the best for their patients under difficult circumstances.

In this study it was also noticed that older doctors above the age of 50 years were more satisfied with the work they do when operating on HIV/AIDS patients than

younger doctors. Older doctors were more experienced and had developed and honed their skills as the HIV/AIDS epidemic developed. Older doctors also have more experience in operating on HIV/AIDS patients than younger doctors. They might find it easier to pre-operatively assess patients who will be fit for an operation, and thus there will be fewer complications post-operatively. In this study doctors were mainly challenged by complications that occur intra and post-operatively. It was also highlighted in this study that older doctors seem to manage as they have become more competent and they also accept the status quo, but that they no longer try to improve, unlike the younger doctors who are keen improve their skills to do better for their patients.

A few of the young doctors expressed their frustration, *“if patients die after the operation when you really have given it your best that is not nice, it is very frustrating.”* (24 year old female doctor). This may impact on the service delivery when the doctor has to make a decision for the next patient who is HIV infected, whether to operate or not.

All doctors interviewed agreed that work related stress was associated with operating on HIV/AIDS patients, and if not treated could result to burnout . *“...it cannot be denied that work related stress can result in burnout if not addressed”* (62 year old male consultant). It was noted that younger doctors were more likely to develop burnout than older doctors, since they did not have much previous experience in operating on HIV/AIDS patients. There did not appear to be differences in burnout based on other possible factors such as gender or marital status.

Although the doctors in this study reported feelings of stress and hopelessness and fatalism in operating on HIV /AIDS patients, the majority of respondents said that they spend more time with HIV positive patients pre and post-operatively because of the complications post-operatively compared to other patients. “ *...pre-operatively more time is spent in history taking, elective examination and investigation on HIV positive patients and post operative HIV positive patients stay longer in the hospital, so more time is spent on ward rounds*” (62 year old male consultant with 25 years of professional experience).

### **4.3 Structural Factors**

#### **4.3.1 Problems related to the health system, service delivery and risk of exposure that doctors encounter when electively operating on HIV/AIDS patients.**

##### **(I) Health system**

##### **HIV testing**

All fourteen doctors interviewed in this study confirmed that Northern KwaZulu Natal has a high sero-prevalence of HIV/AIDS. Despite this, patients are not routinely tested for HIV infection pre-operatively, but only if their sero-status will make a difference to their surgical management will they be tested. Patients give written informed consent before they are operated.

Surgical doctors in all institutions were found not to be involved in the counselling of patients for testing for HIV infection. They gave as the reason that the work load

is too much; they do not get a chance to counsel their patients. If they need to do an HIV test on them, they order it in the patient's chart like any other investigation for the nurses to carry out. They added that they trust the nurses who are trained to do voluntary counselling and testing of patients for HIV. They also acknowledged that counselling is an on going process that needs time, which they do not have. Orthopaedic doctors from all three hospitals said although they do not test all patients, more than 60 percent of those they test were HIV infected.

They further explained that their rationale for testing, was in order to decide which operation to perform on the patient, e.g. whether to do internal or external fixation for compound fractures. They explained the effect on the skin determines whether the fracture is, a closed simple or an open "compound" fracture, which a fracture is communicating with an epithelial surface. The surface is usually the skin but may be the rectum in pelvic fractures, or mouth, nose, ears and air sinuses, in skull and facial fractures. For a compound fracture in HIV positive patients an external fixation is preferred for faster wound healing.

Doctors reported that although they do not test all patients pre-operatively for HIV infection clinically about 50% patients that were seen everyday were HIV infected and some displayed signs of AIDS. These doctors are guided by the World Health Organization adult HIV/AIDS staging system (See attached appendix-F ).

Doctors who were involved in obstetrics stated that they test most pregnant women who come for antenatal visits, for the purpose of prevention of mother to child transmission of HIV infection (PMTCT). They reported that almost 60% of these women are HIV infected. Doctors who were interviewed are exposed to a large number of HIV/AIDS patients, and agreed that there is a very high seroprevalence of HIV amongst the patients whom they see. Hence the hypothesis that doctors are operating on a large number of HIV/AIDS patients was confirmed. This is because of programs like prevention of mother-to-child transmission of HIV (PMTCT), where doctors reported that the caesarian section rate has tripled from the normal rate. Similarly there has been an increase in extra-pulmonary TB cases which require surgery for diagnosis e.g. TB bones and lymph nodes. Despite this major increase in the workload, the human resources, namely number of doctors and nurses have not increased.

## **ii) Increasing Workload**

The doctors interviewed in this study agreed that *“the increased demand for health care created by HIV/AIDS related illnesses is heavily taxing the already overstretched public health services”* (35 year old female with 9 years of professional experience). There is a high prevalence of people in the community who are HIV infected, and unfortunately some of these community members need operations. Doctors are faced with this challenge, as they do not receive any special training in operating on HIV/AIDS patients.

In addition the high prevalence of HIV/AIDS in district 28 – Northern KwaZulu Natal, affects the health sector and its human resources, by reducing the supply of service providers through attrition due to death, departure from service, and reduced performance. *“There is a shortage of doctors in our hospital, but the shortage of operating theatre nurses is unbelievable”* (56 year old male doctor).

Most of the doctors who had been involved in surgical management for more than twenty years were consultants. Consultants do not do night calls although they are occasionally called if there are problems being experienced with the operations. They basically have a lesser workload compared to the rest of the doctors. This might be the reason for their having different opinions. Most of the young doctors were from the urban hospitals, and they felt that the health system is not organized well enough, and that they had not received any training on how to surgically manage HIV/AIDS patients. Their narratives also illustrated that they felt that it was not fair for them to be judged as a result of inadequacies in the system.

A significant disparity occurred between responses proffered by consultants, who have less contact with the HIV-infected patients who need operations, as compared to medical officers, who handle more such patients. For example, medical officers objected most strongly to routinely obtaining informed consent before testing for suspected HIV infection pre-operatively. The reason being that the personnel responsible for obtaining the consent have encountered practical problems in doing so. Consultants however see it as the correct procedure to follow, but they are

usually involved in a more advisory capacity. The medical officers were also more inclined to perform invasive operations on HIV-positive patients. Once again, this may be explained by the fact that medical officers are more involved in the daily management of these patients post-operatively than consultants. The rapidly increasing incidence of HIV infection results in a high demand for care. However, this is occurring in the context of existing inadequate health care resources. Doctors explained that operating in the era of HIV/AIDS, they require a lot of equipment which is lacking in the public sector, such as double, strong, and elbow gloves, facial shields including eye shields, protective plastic aprons, a traumatic needles and blades, and instruments for endoscopes and external fixation.

### **iii) Health Service Delivery**

All fourteen doctors in the study agreed that they are obliged to give HIV/AIDS patients information and education before operating on them, which is the major, and most omitted part of health service delivery in surgical intervention. Nurses should only act as the patients' advocates when the doctor gives the patient information pre-operatively. They believe that although information and education should be given to each and every patient before the operation that it was more important for the HIV/AIDS patient because of the many complications that might occur post-operatively. This is also important so that the patient can give informed consent knowing all the possible complications. It is up to the patient to weigh the advantages and disadvantages of going through or not going through with the proposed operation. It is also in the patients' bill of rights and according to Batho



Pele Principles, that the patient should be consulted and be given all the information about his/her illness in the language that he/she can understand. Doctors also highlighted that most of the time they do not personally counsel patients or give information and education to the patients pre-operatively, or when the operation is proposed. They gave as the reason that they are unable to do this because of the workload, which compromise the quality of service delivery. The doctors interviewed emphasized that the pandemic of HIV/AIDS has caused an increased workload, making the work of surgeons stressful.

All fourteen doctors reported that the HIV/AIDS pandemic increases the workload as many patients present with opportunistic infections, for example extra-pulmonary tuberculosis (EPTB), including lymph nodes, abdominal TB and TB of the Bones. The doctors explained that for diagnosis of these extra-pulmonary tuberculosis infections, one is required to do a biopsy, which is a surgical procedure and that EPTB can occur at any age. Young children and HIV positive adults are particularly susceptible. Up to 25 percent of TB cases may present with EPTB. The common form of EPTB associated with HIV is lymphadenopathy, pleural effusion, pericardial disease and meningitis. Diagnosis of extra-pulmonary TB is the presence of constitutional features and local features related to the site of disease, but the certainty of diagnosis is through specialised x-ray, ultrasound and biopsy, which is a surgical procedure. The increase in EPTB has thus resulted in an increased surgical workload, reported by all the doctors.

#### **iv) Risk of exposure**

When doctors were asked about the risk of HIV/AIDS transmission they all felt that health professionals are at risk of getting HIV/AIDS from the patients during operation. They also felt that the personal protective equipment provided by the institutions was of poor quality, and that these are not always available because of inadequate resources in public hospitals. None of the doctors had considered transmission of HIV infection from an HIV infected doctor to the operated patient, during an operation if a needle stick injury occurred.

Most doctors felt that they were personally at risk of contracting HIV infection and that this could easily occur because of the workload. They feel that they do not have enough time to take proper universal precautions. They further highlighted that the workload has increased due to the number patients with HIV/AIDS, resulting in longer ward rounds and those patients who have been operated stay longer in hospital, because of delayed wound healing processes and other opportunistic infections related to HIV/AIDS.

These doctors noted that the incidence of needle stick injuries was increasing as the workload increased and they also noted that these occur mostly during the night. After a long day's work doctors may also be on call during the night, and they are more exposed to HIV infection through needle stick injuries, as they work very long hours. They explained that doctors do 160 hours a month which is their normal shift but then they do extra hours which is their paid overtime. Doctors' calls are optional

but their salaries without such calls are low so they need these calls to boost their income. In referral hospitals which are very busy they sometimes work throughout the night but that does not mean that they do not have to do their 8 hour shift the following day.

Older doctors who have been practising for more than twenty years thought the risk of contracting the disease was not so bad these days because there are protective devices that are available. They felt precautionary measures should be taken with all patients, and advised "*Treat every patient as HIV infected*" (female doctor with 25 years of professional experience). They also highlighted that although protective devices are available, institutions opt for cheaper materials which are not very effective and comfortable, for example, poor quality gloves especially when doubled can hinder good surgical performance, and that can cause even more needle stick injuries. Poor quality visors hinder good sight. This is not so bad for somebody who is very experienced in surgical management, but may limit less experienced doctors.

Pre-operative personnel who provide direct and indirect patient care were also considered to be at risk of exposure to potentially harmful micro-organisms. Wearing personal protective equipment (PPE), such as gowns, gloves, and eyewear, decreases the risk but does not eliminate it. The risk of exposure is proportionate to the proximity to the patient in the operating theatre. They explained that the closer to the surgical field (source of blood and / or body substance), the higher the risk. The surgeon, assistants, and scrub person therefore have a higher risk by role and

proximity. They share an increased incidence of needle sticks and puncture wounds. However, the circulator, environmental services personnel, and instrument processors are also at increased risk for body substance exposure because of specimen handling, cleaning processes, and other contaminants in the environment.

Doctors explained in one of the hospitals where the study was done, exposure rates to blood and body substances for operating theatre personnel were reported as 10 per 100 procedures. Sharps were responsible for 3 of 100 exposures reported. Of glove tears reported 93% were in single-gloved caregivers. Approximately 63% of glove tears in a single-gloved individual revealed a blood exposure. In 20% of double-gloved individuals who had a glove puncture, only 6% had evidence of inner-glove puncture. In 74% of injuries with sharps, the injuries were self-inflicted by carelessness.

The working environment is a very important aspect of HIV/AIDS. Even doctors who were familiar with the infection control guidelines and aware of the standard precautionary procedures, felt that they were at risk for contracting HIV/AIDS from patients and that the risk is high in South Africa. Many doctors are inexperienced in their pre and post operative care and management of HIV/AIDS patients.

Another dimension of the study is the human rights' issue. Almost all of the doctors thought that health care personnel have the right to know the HIV Status of their patients before surgery. This is a complex issue, because doctors must take into

consideration universal precautions for HIV transmission with all patients on whom they operate. This study indicated that although doctors feel a sense of responsibility for providing care, nearly half of them think that they have the right to refuse treatment of patients who are HIV infected and one-third of the sample believed that they themselves need psychological help after caring for these patients on a day to day basis. *“When complications occur either intra or post-operatively one wonders whether a decision to operate the patient was right from the beginning, this becomes worse if a similar decision has to be taken for the next patient, a forum to ventilate such is needed ...”* (34 year old female doctor with four years of professional experience).

Some of the doctors mentioned that the patient is also at risk. If a needle stick occurs, the needle may come in contact with the patient after penetrating the caregiver, thereby exposing the patient. Some patients have health conditions that predispose them to vulnerability for infection. Interestingly however, the situation regarding disclosure is reversed when the physicians are assumed to be HIV positive. Then the majority of the physicians do not want their patients to know their status.

Less experienced doctors felt operating on HIV/AIDS patients was putting them at greater risk of contracting the HIV infection. They continue to work because they have no choice and they do it under a lot of stress. *“operating on patients is a skill, this skill is fully developed over a number of years of practice, being inexperienced and having to use protective devices like gloves, which reduce hand sensitivity and visors, reducing vision is very frustrating to us”* (30 year old female with two years

of professional experience). This study confirms however that doctors who fear contracting HIV infection from their patients had sufficient information to take adequate measures for the prevention of transmission of HIV/AIDS in their working environment which is the operating theatre.

#### **4.4 Patient related factors challenging doctors when electively operating on HIV/AIDS patients.**

##### **4.4.1 Consequences of HIV/AIDS epidemic for surgery**

Doctors in this study stated that operating on HIV infected patients is risky to the patients both intra-and post-operatively. Intra-operatively because HIV infected patients normally have respiratory infections, which are common opportunistic infections amongst HIV/AIDS patients. This becomes a problem in anaesthesia. Most of HIV/AIDS patients have difficulty in breathing post-operatively. Post-operatively according to the interviewed doctors there is also a common problem of delayed wound healing. They emphasised that HIV/AIDS patients are considered a compromised or altered host because of their significant impairment of the system and tissues which does not allow a normal response to operative trauma or infection. Most of HIV/AIDS patients are weak, malnourished and anaemic.

Doctors explained that no matter how they try to prevent the infection on the operated site these complications still prevail. They reported that before any operation, theatres are thoroughly cleaned using bactericides and this is also done after each and every operated patient. Operating theatre furniture and machinery is

also cleaned by microbicide spraying agents. Instruments used on the patient are cleaned and sterilized by autoclaving. The researcher has also witnessed these procedures done to minimise micro-organism in the operating theatre, while she was a scrub-nurse at Ngwelezana hospital. Control of the environment is a necessary part of overall infection prevention. The inanimate environment of the operating theatre suite presents a risk for the transmission of micro-organisms. The aim of a microbiologically controlled environment is to keep contamination to a minimum.

The pre-operative environment is designated both to optimize function and safety and to protect patients' sources of contamination. The operating theatre includes specific areas for traffic, support systems, administration, communication, and storage. Traffic patterns are designed to flow smoothly and to prevent backtrack and crossover traffic. Clean and soiled activities, areas, personnel, and sterile and unsterile supplies need to be distinctly separated.

Aseptic barriers such as sterile gowns and gloves protect sterile areas, isolate surgical sites from infectious contaminants, and keep the number of microorganisms to a minimum. To slow or prevent the transfer of organisms, these barriers must be impervious to the passage of such micro-organisms under ordinary operating conditions. Procedures are established to provide barriers against the migration of microorganisms from any potential source of microbial contamination. All doctors interviewed in this study agreed that all these standardized operating theatre procedures are followed in their institutions.

According to the doctors an increased number of complications that occurred intra- and post-operatively cause the patients to stay longer in the hospital, increasing in-patient stay, and also causing an increase in the workload, because of long ward rounds and the care required. *“HIV/AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis and have more inpatient days compared to other patients, this obviously increases the time spent on ward rounds”* (44 year old male doctor). Doctors gave this reason for their failure to finish all their required duties during working hours as they frequently have to volunteer their time, and use their spare time to appropriately manage HIV/AIDS patients pre and post-operatively.

One of the doctors who agreed that the workload was increasing, but did not understand the reasons for the increase, because he had never experienced the working world without HIV/AIDS. *“ ...Ever since I started working people have been sick, but now I think they are more sick than before, I feel obliged to help these people, this is like a calling to me”* (52 year old female doctor with 17 years of professional experience).

#### **4.5 Procedures and Protocols required when operating during an HIV/AIDS epidemic.**

All the doctors agreed that protocols and guidelines should be drawn up and made available to guide all doctors in deciding whether to operate on HIV/AIDS patient or not. Such protocols would also allow reasonable flexibility in the surgical treatment



where the patient is HIV infected and flexibility is of paramount importance due to the incredible diversity of the virus and its highly variable course in each individual case. The respondents noted that “...*every infection of HIV is completely different in its effects upon the human body*” (new male consultant). No two patients respond to HIV infection in quite the same way. It should be noted though, that even if guidelines are to be flexible, flexibility will have to be reconciled with standardisation and this should be overseen by consultants in the field.

Some HIV/AIDS patients who are almost at the same stage of infection or disease will not have similar problems intra or post-operatively. “*Others are just the opposite and deteriorate rapidly while constantly plagued with a variety of opportunistic infections*” (female doctor with six years of professional experience). The vast majority of HIV/AIDS patients fall somewhere in between these extremes and display greatly varied symptoms in the course of their disease. Thus there are tremendous variances between individual HIV/AIDS patients intra- and post-operatively.

Consultants also felt that HIV/AIDS patients should be assessed jointly and discussed among themselves as doctors in order to come up with the best possible way of helping the patient, and alternatives other than operating should be considered if available. They further supported this statement by commenting about the common conditions of HIV/AIDS patients, with generalised body weakness, anaemia and malnutrition which make such patients complicate.

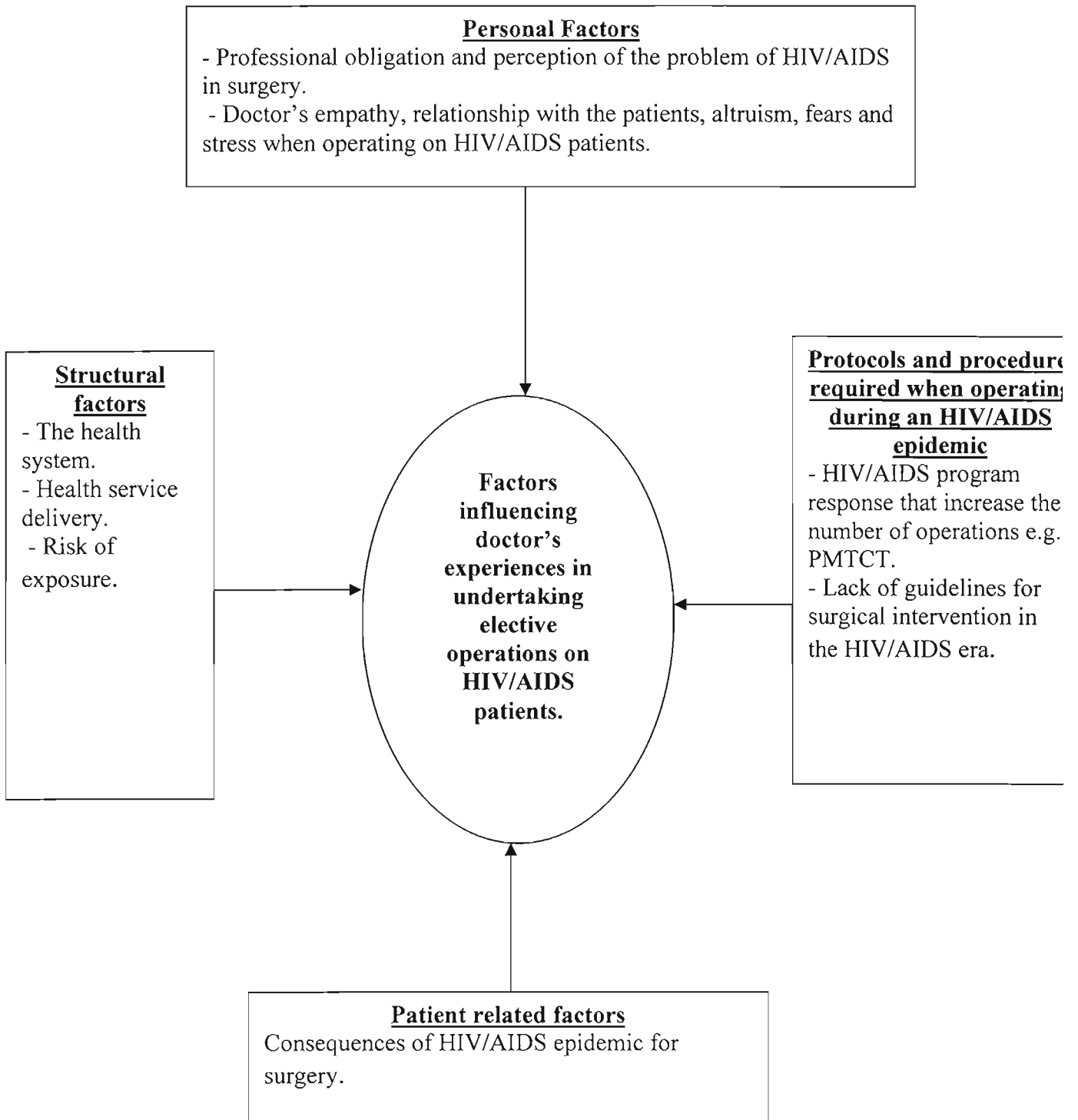
In this study obstetric doctors found it very hard to make decision regarding performing caesarian section on HIV infected mothers. In the prevention of mother to child transmission of HIV infection (PMTCT) program, if the HIV infected mothers CD4 Cell count is less than 200 cells / mm<sup>3</sup> caesarian section is recommended to prevent transmission of HIV infection to the baby during delivery. This is the stage where the mother is vulnerable to catching all the opportunistic infections. They are also likely to have wound healing problem post-operatively. The decision to be taken is so difficult whether to save the baby from HIV infection or the mother though the situation has improved with the availability of antiretroviral therapy that can also assist the mother to be better.

Younger doctors from urban hospitals felt all patients should be given a chance since patients do not react similarly even with similar conditions. *“Give the benefit of doubt and see what happens”* (24 year old male doctor). They felt that the consequences of the operation would be dealt with as they prevail, because it was not justifiable to deprive somebody of a required operation based on the possible complications that may not occur.

The researcher has observed that some doctors make an effort to better their skills and knowledge about surgical interventions on HIV/AIDS patients while others do not. If the institution or hospital does not provide any in-service education on such topics, those who do not update themselves remain with minimal basic skills and the knowledge they graduated with.

The researcher has also witnessed that some doctors give up their own spare time for their patients pre and post-operatively, for example on an operating day doctors at Ngwelezana hospital where the researcher is working start work at between 07h00 and 07h30 instead of 08h00 to do pre-operative check ups on patients and after finishing the operation list, which normally finishes at 17h00, they do an immediate post operative round and leave the hospital after 18h00 instead of 16h00. This overtime doctors in the public sector are not paid for (only paid for eight hour day's work).

## SUMMARY OF RESULTS



**FIGURE 4.1** Theoretical framework to understand experiences of doctors when undertaking elective operations on HIV/AIDS patients.

## CHAPTER 5

### 5. Limitations of the study and Discussion

#### 5.1 Limitations of the study

##### Credibility of the study

Durrheim and Wassenaar (1999) argue that qualitative researchers have a problem with terms such as ‘validity’. Social construction, for example, rejects the idea that the research findings can be accurate reflections of reality. Qualitative researchers argue that research can be evaluated according to its “credibility”. They argue that the credibility of qualitative research is established while the research is being undertaken, in that ‘the researcher continually looked for discrepant evidence to the hypotheses she was developing as a means of producing a rich and credible account’.

Richardson and Woolfolk (1999) argue that in order to understand, we need to be open to the possible truth of other points of view. We need to be involved in a “genuine dialogue that involves openness to challenges that may overturn our prejudices or partialities. During this research process, the researcher was open to this dialogue, which meant that she had to often re-think ideas and return to relevant literature to reconstitute the ideas she was working with. Parker (1995) explains that a unique characteristic of hermeneutic analysis is its openly dialogical nature: “the returning to the object of inquiry again and again, each time with an increased understanding and a more complete interpretivist account.

Credibility was assured in two ways in this study. Firstly, during the interviews the researcher was conscious of having to constantly reflect back on what had been narrated, and to ask for clarity and confirmation of meaning from narrators. Secondly, the researcher returned to the transcribed narratives over and over again, asking new questions and thus constantly revisiting her interpretations (Parker, 1999). As Richardson and Woolfolk (1999) argue, “the work of understanding is never finished and is permanently liable to honest doubt. They argue that all understanding is “historically conditioned, essentially prejudiced, in part relative to the perspectives and purposes of the interpreter, and therefore continually changing”. The researcher therefore acknowledged that her interpretation of these narratives was partial and permanently liable to honest doubt. In sum, the researcher would argue that her findings are neither accurate nor final reflections of reality, but rather a tentative and plausible account of human agency in the world.

### **Transferability**

As an interpretive study, this study did not seek generalisability. Rather, the researcher acknowledges that meanings are highly variable across contexts of human interaction (Durrheim & Wassenaar, 1999). Through the process of interpretation this study provides a detailed and rich description of the context of participants. Readers are thus able to achieve understandings of the structures of meaning, which develop in specific contexts. These understandings can then be “transferred to new contexts in other studies to provide a framework with which to reflect on the arrangements of meaning and action that occur in these new contexts” (Durrheim & Wassenaar,

1999). In sum, the aim of this study is not ‘generalisability’ but rather ‘transferability’.

### **Dependability**

Closely related to the notion of transferability was that of dependability. Interpretivist researchers do not assume that what they are studying is a stable or unchanging reality and therefore do not expect to find the same results repeatedly. Rather, they expect that individuals will behave differently in changing contexts (Durrheim & Wassenaar, 1999). The researcher has therefore not sought to show reliability, but rather dependability, by giving a rich and detailed description of the contexts in which the participants interacted during the interpretation of the narratives. It is hoped that this study has shown how certain actions and options are rooted in and develop out of contextual interaction and that reliability, as a positivist term, is not appropriate to interpretivist research.

### **Information bias**

The possibility of information bias resulting from interviewing was considered since the researcher was closely involved professionally, so to maintain objectivity the data analysis was checked by the supervisor, who had a different background. However, the researcher’s close involvement also provided a better understanding of the context, which enabled her to probe responses and obtain explanatory responses. This limitation could have been overcome perhaps, if another experienced theatre nurse with an interest in research had been available. S/he could have conducted the

interviews, unfortunately at the time of the study there was no suitably qualified person.

### **Researcher bias**

Although the researcher in this study had established rapport, gained the trust of the informants and had practised her interview skills, the fact that the interviewer is in the same field of work may have either positively or negatively affected the amount and quality of data collected. The researcher ensured constant objectivity by making sure that study results are derived from characteristics of participants and study context, not from researcher's biases.

### **'Rashomon effect'**

This effect was noticed in this study where doctors' reports from working in the same hospital, and practising in the same field contradict other reports, e.g. some doctors have experienced difficulties in operating on HIV/AIDS patients whereas others did not (Marks,1993).

### **Other limitations identified**

In this study purposive sampling was selected so that rich and quality data could be obtained, and the criteria for selection was two years of experience in surgery. However two years experience in surgery may not be the same as some hospitals are busier than others e.g. Ngwelezana hospital does 550 operations per month, while Benedictine hospital does 100 operations per month.



Lack of sufficient literature and studies done on the researcher's topic in Africa limited possible comparison.

Another limitation of the study was that one of the respondents withdrew from the study, preventing the incorporation of salient data. This is seen as a limitation because the unique insights obtained from this respondent, unfortunately could not be used.

## **5.2 Discussion**

This study found many challenges that doctors experience when operating on patients with HIV/AIDS, related to doctors' personal factors, the health system, health service delivery, their risk of HIV infection exposure, and patient related factors.

### **5.2.1 Professional obligation to electively operate on HIV/AIDS patients.**

The interpretation of a variety of extracts from the doctors' narratives in this study illustrates how professional obligation is inextricably embedded in electively operating on HIV/AIDS patients, and that doctors understand their professional obligation to electively operate on HIV/AIDS patients. Various factors, including the process of surgery, motivation to engage in prosocial response, decision to operate, establishing rapport and consoling, HIV testing, pre-operative care, intra-operative care and post-operative care were seen as instrumental in deciding electively to operate on HIV/AIDS patients.

The management of surgical disorders in HIV/AIDS patients requires not only the application of technical skills and training in basic sciences to the problems of diagnosis and treatment, but also genuine sympathy and indeed love for the HIV/AIDS surgical patients. The surgeon must be an applied scientist, an engineer, an artist, and a minister to his or her fellow human beings. Because life or death often depends upon the validity of surgical decisions, the surgeon's judgment must be matched by courage in action and by a high degree of technical proficiency. In summary, the pre-intra and post-operative care and evaluation should be comprehensive in order to assess the patient's overall state of health, to determine the risk of impending elective surgical treatment in HIV/AIDS patients and to guide pre, intra and post-operative preparations for HIV/AIDS patients (Way, 1998)

### **5.2.2 Operating doctors' personal factors, fears, stigma and work related stress**

This study showed that many younger doctors reported negative feelings like bother, worry, fear and anger when they have to operate on HIV/AIDS patients, which results in work related stress. The results of this study correlates with previous research findings that were carried out in foreign countries. In countries where the epidemic has recently emerged doctors lacked self efficiency in managing HIV infection in operated patients (Mac Cann, 1999).

Doctors in this study indicated five different motivations that lead them to engage in their prosocial response to the HIV pandemic and the surgical interventions required for HIV/AIDS patients. These five underlying factors included their values e.g. a

humanitarian obligation to help others, the need to understand, community concern, the desire for personal growth and attempts to enhance their own self-esteem.

According to Smith, Keating and Scotland (1989), empathy leads to helping but not because of selfless concern for the welfare of others or because helping reduces uncomfortable emotions. Instead pro-social behavior is motivated by the joy one experiences when observing that someone's needs have been met. This appears to be an evolutionarily useful response, and it has been observed in monkeys and apes (Brothers, 2000) and in some children as young as twelve months of age. By the time we reach adulthood, this capacity for empathic concern is a common one, especially if we have grown up in a supportive family in which such reactions are encouraged (Ungerer et al, 2000). It has been suggested that job preferences of doctors indicate the desire to dedicate oneself to the patients or serving community and they put their patients' interests before their personal interests (Hale, 1999).

The results on doctors' fear and stress in this study are supported by Demmer, 2004 who highlighted the experiences of health care workers with stress and burnout during more than two decades of HIV/AIDS care. Though physicians represented a much smaller proportion of the sample in this study, he found that younger physicians showed more stress and burnout compared to experienced physicians (Demmer, 2004).

Studies conducted in Singapore (Annals of the Academy of Medicine) consistently showed that many medical professionals have negative attitudes towards people who are HIV positive (Silverma, 1998) and feel reluctant to offer them treatment (RSC,

1999). The results of this study are similar to Wallack's (1999) findings that 87% of physicians experience more anxiety about caring for HIV/AIDS patients than other patient groups. Caring for people with HIV infection can be more stressful (Reed, 1994 & Silverman, 1998) and more fearful for those in the medical profession who perform invasive procedures (Donnell & Weinberger, 1998).

### **5.2.3 Structural factors**

#### **Health System**

All fourteen doctors reported that the HIV/AIDS pandemic has increased the workload, since diagnosis of extra-pulmonary tuberculosis (EPTB) requires confirmation through biopsy, and HIV/AIDS patient are at increased risk post-operatively ( WHO, 2002).

Prior to the HIV/AIDS epidemic, the health systems of Sub-Saharan Africa were making a significant contribution to the steadily improving overall health status of populations in the region. There were however virtually no published studies as of 1995, on how the African HIV epidemic would affect the supply, demand and quality of healthcare (UNAIDS, 2000). The experiences of doctors in Northern KwaZulu-Natal indicate the deleterious effect of this pandemic on the health system.

The narratives of doctors in this study demonstrate the importance of aseptic practices in the care of pre-operative patients, and they all confirmed that these aseptic guidelines are followed in the institutions where they are employed. AORN,

the Association of Preoperative Registered Nurses, has developed standards and recommended practices for achieving the optimal level of technical and aseptic practices in the care of preoperative patients. These guidelines are intended to give direction and information for the formulation of institutional policies. Individual hospital policies and procedures reflect variations in the physical environment and/or in clinical situations, which determine the degree to which these recommended practices can be implemented. All health care facilities incorporate into their policies and procedures the recommendations for infection control from the Centres for Disease Control and Prevention (CDC), as well as the regulations for the prevention of exposure to blood-borne pathogens from the Occupational Safety and Health Administration (OSHA) (Stotter et al, 2000).

In this study budgetary constraints and difficult working conditions appeared to exacerbate the problem by increasing doctor fatigue, which doctors felt could lead to accidental injuries especially amongst junior staff. The extent of the psychological stress on staff as a result of their perceptions of inadequacy is not known. This feeling of inadequacy may place an additional burden on doctors already operating on HIV/AIDS patients. There are no formal support mechanisms in the health service for staff working with HIV-infected patients.

Visintini et al. (1996) point out that lack of competence leads to burnout and peer support groups could alleviate the stress caused by the feeling of incompetence. In a 1998 survey done in New York City of doctors and nurses specialising in AIDS care,

36% identified workplace-related stressors, which involved staff conflicts, workload and shortage of staff. Similar findings were reported in a study of physicians caring for HIV/AIDS patients. Work overload and social relationships with colleagues, supervisors and administrators were the main predictors of burnout. In a recent study of counselling and administrative staff working in AIDS service organisation in New York City, paperwork and inadequate salaries were cited as the main source of stress (Demmer, 2004). Anecdotal information and a few recent studies suggest that the epidemic's impact on the health system is devastating, particularly as it affects human resources as well (Tawfik and Kinoti, 2001).

This study also highlighted that the workload is increasing while the number of surgical doctors and nurses in operating theatres is decreasing. The Health Systems Trust estimated that 300 nurses are leaving South Africa every month. There is already a shortage of skilled healthcare workers, particularly in the specialist categories of intensive and neo-natal care, as well as in the country's operating theatres. The HIV epidemic is also expected to take its toll on the nursing profession, with an estimated one in five nurses being HIV positive (HST, 2001).

### **Risk of exposure**

As a result of the high prevalence of HIV/AIDS, some doctors in this study feel very anxious about contracting HIV in the workplace. This group of doctors appeared to resent being involved in the surgical care of HIV/AIDS patients. They did not see medicine as fulfilling its role as a healing profession due to the poor health system.

It was also noticed that male doctors felt very strongly that the health system was not providing a conducive working environment for public-sector doctors. The possibility that doctors performing surgery will be exposed to the HIV virus by infected blood and body fluids is increasing as the epidemic expands. There is thus a need to improve awareness of guidelines regarding PEP.

In this study some doctors called for the facilitation of HIV antibody testing for patients prior to surgery, so that additional infection control procedures can be implemented for those who are HIV positive. This study's results are similar to the research findings from studies that were carried out in Turkey (Duyan et al. 1998; Elbas & Send, 1998 and Zencir et al, 1998). Doctors wish for routine HIV antibody testing of pre-operative patients, which has not been endorsed by the college of surgeons or Medical Association. The need for counselling about the HIV test is now recognized by most health care workers (Sketchley, 2001) and the majority of the doctors in this study agree. Asking a patient about to undergo surgery to submit to an HIV antibody test may increase their anxiety at what is already a stressful time. Furthermore, the psychosocial consequences of having an HIV antibody test are likely to lead to some people in need of surgical care avoiding the necessary treatment, if testing prior to surgery is made compulsory (Sketchley, 2001).

The disadvantage of selective testing, whether compulsory or voluntary, is that it is likely to miss a number of infected individuals, including those not perceived to be at

high risk, and even the testing of all patients will fail to identify those in the window period between infection and sero-conversion (Currie, 1998).

Doctors need to be made aware that the risk of contracting HIV following occupational exposure to HIV is low. Epidemiological studies have indicated that the average risk of HIV transmission after percutaneous (passing through the skin) exposure to HIV infected blood in health care settings is about three per 1000 injuries ( Schaller & Cladini, 2000).

It is important to highlight to health staff that besides contracting HIV following occupational exposure, they are subject to similar risks of HIV/AIDS as the general population, with the main mechanism of disease transmission being sexual contact. Health personnel are subject to age-specific risks and the effects of income, education, and social status on their sexual behavior. Studies suggest that although occupational risk is increased in the course of providing health services, this risk is limited. There is also variation in occupational risk across professional cadres and between developed and resource poor institutions (Hajek, 2003). Employers should be aware that, where there is, or is likely to be, a risk of infection in the work-place, the employer shall take and maintain measures, depending on the nature and extent of the risk for preventing infection including, where applicable, the application of universal precautions (Hajek, 2003).



### **Health service delivery**

This study indicates that there is a lack of protocols and guidelines that will give doctors information or a guide on electively operating on HIV/AIDS patients. This finding is similar to that from other countries like Turkey (Elbas & Send 1998, Zencir et al, 1998). Those studies showed that some of the doctors were anxious about their knowledge of surgical care in HIV/AIDS patients. There is no evidence that knowledge of patients' HIV status reduces the risk of HIV transmission to surgical staff through reduction in the rate of needle stick injury. To investigate this, a study was performed in San Francisco in an area of extremely high prevalence, where maximum precautions were probably being taken anyway (Gerberding, 1990). However, this does not detract from the fact that although knowledge about HIV may encourage compliance with infection control procedures, it will not prevent accidental exposure.

Doctors in this study feel that the PMTCT program has contributed to the challenges they face when electively operating on HIV/AIDS patients. Appropriate management of pregnant patients who have HIV disease has a major impact on maternal and infant death. The goals of therapy are to properly manage the pregnancy, treat the maternal HIV infection, and minimize the risk of vertical transmission of HIV. Early detection of HIV through aggressive screening programs is necessary to initiate timely therapy. Multiple prospective cohort studies support elective caesarian section as an additional means to decrease vertical transmission (Stotter et al, 2000). More than 160,000 women of childbearing age in the United States are infected with

HIV disease. Perinatal transmission of HIV accounts for more than 90 percent of all paediatric AIDS cases. Infants infected with HIV at birth are more susceptible to opportunistic infections and a rapid progression to AIDS, including a 50 percent chance of developing AIDS by three years of age. In 1995 AIDS was the leading cause of death in children in the United States. Fortunately from 1992 to 1997 the number of paediatric AIDS cases declined to 66 percent despite only a 17 percent decline in the number of births to women infected with HIV (UNAIDS, 2000).

#### **5.2.4 Patient related factors**

The results of this study confirmed the following patient related factors that make operating on HIV/AIDS patients very challenging, and these have been also reported by other studies.

- Lung diseases are very common in HIV/AIDS patients, which give rise to intra-operative complications, that is complications related to anaesthesia (Bartlet & Gallant, 2001).
- Malnutrition and in particular iron and protein deficiency is a common problem with HIV/AIDS patients. Often, due to lack of absorption from diarrhoea or anaemia secondary to malnutrition and drug side effects. These deficiencies cause depleted immune system. Malnourished patients do not do well both intra and post-operatively (Chambers, 1991).
- Despite the increasing number of patients with the human immunodeficiency virus (HIV) infection, surgical experience with these patients remains limited. A retrospective review over a 9 year period (January 1985 to December 1993) was

undertaken in Australia to determine the indications, operative management, pathologic findings and outcome of major abdominal surgery in these patients. A total of 51 procedures were performed in 45 patients; 30 patients had acquired immunodeficiency syndrome (AIDS) and 15 patients had asymptomatic HIV infection. Indications included gastrointestinal bleeding, complicated pancreatic pseudocysts, cholelithiasis, bowel obstruction, immune disorders, acute abdomens, elective laparotomy, colostomy formation, menorrhagia and Caesarian section. Pathologic findings directly related to the HIV infection were found in 81% of the AIDS patients and 35% of the asymptomatic HIV infected patients ( $P < 0.05$ ). These included opportunistic infections, non-Hodgkin's lymphoma, Kaposi's sarcoma, immune disorders, lymphadenopathy and pancreatic pseudocysts. It was noted that AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis (61% vs. 7%;  $P < 0.01$ ). Emergency operations carried a higher complication rate than elective operations though this was not significant. The hospital mortality was 12%. On follow up, 13 of the 25 AIDS patients had died with the median survival of 7 months, while three of the 14 asymptomatic HIV infected patients had died with the median survival of 40 months. Of the remaining patients, the 12 AIDS patients had a median postoperative follow up of 7 months and the 11 asymptomatic HIV infected patients had a median postoperative follow up of 29.5 months (Saunders & Scott, 1999).

- In orthopaedics soft tissue injuries are more risky in HIV/AIDS patients and the risk of sepsis is higher than in closed fractures. A bone spike pierces the skin from within if the fractures follow indirect violence. There is much less soft tissue damage but the risk of sepsis is still present (Marks, 1993).

### **5.2.5 Protocols and guidelines**

The nature and number of concerns expressed by respondents in this study of the lack of effective surgical interventions for HIV/AIDS patients and complications they encounter post-operatively indicate the urgent need for policy guidelines and protocols. These should be made a priority of health service managers and policy makers. Official management protocols should be developed and supported with the necessary resources to facilitate implementation. The protocols must range from the macro level (national) to the micro level (operating theatre or unit in the hospital).

The care of the HIV/AIDS patient with a surgical problem commonly involves distinct phases of management sequence: the diagnostic workup is concerned with determining the cause and extent of the present illness. Preoperative evaluation consists of an overall assessment of the HIV/AIDS patient's general health in order to identify significant abnormalities that might increase operative risk or adversely influence recovery. Preoperative preparation includes procedures detected by the findings from the diagnostic workup and preoperative evaluation, and by the nature of the expected operation on the HIV/AIDS patient. In summary, the preoperative evaluation needs to be comprehensive in order to assess the HIV/AIDS patient's

overall state of health, to determine the risk of the impending surgical treatment, and to guide the preoperative preparation. The assessment should include: a nutritional assessment, assessment of immune competence, factors leading to increased infection, pulmonary dysfunction, delayed wound healing, drug effects etc.

This study indicated that doctors would like to test patients for HIV/AIDS preoperatively as they believe they will take extra precautions if they know that the patient is HIV positive. However according to AIDS and the Law in South Africa HIV testing is subject to informed consent (DOH, 2002). It states that no medical procedure for establishing whether a person is an infected person shall be performed in respect of such person without the informed consent or that person or someone who is legally competent to consent on her or his behalf ( in the act referred to as a legally competent person).

## CHAPTER SIX

### 6. Conclusion and Recommendations

#### 6. 1 Conclusion

In conclusion, this study clearly indicates the need for official guidelines to influence the doctors' decisions about surgical interventions for HIV-infected patients. These are difficult decisions, with far-reaching implications and usually call for ethical considerations. At a micro level, these guidelines should be translated into protocols that are developed with co-operation and input of all categories of staff, as the different categories have different concerns and experiences that all need to be taken into account.

It is apparent that many doctors feel they have inadequate clinical and pre-operative counselling skills to deal with HIV/AIDS and its implications. Thus, the training programs at medical school and the continuing medical education of doctors should aim at increasing the confidence and skills of doctors to cope with HIV surgical intervention issues. In addition consultants, who feel more clinically confident, need to provide more active support and teaching advice for the less experienced categories of staff. Counselling skills training in respect of HIV infection should also become part of the basic training of doctors.

Doctors overestimate the risk of operating on HIV/AIDS patients and this can lead to some ethical problems. Education programs are needed to reduce negative attitudes towards operating on HIV/AIDS patients and to remove unfounded fears of

contracting HIV infection and post-operative complications of the patients. Formal, and peer support groups should be organized to handle the emotions related to HIV/AIDS and multidisciplinary health care teams are needed to help with proper pre-operative counselling of HIV/AIDS patients. Further research is warranted.

## **6.2 Recommendations**

### **Workplace support groups for surgical doctors operating in HIV/AIDS era.**

Surgical doctors need regular forums where they can vent and share their experiences in surgery especially in the HIV/AIDS era. These forums should start at a facility level and then have local and international forums. The example of this will be: All doctors involved in surgery in service delivery cluster (Northern part of KZN), comprising of three health districts (Umkhanyakude, Zululand and Uthungulu) will have a local forum, then the representatives of this forum can attend both national and international forums. This type of exposure will help surgical doctors operating in the HIV/AIDS era to exchange experiences and learn from one another especially because when viewing literature for this study very few studies have been conducted in South Africa on HIV/AIDS surgical management.

### **Personal coping resources (physical, emotional, psychological, social and spiritual)**

Facility / hospital management should revive the Employee Assistant Programs (EAP) and provide resources that prevent or help in stress management, for example

provision of gymnasiums within hospital settings, resource centre for information, cafeterias and chapels within the institution.

### **Supportive supervision and work environment**

In hospitals where there are no skilled or experienced doctors in HIV/AIDS surgical management specialists should frequently visit those institutions and make an effort to in-serve doctors in those areas. Monitoring and evaluation systems of morbidity and mortality should be established in HIV/AIDS surgical care (intra and post-operatively) and reports should be frequently reviewed by the provincial department of health at all levels of care. This will help to identify gaps in surgical care of HIV/AIDS patients and get ways to remedy the situation.

Supportive work environment (involvement of surgical doctors in the mission of the institution, recognition of work and adequate benefits), methods of nurturing them so as to retain surgically skilled doctors should be considered so as their long working hours because quality of rendered service is compromised especially during this era of HIV/AIDS, patients need more time for assessment pre and post operatively. These pre-operative assessments should be done by both the anaesthetist and surgical doctor to determine the patient's fitness for surgery, a more experienced surgeon and a physician may be involved in severe cases. This will help to identify the actual cause of death other than anaesthetic death.



### **Strengthen Health Services to deal with HIV/AIDS surgical management**

Protective devices for HIV/AIDS during operation should be made available at all times. Enforcing measures should be implemented if there is resistance, by each institution to ensure that all doctors use these when operating. In-service education on international protective measures of HIV infection transmission should be continuously done. The incidence of needle stick injuries should continuously be monitored and evaluated quarterly by the infection control, occupational health and quality assurance officer of each institution. Post exposure prophylaxis chemotherapy should be available at all times together with counselling services.

Undergraduate training on surgical interventions in HIV/AIDS patients for both doctors and nurses should be emphasized, and should included in students curriculum.

Guiding protocols and policies should be formulated by specialists (in HIV/AIDS and surgical intervention) on how to assess an HIV/AIDS patient pre-operatively. A guide on deciding, whether the patient will survive an operation and intra and post-operative care should be developed.

Vacant doctors' and operating theatre nurses' posts need to be filled so that there will an adequate number of doctors and operating theatre nurses in each institution, thus decreasing the workload, and this will reduce work-related stress, which can result in work burnout. Staffing norms should be adhered to, at all times.

Strengthen health services with regard to availability of better and latest technology equipment, such as endoscopes to lessen unnecessary opening of HIV/AIDS patients and better surgical doctors' surgical skills in using such equipment. Improving general surgical intervention in HIV/AIDS patients could also improve the prognosis of such patients.

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## APPENDIX A

### INFORMATION DOCUMENT

**Study title: Understanding the Experiences of Doctors Who Undertake Elective Operations on HIV/AIDS Patients.**

Good morning doctor, I am gathering information about doctors' experiences when electively operating on HIV/AIDS patients, this will help in understanding the experiences of doctors who undertake elective operations on HIV/AIDS patients for my research project, which is a partial fulfillment of my MPH program registered with the University of Kwa-Zulu Natal (Nelson R Mandela School of Medicine).

This is a qualitative study and information will be gathered through two interviews and each interview will take about an hour. ±10 doctors will be interviewed. During these interviews questions will be asked regarding your feelings about operating on HIV/AIDS patients. Interviews will be tape recorded and these tapes will not be shared with your colleagues, they will be locked away and will be destroyed after the analysis of data. The final report, containing anonymous quotations, will be available to all at the end of the study.

We are inviting you to participate in this research study. There are no adverse effects expected after conducting the study, though the psychologist will be available if you would like counseling after the interview. All doctors who perform surgical operations at Ngwelezana, Benedictine and Lower Umfolozi hospital will be invited to participate.

Participation is voluntary refusal to participate will involve no penalty or loss of benefits to which you are entitled to, and you may discontinue participation at any time without penalty, or loss of benefits.

For further information or reporting study related adverse events you may contact –J.N.Gwala at (035) 9017099 / 0832801722.

Contact details of Research Ethics Committee.

Administrator and chairperson:

Cheryl Borreson

Medical Research Administration

Nelson R Mandela School of Medicine

Private Bag 7

Congella, 4013. Phone- (031) 2604639

THANK YOU.

**APPENDIX B**

**Consent to Participate in Research**

Dear Doctor,

You are asked to participate in a research study-

**TITLE:** Understanding the Experiences of Doctors who Undertake Elective Operations on HIV/AIDS Patients.

You have been informed about the study by the researcher- Jacqueline N. Gwala.

If you require further information you may contact Dr Taylor at the University of Kwa-Zulu Natal at (031) 260 4499 any time if you have questions about the study.

In addition you may also contact the Medical Research Office at the Nelson R Mandela School of Medicine at (031) 260 4604 if you have questions about your rights as a research subject.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop, at any stage during the interview or study.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet which is a written summary of the research, namely:

The research study, including the above information, has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate.

.....  
**Signature of Participant**

.....  
**Date**

APPENDIX C

PERMISSION TO CONDUCT A RESEARCH STUDY/TRIAL

This must be completed and submitted to the Medical Superintendent/s / Hospital Manager for signature.

Once the document has been signed it should be returned to the Medical Research Administration Office, Nelson R Mandela School of Medicine so that full ethical approval can be granted.

To: Hospital Manager

PROTOCOL : Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients. J N Gwala, Community Health. Ref.: H130/04

Permission is requested to conduct the above research study at the hospital/s indicated below:

Site 1 address:

Benedictine Hospital  
P/Bag X24  
Nongoma

Investigator/s:

Principal: J.N. GWALA

Co-investigator: \_\_\_\_\_

Co-Investigator: \_\_\_\_\_

Signature of Hospital Manager :

[Handwritten Signature]

Date: 08/10/04

Site 2 address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Investigator/s

Principal: \_\_\_\_\_

Co-investigator: \_\_\_\_\_

Co-Investigator: \_\_\_\_\_

Signature of Hospital Manager :

\_\_\_\_\_

Date: \_\_\_\_\_

NB: Hospital Manager/s to send a copy of this document to Natalia.

**PERMISSION TO CONDUCT A RESEARCH STUDY/TRIAL**

This must be completed and submitted to the Medical Superintendent/s / Hospital Manager for signature.

Once the document has been signed it should be returned to the Medical Research Administration Office, Nelson R Mandela School of Medicine so that full ethical approval can be granted.

To: Hospital Manager

**PROTOCOL : Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients. J N Gwala, Community Health. Ref.: H130/04**

Permission is requested to conduct the above research study at the hospital/s indicated below:

Site 1 address:  
NGWELEZANA HOSPITAL  
P/BAG 20021  
EMPANGENI 3880

Investigator/s:  
Principal: J.N Gwala  
Co-investigator: \_\_\_\_\_  
Co-Investigator: \_\_\_\_\_

Signature of Hospital Manager :

Date: 06/10/04

Site 2 address:  
LUDWIM HOSPITAL/NPA  
P/BAG X  
EMPANGENI 3880

Investigator/s  
Principal: J.N Gwala  
Co-investigator: \_\_\_\_\_  
Co-Investigator: \_\_\_\_\_

Signature of Hospital Manager :

Date: 07/10/04

ISIBUNGAZWE SAKWAZULU  
NATALI EMBILO  
LOWER UMFOLOZI DISTRICT  
VAB MEMORIAL HOSPITAL

**NB: Hospital Manager/s to send a copy of this document to Natalia.**

## APPENDIX D

### Copy of letter sent to Dr Taylor - 17 January 2005

Dr M Taylor

Community Health

Nelson R Mandela School of Medicine

Dear Dr Taylor

**PROTOCOL : Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients. J N Gwala, Community Health. Ref.: H130/04**

The Biomedical Research Ethics Committee and the Postgraduate Education Committee considered the abovementioned application and made various recommendations. These recommendations have been addressed and the protocol was approved by consensus at a full sitting of the Biomedical Research Ethics Committee at its meeting held on 5 October 2004 pending the receipt of the Information to Participants document being translated into isiZulu and permission being received from the Hospital Managers. These documents were received on 10 October 2004.

This approval is valid for one year from 5 October 2004. To ensure continuous approval, an application for recertification should be submitted a couple of months before the expiry date.

Please accept my very sincere apologies for the delay in submitting this letter giving full approval. This was a slip by our administrator.

Yours sincerely

PROFESSOR A DHAI (signed)

Chair : Biomedical Research Ethics Committee

c.c. : Ms J N Gwala : e-mail - [ngoza@medis.co.za](mailto:ngoza@medis.co.za) Mr S Siboto, Postgraduate Education

**APPENDIX E**

**THE INTERVIEW GUIDE**

**Opening Question**

Please will you tell me about your experience on Electively Operating on HIV / AIDS Patients from A Disadvantaged Community you are serving?

**Probing Questions**

Depending on how the narratives unravel, the following probing questions are anticipated:

Northern Kwa-zulu Natal is said to be having high seroprevalence do you agree with this statement?

If yes, why?.....

If no, why?.....

As a result of a lack of effective surgical interventions on HIV/AIDS patients, what do you think doctors should do to succeed in operating HIV/AIDS patients?

Do you think that you have an obligation to give information and education before operating HIV/AIDS patients?

If yes,why?.....

If no,why?.....

Do you think that doctors should be able to feel their patient's pain and fear?

Before operating an HIV/AIDS patient, do you think that it is important to establish rapport with your patient?

If yes,why?.....

If no, why?.....

Do you think that the pandemic of HIV/AIDS sometimes make your work stressful?

If yes,why?.....

If no,why?.....

If your answer above is yes, how do you cope with stress?

Do you think that operated a number of HIV/AIDS patients, make you feel burnout?

## APPENDIX F

### Adults

<b>WHO clinical staging system for HIV infection and related diseases in adults (13 years or older).</b>
<p><b>Stage 1</b> - Asymptomatic</p> <ul style="list-style-type: none"><li>- Persistent generalised lymphadenopathy</li></ul> <p><b>Performance scale one : asymptomatic, normal activity</b></p>
<p><b>Stage 2</b> - Weight loss &gt; 10% of body weight</p> <ul style="list-style-type: none"><li>- Minor mucocutaneous manifestations (e.g oral ulcerations, fungal nail infection)</li><li>- Herpes zoster within the last five years</li><li>- Recurrent upper respiratory tract infections (e.g bacterial sinusitis)</li></ul> <p><b>and / or Performance scale 2: symptomatic, normal activity</b></p>
<p><b>Stage 3</b> - Weight loss &gt; 10% of body weight</p> <ul style="list-style-type: none"><li>- Unexplained chronic diarrhoea for more than one month</li><li>- Unexplained prolonged fever for more than one month</li><li>- Oral candidiasis ( thrush)</li><li>- Oral hairy leukoplakia</li><li>- Pulmonary TB</li><li>- Severe bacterial infections ( pneumonia, pyomyositis)</li></ul> <p><b>And / or Performance scale 3: bedridden &lt; 50% of the day during the last month</b></p>
<p><b>Stage 4</b> – HIV wasting syndrome, as defined by CDC</p> <ul style="list-style-type: none"><li>- Pneumocystis carinii pneumonia</li><li>- Toxoplasmosis of the brain</li><li>- Cryptosporidiosis with diarrhoea, for more than one month</li><li>- Cryptococcosis, extrapulmonary</li><li>- Cytomegalovirus (CMV) disease of an organ other than liver, spleen, lymph nodes</li><li>- Herpesvirus infection, mucocutaneous for more than one month, or visceral any duration</li><li>- Progressive multifocal leukoencephalopathy (PML)</li><li>- Any disseminated endemic fungal infection (e.g. histoplasmosis)</li></ul>



## APPENDIX G

### MATRIX DISPLAY

#### Opening Question:

Please will you tell me about your expertise on electively operating on HIV/AIDS patients from a disadvantage community you are serving?

<p>1. <u>Recurrent Images, metaphors, tension, inconsistencies and contradictions.</u></p> <ul style="list-style-type: none"> <li>• Sympathy for patients.</li> <li>• HIV positive</li> <li>• Helping HIV/AIDS patients.</li> <li>• Needs/demands for operations.</li> <li>• Decision to operate.</li> <li>• Personal responsibility</li> <li>• Assessment of patients</li> <li>• Pre-operative assessment</li> <li>• Perceptions about HIV/AIDS</li> <li>• Rapport with patients pre-operatively.</li> <li>• Increased workload.</li> <li>• Gender</li> <li>• Race</li> <li>• Age</li> <li>• Religion</li> <li>• Nationality</li> <li>• Marital status</li> <li>• Years of experience</li> <li>• Country trained</li> <li>• Ways of coping</li> <li>• Consultants</li> <li>• Attitudes of doctors to HIV/AIDS</li> <li>• Levels of lived stress</li> <li>• Counselors for doctors</li> <li>• Specialized training on HIV/AIDS</li> </ul>	<p>2. <u>Sense of self that emerged from narratives.</u></p> <ul style="list-style-type: none"> <li>• Humanitarian</li> <li>• Obligation of "a calling"</li> <li>• Concern &amp; worry about HIV/AIDS patients.</li> <li>• Develop surgical skills.</li> <li>• Feel better about myself having helped HIV/AIDS patients who need operation.</li> <li>• Dedication to patient welfare.</li> <li>• Comfortable with career of choice</li> <li>• Happy</li> <li>• Sad</li> <li>• Satisfaction</li> <li>• Technical skills</li> <li>• Professional obligation</li> <li>• Career path</li> <li>• Empathy</li> <li>• Rewards / rewarding experience</li> <li>• Work related stress</li> <li>• Burn out</li> <li>• Failures</li> <li>• Power</li> <li>• motivation</li> </ul>
<p>3. <u>Incidences where the interviewee described themselves in relation to HIV/AIDS patients</u></p> <ul style="list-style-type: none"> <li>• Anaesthetic difficulties</li> <li>• Delayed healing</li> <li>• Enhanced quality of care</li> <li>• Strategies</li> <li>• Challenge skills</li> <li>• Coping strategies</li> <li>• Diagnosis &amp; decision for treatment</li> <li>• HIV testing</li> <li>• Weak HIV patients</li> <li>• Chest infections &amp; anesthesia.</li> <li>• Establish rapport with HIV/AIDS patients.</li> <li>• Obtaining informed consent</li> <li>• Emotional reaction</li> <li>• Happy to help HIV/AIDS patients by operating on them.</li> <li>• Feel patients' fears and pain.</li> <li>• Communication with patients</li> <li>• Long working hours.</li> </ul>	<p>4. <u>Emergence of broader personal structural, patient related factors. Consequences of HIV/AIDS in surgery and procedures and protocols required when operating during an HIV/AIDS procedure.</u></p> <ul style="list-style-type: none"> <li>• Selection of HIV/AIDS patient for surgery</li> <li>• Why selected?</li> <li>• Difficulties</li> <li>• Fears</li> <li>• Risk of exposure</li> <li>• Bill of rights (patients)</li> <li>• Health service delivery</li> <li>• Service requirements</li> <li>• Protocols and policies.</li> <li>• HIV/AIDS pandemic increased rate of opportunistic infections e.g. extrapulmonary TB</li> <li>• Increased caesarian section rate from PMTCT.</li> <li>• Increased demand and supply of health care.</li> <li>• Increased workload.</li> <li>• Work unpaid overtime</li> <li>• Complications Long inpatient stay</li> <li>• Long ward rounds</li> </ul>

UNDERSTANDING THE EXPERIENCES OF DOCTORS WHO  
UNDERTAKE ELECTIVE OPERATIONS ON HIV/AIDS PATIENTS.

BY

JACQUELINE NOMASWAZI GWALA

MASTER OF PUBLIC HEALTH

2007

## DECLARATION

This study is original work and has not been submitted previously to this or any other university. Master's Thesis prepared and revised solely by Jacqueline Nomaswazi Gwala in partial fulfillment of requirements for the degree Master in Public Health in the school of Family Medicine and Public Health, University of Kwazulu-Natal.

**P**.....  
Jacqueline Nomaswazi Gwala  
2007

## ACKNOWLEDGEMENTS

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- The fourteen doctors from Ngwelezana, Benedictine and Lower Umfolozi District War Memorial hospitals, who availed themselves for interviews. You have taught me so much about what you encounter day-to-day when electively operating on HIV/AIDS patients. May God bless you for your hard work, perseverance and strength against all odds!
- Myra Taylor, my supervisor, for her passion for this topic and her guidance. Thank you for all your mentoring and encouragement.
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- Siyabonga Ngozo, my husband for supporting me through this. I thank the Universe for our meeting!
- Sthabile Ngozo, my daughter for all the laughs through this period! Thank you for your unconditional love, my angel.
- To all my other friends who have seen the best in me on my worst days.

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## LIST OF ABBREVIATIONS

ANC	Antenatal Clinic
AORN	Association of Pre-operative Registered Nurses
CDC	Centers for Disease Control and prevention
DHS	District Health System
DOH	Department of Health
EPTB	Extra pulmonary tuberculosis
NHS	National Health System
NTP	National TB Program
HPCSA	Health Professional Council of South Africa
HST	Health Systems Trust
HIV/AIDS	Human Immune Deficiency Virus / Acquired Immune Deficiency Syndrome
KZN	Kwazulu-Natal
LUDWMH	Lower Umfolozi District War Memorial Hospital
NGO	Non Governmental Organisations
OHSA	Occupational Health and Safety Act, 1994
PEP	Post Exposure Prophylaxis
PHC	Primary Health Care
PPE	Personal Protective Equipment
PMTCT	Prevention of Mother to Child transmission of HIV infection
RDP	Reconstruction and Development Program
SA	South Africa



SD	Standard Deviation
TB	Tuberculosis
UNAIDS	United Nations Program on AIDS
VCT	Voluntary Counselling and Testing

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## **Summary of the study**

### **The problem**

UNAIDS estimates that at the end of 2003 there were 5.3 million people in South Africa living with HIV, equivalent to 21.5% of the adult population (UNAIDS, 2004).

The average density of the population works out at 29 people per square kilometer, with 60% of these in urban areas and 40% in rural areas. Some parts of the country, especially in the rural areas, are very isolated and underdeveloped. This lack of infrastructure is one of several factors that make it difficult to get a clear picture of the size of the population and the HIV prevalence. A common method of measuring HIV prevalence in South Africa is through surveys of HIV test results taken from pregnant women who attend antenatal clinics. It is estimated that about 600 people in South Africa die of HIV-related illnesses each day. Whatever the precise levels of HIV infection and mortality, what is certainly clear is that the epidemic is a major one, and impacts on clinical practice in public sector hospitals.

This study was designed to investigate and understand doctors' experiences when electively operating on HIV/AIDS patients.

**The aim of the study** was:

To investigate the experiences of doctors undertaking elective surgery on HIV/AIDS patients.

### **Methodology**

This study uses a narrative and hermeneutic approach to explore the experiences of fourteen doctors undertaking elective surgery on HIV/AIDS patients. Participants in this

study were doctors from three hospitals serving district 26, 27 and mainly district 28, in Northern Kwazulu Natal, where most people in these communities are disadvantaged.

Using an interview guide developed by the researcher, narratives from doctors were collected. The narratives were analysed using a reading guide (Tappan and Brown, 1992). This method involved reading each narrative a number of times, focusing on a particular aspect of the respondent's narrative with each reading.

### **Findings**

Three major themes emerged through the process of interpretation, 1) doctors' personal factors, 2) structural factors, such as the health system, health service delivery and risk of exposure 3) patient related factors and lack of protocols and guidelines in surgical care of HIV/AIDS patients, these factors contribute to the challenges doctors encounter when operating on HIV/AIDS patients. Further research is warranted.

## CHAPTER ONE

### 1. Introduction

#### 1.1 Motivation for the study

The HIV/AIDS epidemic has become a serious health and development problem in many countries around the world. The joint United Nations Program on AIDS (UNAIDS) estimates the number of HIV infections worldwide at about 38.6 million by the end of 2005. An estimated 4.1 million became newly infected with HIV and an estimated 2.8 million lost their lives to AIDS (UNAIDS, 2006).

The annual South African Antenatal HIV Sero-prevalence Surveillance has reflected a sharp rise in the epidemic over the last ten years and continually reported KwaZulu Natal as the epicentre of the AIDS pandemic. In 1991 the survey of women attending antenatal clinics in Northern KwaZulu-Natal found that only 0.8% were HIV infected in 1991. The rapid increase in prevalence of women attending antenatal clinics in KwaZulu-Natal, from 1994, (7.6%), to 22.4% in 2000 and 40,7% in 2004 (Department of Health, 2005). In contrast to the annual antenatal surveys which have consistently found KwaZulu-Natal (KZN) to have the highest prevalence, in a national survey the province ranked 4<sup>1</sup> (11.7%). A possible explanation for the discrepancy is the fact that the sites for KZN's antenatal survey are along major transport routes, known to be high-risk areas for HIV. This study included rural and urban households. In addition, a relatively small percentage of people in KZN (5%) live in informal settlements where HIV prevalence is high (Shishana, 2002).

A cohort study was undertaken at a sugar mill located in Northern KwaZulu- Natal during 1999-2000, to determine a package of care for HIV/AIDS in an occupational setting in Africa. It revealed that amongst those receiving voluntary counselling and testing the sero-prevalence of HIV was 54% (Morris, Edward and Cheevers, 2001). This suggests that Northern KwaZulu Natal has a high prevalence of HIV/AIDS and this results in a high number of HIV/AIDS patients being operated on in the hospitals of Northern KwaZulu Natal, where the present study was conducted.

The study conducted by McCann at 1999, which looked at the willingness to provide care and treatment for patients with HIV/AIDS, revealed themes of the positive attributes associated with caring for and treating patients with HIV/AIDS. However these professionals (both nurses and doctors) voiced their major concern regarding surgical management in HIV/AIDS patients and the lack of policy guidelines and protocols.

The uncertainties of HIV infection and its relentless progression places an enormous burden on those affected. The current trend in health care research related to HIV/AIDS generally focuses on the treatment rather than on the care of the patients (Morgan et al, 1999). Many doctors are faced with, and give treatment to the patients who have HIV/AIDS and confront a myriad of challenges directly related to the disease processes, medical and surgical interventions, and diseases associated with AIDS. Many HIV/AIDS patients need operations. Disease prevention and surgery

are significantly affected by the experiences of these doctors in respect of the disease and the patient (Fuller, 1999).

Doctors are in a unique position to provide the information and education needed prior to operating on HIV/AIDS patients, since they are perceived as among the most trusted source of health care information by the general public. However, little is known about doctors' experiences when electively operating on HIV/AIDS patients in South Africa and in particular on such patients from a disadvantaged community, which in this context is very important. This is because most South Africans are malnourished and lack household food making them very weak to withstand operations (Habadaios et al, 2003). There is a rapidly growing body of research related to professionals' attitudes towards HIV/AIDS in Western countries (Morgan etal, 1999).

In South Africa, however, there is limited research about the experiences of health care personnel about HIV/AIDS and in particular, concerning the experiences of practitioners.

## **1.2 Statement of the problem**

Practitioners do not have a platform to verbalize or ventilate their fears, problems, and experiences in operating on HIV/AIDS patients. No ventilation results in a "burnout" syndrome, and they may become less effective and the disadvantaged communities they serve, may suffer (Fuller, 1999). The present study was directed at

understanding and clarifying the surgeons' problems, identifying possible solutions and making recommendations to address these problems.

### **1.3 Aim of the study**

To investigate the experiences of doctors who undertake elective surgery on HIV/AIDS patients in a rural district.

### **1.4 Objectives of the study**

1. To explore doctors' professional obligation to electively operate on HIV/AIDS patients .
2. To investigate doctors'empathy - altruism, fears and stress with respect to HIV surgery.
3. To investigate problems related to the health system, service delivery and risk of exposure that doctors encounter when electively operating on HIV/AIDS patients.
4. To explore patient related factors challenging doctors when electively operating on HIV/AIDS patients.
5. To ascertain which procedures or protocols doctors think should be followed when operating on HIV/AIDS patients.
6. To make recommendations based on the results of the study for doctors involved in surgical interventions with HIV/AIDS patients.



## **1.5 Definition of terms**

### **1.5.1 Understanding**

The term understanding is used in the study to mean grasping the meaning of doctors' feeling when electively operating on HIV/AIDS patients (Fowler & Fowler, 2000).

### **1.5.2 Experience**

The term experience is used in the study to refer to what doctors undergo or live through when electively operating on HIV/AIDS patients (Fowler & Fowler, 2000).

### **1.5.3 Doctor**

The term doctor is used in the study to refer to a qualified medical practitioner who treats diseases and impairments by electively operating on people (Fowler & Fowler, 2000).

### **1.5.4 Undertake**

The term undertake is used in the study to mean to take upon oneself to accomplish elective operations on HIV/AIDS patients (Fowler & Fowler, 2000).

### **1.5.4 Elective operations.**

The term elective operations is used in this study to refer to a choice one has to make in order to operate on the body, usually with instruments, which aims to improve or restore health (Antsey, 1999).

### **1.5.5 HIV**

The term HIV in this study stands for Human Immune Deficiency Virus, which is a group of infectious organisms that cause Acquired Immune Deficiency Syndrome (AIDS). Once inside the host, which is the human body, HIV primarily infects

T lymphocytes and monocytes, which are major components of the immune system. The virus takes over the cell reproductive machinery to reproduce itself. The cell weakens and eventually dies, releasing the newly made viruses into the blood stream. Other white blood cells are invaded and die. The body is left vulnerable to opportunistic diseases as the HIV mutates at such a fast rate that by the time an antibody is produced, the virus has changed its appearance and the antibody is unable to recognise its target (Barnett & Whiteside, 2002).

### **1.5.6 AIDS**

The term AIDS in this study stands for Acquired Immune Deficiency Syndrome, which is the weakening of the body immune system, that is caused by HIV (Human Immune Deficiency virus). The body is thus left vulnerable to opportunistic infections, which are easily fought off by a normally functioning immune system. The disease, however can become highly disabling and potentially fatal if the immune system is infected by HIV (Barnett & Whiteside, 2002).

### **1.5.7 Disadvantaged Community**

The term disadvantaged community in this study refers:

a) To a group of people with more social interaction compared to other groups, (i.e., a community) who typically hold a common vision and share responsibilities and resources. Such a group of people are in Northern KwaZulu-Natal and they lack power, money, or other means of influence. They are similarly called "the poor", and constitute the majority of the population who have been affected by apartheid and its legacy (Chambers, 1991).

b) To a lack of advantage, handicap, with a physical or mental impairment that interferes with the ability to lead a happy, productive life which may affect his or her personal life, and community life (Chambers, 1991).

## CHAPTER TWO

### 2. BACKGROUND OF THE STUDY - LITERATURE REVIEW.

#### 2.1 HIV/AIDS Pandemic

##### 2.1.1 Global summary of the HIV /AIDS epidemic, end 2005

**TABLE 2.1 UNAIDS summary of the HIV/AIDS epidemic (UNAIDS, 2006)**

<b>People living with HIV infection in 2005</b>	<b>Total</b> 40 million [34.6 - 42.3 million] <b>Adults</b> 38.7 million [32.7- 39.8 million] <b>Women</b> 20 million [15.8 - 18.8 million] <b>Children &lt;15 years</b> 2.1 million [1.9 - 2.5 million]
<b>People newly infected with HIV in 2005</b>	<b>Total</b> 5 million [4.2 - 6.3 million] <b>Adults</b> 4.9 million [3.6 - 5.6 million] <b>Children&lt;15years</b> 630 000 [570-740 000]
<b>AIDS deaths in 2005</b>	<b>Total</b> 3.2 million [2.6 - 3.3 million] <b>Adults</b> 2.8 million [2.2 - 2.7 million] <b>Children &lt; 15 years</b> 490 000 [440 - 580 000]

HIV/AIDS has fundamentally changed our world, killing 2.9 million men and women, orphaning millions of children, and killing more than 440 000 children, hindering population growth. More than 40 million people are living with HIV/ AIDS, more than half of them are women and children (UNAIDS, 2006).

#### 2.1.2 HIV / AIDS in Africa

In 16 African countries more than one-tenth of the adult population (aged 15-49) is infected with HIV (UNAIDS, 2004). In six countries of Southern Africa, AIDS was

expected to claim the lives of between eight and twenty five percent of today's practising doctors by the year 2005. In seven countries, all in the southern cone of the continent, almost 80% of all deaths in young adults, aged 25 - 45 years will be associated with HIV. Infection rates in young African women are far higher than young men. The average rates of infection in teenage girls were over five times higher than in teenage boys. In 1997, public health spending for AIDS alone already exceeded two percent of gross domestic product (GDP) in seven African countries - and total health expending accounts for three to five percent (Barnett & Whiteside, 2002).

### **2.1.3 HIV/AIDS in South Africa**

South Africa has a serious HIV/AIDS (Human Immune deficiency Virus/Acquired Immune Deficiency Syndrome) epidemic, with millions of its people living with the disease. For the country to respond effectively to prevent new infections and provide care and treatment to those who are already living with HIV/AIDS, it is vital to have accurate data and a comprehensive understanding of the epidemic (DOH, 2004).

Historically, South Africa has had a turbulent past, and this history is relevant to the explosive spread of HIV in the region the content is described below. Apartheid was legislated into force in the 1950s, with the prohibition of mixed-race marriages, and the categorisation of separate areas in which different races might live. Sex between different ethnic groups was prohibited. In 1955 the African National Congress (ANC) demanded equal political rights, and 1956 Nelson Mandela and other

political activists were arrested for high treason. A period of increasing unrest followed, arising from the increasingly militarised discrimination growing in South Africa. In 1985 and 1986, a State of Emergency was declared in response to serious riots, and the violence increased. (Barnett & Whiteside, 2002).

Migration, mobility and HIV/AIDS are major global phenomena at the beginning of the new millennium. The 2002 UNAIDS *Report on the global HIV/AIDS epidemic* highlights relevant and crucial links between HIV/AIDS and Mobile Populations. The United Nations Population Division estimates that approximately 175 million people worldwide are considered migrants in that they live outside their country of birth. People move for a variety of reasons - some voluntary - some not. The dramatic political, economic, social and demographic changes in Africa over the past few decades have been accompanied by rapid urbanization, significant population displacement, and migration. Improved transport and communication systems, the increased exchange of goods, and the launching of large-scale development projects have prompted millions of young women and men to move within and beyond their countries (UNAIDS, 2003).

Armed conflicts, political instability, economic crises, natural disasters and environmental degradation have forced many millions more to flee their homes and run a gauntlet of dangers which, for many, could include much higher risks of HIV infection. Population mobility facilitates the spread of STIs, including HIV as documented in the UNAIDS Technical Update on population mobility and AIDS. In

many countries, areas reporting higher seasonal and long-term mobility also have higher rates of HIV infection, and rates of infection also tend to be higher along main transport routes and in border regions. Southern Africa has significant levels of migration and the world's highest rates of HIV infection. The latest statistics from UNAIDS indicate that 14.7 million out of the total 42 million adults living with HIV/AIDS are living in southern Africa (UNAIDS, 2003).

The current epidemic started off very slowly with low prevalence reported in South Africa. The rapid increase in HIV prevalence has impacted dramatically on the health services, health policies and programmes and the implementation thereof have not kept pace with the rapid escalation of the epidemic, a summary of the history of HIV/AIDS from 1982 to 2004 is presented, which helps to explain the background to this study. In 1982, the first cases of HIV were diagnosed in South Africa. For the first few years of the epidemic, cases were mainly amongst white gay men. Following the same trends seen in other countries, as the number of cases increased, the virus began spreading to all other areas of society (Barnett & Whiteside, 2002).

The Advisory Group for AIDS was appointed in 1985 and in 1990 the first antenatal surveys to test for HIV were carried out, and 0.8% of women were found to be HIV positive. It was estimated that there were between 74,000 and 120,000 people in South Africa then living with HIV. Since this time, antenatal surveys have been carried out annually (Barnett & Whiteside, 2002). The number of heterosexually contracted infections equaled the number homosexually contracted in 1991. Since

that point, heterosexually acquired infections have dominated the epidemic. The prevalence rate was 1.4% based on antenatal testing. Several AIDS information, training and counselling centres were established (Barnett & Whiteside, 2002).

The prevalence rate was 2.4% in 1992 based on antenatal testing. The first governmental response to AIDS came when Nelson Mandela addressed the newly-formed National AIDS Convention of South Africa (NACOSA), although there was little action from the government in the following few years. The purpose of NACOSA was to begin developing a national strategy to cope with AIDS. The free National AIDS helpline was started (Barnett & Whiteside, 2002).

The prevalence rate was 4.3% in 1993 based on antenatal testing. The National Health Department reported that the number of recorded HIV infections had increased 60% in the previous two years and the number was expected to double in 1993. A survey of women attending health clinics indicated that nationally some 322,000 people were infected (Barnett & Whiteside, 2002).

Based on antenatal testing in 1994 the prevalence rate was 7.6%. The Minister for Health accepted the basis of the NACOSA strategy as the foundation of the government's AIDS plan. There was criticism that the plan, however well intended, was poorly thought-out and disorganised. The South African organisation Soul City was formed, developing media productions with the intention of educating people about health issues, including HIV/AIDS (Barnett & Whiteside, 2002).



The prevalence rate was 10.4% in 1995 based on antenatal testing. In 1996 the prevalence rate was 14.2% based on antenatal testing. The International Conference for People Living with HIV/AIDS was held in South Africa, the first time that the annual conference had been held in Africa. The then Deputy President, Thabo Mbeki, acknowledged the seriousness of the epidemic, and the South African Ministry of Health announced that some 850,000 people - 2.1% of the total population - were believed to be HIV positive, and that in some groups, such as pregnant women, the figure had reached 8% and was rising (Barnett & Whiteside, 2002).

The prevalence rate was 17.0% in 1997. based on antenatal testing. A national review of South Africa's AIDS response to the epidemic found that there was a need for political leadership (Barnett & Whiteside, 2002).

The pressure group Treatment Action Campaign (TAC) was started to advocate for the rights of people living with HIV / AIDS and to demand a national treatment plan for those who were infected, as the prevalence rate in 1998 was 22.8% based on antenatal testing. The then Deputy President Thabo Mbeki launched the Partnership Against AIDS, admitting that 1,500 infections were occurring every day. That year (2001) alone, 49,280 incidences of rape and sexual assault were reported, indicating that sexual violence is likely to be an important factor involved in the transmission of HIV. Sexual assaults in South Africa are thought to go largely unreported, so the true figure is undoubtedly much higher (Barnett & Whiteside, 2002).

Gugu Dlamini, a health worker and AIDS activist, made her HIV status public on World AIDS Day, and was stoned to death by a mob which included her own neighbours. Some 50% of adult medical admissions in hospitals in Gauteng Province were AIDS related (Barnett & Whiteside, 2002).

The prevalence rate of 22.4% based on antenatal testing was reported in 1999. Over 160 million free condoms were distributed. An educational campaign called 'Lovelife' was launched, a national programme targeting 12- to 17-year-old South Africans and in 2000 the prevalence rate was 24.5% based on antenatal testing. At the International AIDS Conference in Durban, the South African president Thabo Mbeki said that AIDS was a disease caused by poverty, not by HIV. While poverty can be more harmful to people who are HIV positive and lack adequate nutrition, this comment is untrue. It was also extremely unhelpful in promoting the adequate provision of HIV education in South Africa (Barnett & Whiteside, 2002).

President Mbeki set up a group charged with solving the country's AIDS problems which included HIV 'dissidents' such as Peter Duesberg, who believe that anti-AIDS drugs such as AZT actually cause AIDS, and that lifestyle choices such as homosexuality or drug addiction can cause AIDS. In 2001 the prevalence rate was 24.8% based on antenatal testing. South Africa's High Court ordered the government to make the drug nevirapine available to pregnant women to help prevent the transmission of the virus to their babies. Despite international drug companies

offering free or cheap AIDS drugs, the Health Ministry still refused to provide these drugs on a large scale (Barnett & Whiteside, 2002).

In 2002 the prevalence rate was 26.5% based on antenatal testing and in 2003, data showed that the HIV prevalence rate amongst pregnant women was 27.9%. TAC campaigners embarked on a strategy of civil disobedience and demonstrations to try to embarrass the government into acting. In March 2003, TAC laid culpable homicide charges against the Health Minister and her trade and industry colleague. TAC claims the pair are responsible for the deaths of 600 HIV-positive people a day in South Africa who have no access to antiretroviral drugs (Barnett & Whiteside, 2002).

These figures show that there was clearly an explosion in HIV prevalence between 1993 and 2000. This was a time when the country was distracted by the major political changes through which it was going, it is possible that the severity of the epidemic might have been lessened by prompt action at this time. Whilst the attention of the South African people was focused on the political and social changes occurring in South Africa, HIV was escalating. Although the results of these political changes were positive, the spread of the virus was not given the attention that it deserved, and policy makers and service providers didn't realise the impact of the epidemic in South Africa until prevalence rates had begun to accelerate rapidly.

Over the past decade, HIV prevalence estimates in South Africa have been largely derived from an annual survey of pregnant women attending antenatal clinics, supplemented by additional estimates from workplace and other studies. International consensus considers that antenatal surveys are a useful tool to assess HIV prevalence in areas with high prevalence of HIV in order to provide trend data. A further study augmented the Department of Health's (DOH) annual antenatal survey of pregnant women, through a population-based sample of South Africans including men, women, children, all races and ethnic groups, people living in urban areas, rural areas and farms, as well as people living in hostels (Winner, 2000).

To deal effectively with HIV/AIDS it is crucial to understand the social, cultural, political and economic context that contributes to vulnerability to HIV infection, and numerous studies have examined factors that contribute to this vulnerability in South Africa and internationally (Bartlet, 2003). These studies have utilized different methodologies, different measures and indicators, and sample sizes have been limited (DOH, 2004).

**TABLE 2.2 HIV Prevalence by sex and race in South Africa with 95% confidence intervals (Shisana, 2002).**

<b>Sex</b>	<b>n</b>	<b>HIV+ (%)</b>	<b>95% confidence interval</b>
Male	3772	9.5	8.0-11.1
Female	4656	12.8	10.9-14.6
Total	8428	11.4	10.0-12.7.
<b>Race</b>	<b>n</b>	<b>HIV+ (%)</b>	<b>95% confidence interval</b>
African	5056	12.9	11.2-14.5
White	701	6.2	3.1-9.2
Colored	1775	6.1	4.5-7.8
Indian	896	<b>1.6</b>	0-3.4
Total	8428	11.4	10.0-12.7.

Table 2.2 presents the overall HIV prevalence in the South African population (over the age of two) was estimated to be 11.4%. The HIV prevalence among those aged 15-49 was 15.6% (Shisana, 2002).

Gender: Females accounted for 12.8% of those testing HIV positive, while 9.5% of males tested positive. Among the youth (15-24 years), 12% of females were HIV infected as compared to 6% of males. Women are biologically more susceptible to HIV infection than men and difference in age distribution shows that women are infected at an early age. Men are also more effective at transmitting the virus as semen is more infectious than vaginal fluid. Women may also have undetected sexually transmitted infections, which increase the risk of HIV infection (Shisana, 2002).

HIV prevalence amongst Africans was highest (12.9%). This can be explained by historical factors, such as labor migration and relocation, as well as the fact that more African people live in informal settlements (DOH, 2004 & Shisana, 2002).

The infection rate among whites was 6.2%. This is considerably higher than countries with predominantly white populations such as the US, Australia and France, where prevalence amongst whites is less than 1%. Prevalence among Colored people was 6.1% and among Indians, prevalence was 1.6% (DOH, 2004).

South Africa is experiencing an HIV/ AIDS epidemic of shattering dimensions.

#### **2.1.4 South Africa AIDS Mortality Report**

Reliable statistics on HIV/AIDS deaths in South Africa are not available despite Government's extensive, efforts to improve the national vital registration system. The most recent official death statistics available are those for 1996. By 1996 the proportion of deaths due to AIDS was too low to tell us much about the shape of things to come. Even if the numbers of AIDS deaths were substantial, vital registration statistics may well be an unreliable source of cause of death information because the true cause of death of someone who died of AIDS can be expected to be frequently misreported (Bradshaw et al, 2001).

Standard indirect techniques have been adapted for estimating the extent of under-reporting of deaths to allow for different levels of completeness at different ages which can be expected in South Africa, in order to estimate the extent of under-registration in both the routine vital statistics reported by Statistics South Africa as well as the data obtained from home affairs. The coverage of adult death registration appears to have improved from 54% of deaths occurring in 1990 being reported to 89% of adult deaths (in those older than 15 years) occurring in the 12- month period

to the end of June 2000. The data show that there has been a steady increase in adult mortality during the 1990s. The mortality of young, adult women has increased rapidly in the last few years with the mortality rate in the 25-29 year age range in 1999/ 2000 being some 3.5 times higher than in 1985 (Bradshaw et al, 2001).

The mortality of young men has also increased, however, the pattern suggested that this may be a combination of a rise during the early 1990s in injury-related deaths, that typically occur among men in their twenties, that began to fall in the late 1990s, and a more recent increase in deaths due to AIDS in a slightly older age group. Mortality in the 30-39 year age range in 1999/2000 was nearly 2 times higher than in 1985, but obviously this is off a much higher base (Bradshaw, 2001).

The pattern in the empirical data is largely consistent with that predicted by models of the AIDS epidemic, in particular the ASSA600 model developed by the Actuarial Society of South Africa, suggesting that it is reasonable to interpret an increase in young, adult mortality as being essentially a consequence of HIV/ AIDS (Bradshaw, 2001).

It is estimated that about 40% of the adult deaths aged 15-49 that occurred in the year 2000 were due to HIV/ AIDS and that about 20% of all adult deaths in that year were due to AIDS. When this is combined with the excess deaths in childhood, it is estimated that AIDS accounted for about 25% of all deaths in the year 2000 and has become the single biggest cause of death. The projections show that, without

treatment to prevent AIDS, the number of AIDS deaths can be expected to escalate, within the next 10 years, to more than double the number of deaths due to all other causes, resulting in 5 to 7 million cumulative AIDS deaths in South Africa by 2010 (Bradshaw, 2001).

**Table 2.3 Provincial HIV prevalence (Shisana, 2002)**

<b>Provinces</b>	<b>n</b>	<b>HIV+ (%)</b>	<b>95% confidence interval</b>
KwaZulu-Natal	1579	11.7	8.2-15.2
Gauteng	1272	<b>14.7</b>	11.3-18.1
Western Cape	1267	10.7	6.4-15.0
Eastern Cape	1221	6.6	4.5-8.7
Northern Cape	694	8.4	5.0-11.7
Limpopo	679	9.8	5.9-13.7
North West	626	10.3	6.8-13.8
Mpumalanga	550	14.1	9.7-18.5
Free State	540	14.9	9.5-20.3
Total	8428	11.4	10.0-12.7.

When considering the provinces, HIV prevalence was highest in these provinces Free State (14.9%), Gauteng (14.7%) and Mpumalanga (14.1%) (Table 2.3). Gauteng and Free State have the highest proportion of their HIV positive residents living in informal settlements, which is a significant risk factor for HIV (Shisana, 2002). It should be noted, however, that in terms of population numbers, KZN is a populous province (9.4 million people) as a result it has the second highest number of people living with HIV/AIDS after Gauteng (Shisana, 2002).

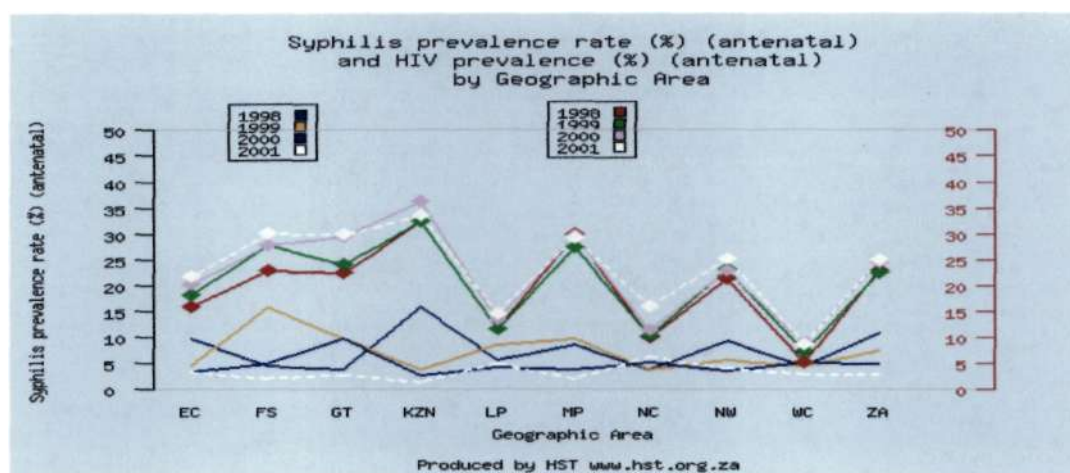
Age: The highest prevalence rate was among the 25-29 age group (28%), followed by the 30-34 group (24%). The prevalence rate for children 2-14 years was unexpectedly high at 5.6% and it remains unclear how these children were infected.



Locality type: People living in urban informal settlements had the highest HIV prevalence (21.3%), followed by formal urban areas (12.1%). Tribal areas had a rate of 8.7% and farms 7.9% (Shisana, 2002)

### 2.1.5 HIV/AIDS in KwaZulu-Natal

Antenatal (ANC) HIV sero-prevalence surveillance reflects KwaZulu-Natal as the epicenter of the HIV/AIDS pandemic. Figure 2.1, below illustrates HIV and prevalence among ANC attendees per province from 1998 to 2001 (cited DOH, 2003).



**FIGURE 2.1** HIV and Syphilis prevalence among ANC attendees in KZN: 1998-2001 (cited DOH, 2003)

### 2.1.6 HIV/AIDS prevalence in "Disadvantaged communities"

"The mobility and transient nature of life in informal settlements, rather than socio-economic status, makes those living in these areas most vulnerable to HIV," says Dr Shisana. This is reflected in the finding that 23.5% of men living in informal settlements reported more than one sexual partner in the past year, in comparison to 19.2% in tribal areas, 10.2% in urban formal areas and 8.2% in farms. Youth (15-24

years) in informal settlements also showed a significantly higher rate of sexual experience (74%) than their peers in rural areas (58.3%) and formal urban areas (53.2%). There was no significant difference in HIV prevalence between those working (14.2%) and not working (12.1%). Wealthy Africans and less wealthy Africans had similar levels of risk (Shisana, 2002).

In summary, although socio-economic status might be seen as one of HIV/AIDS determinants, mobility and the transient nature of life in informal settlement makes people more vulnerable to HIV infection.

## **2.2 The background of South African Health System.**

### **2.2.1 Apartheid Structures that Affected Health Status.**

Inadequate state of the current health facilities arose because of the tremendous backlog resulting from South Africa's history and previous policies. The inadequacies of the health system have been emphasized by the current HIV/AIDS and TB epidemic, this is further explained below.

The apartheid policies of the South African government had a deleterious effect on the health of the majority of South Africans. When government created the homelands and forcibly relocated people to these and other rural places, it did so with little concern for the capacity of these areas to sustain a population or to develop an economic base. The government did not provide adequate housing, water, sanitation, schools, hospitals, and other public services (Van Rensburg, 2001).

### **2.2.2 Fragmentation, Privatization and Access to Care.**

After the formation of the South African state in 1910, health services in South Africa were characterised by a multiplicity of authorities and systems responsible for providing health care, rather than a unified system. The South African health system was divided according to race, geographic area, the public sector (further divided into local, provincial and central health authorities), and the private sector. Each of the ten subsequent homelands had its own health departments (Van Rensburg, 2001)..

Significant inequalities in the provision of health care therefore emerged between blacks and whites, between rural and urban areas, between primary and tertiary health care programs. The second Carnegie Inequality into Poverty and Development in South Africa characterised the South Africa Health Service as "not a federal arrangement with rational, clearly defined regional boundaries (Van Rensburg, 2001).

Most blacks in South Africa have not had access to health professionals and health care facilities. In 1990, there were approximately 22 000 doctors registered in South Africa, of whom only 1000 were black. At that time there were 3581 dentists, of whom only 25 were black. Socio- economic factors induce most doctors to practise in the developed areas of South Africa where potential patients can afford the fees and where more patients are likely to be covered by medical aid schemes. Thus in 1990 the ratio of general practitioners to population was 1: 900 in the urban areas

compared with 1: 4100 in the rural areas. The segregation of hospital care was one of the most visible manifestations of apartheid practices in health. Almost all public hospitals in South Africa had segregated wards or were designed entirely for specific "race" group (Van Rensburg, 2001).

Groote Schuur Hospital, an internationally renowned medical centre affiliated with the University of Cape Town, was the only South African hospital that offered services to all races. The hospital which opened in the 1930s, originally had separate entrances and wards for black and white patients. The result was severe overcrowding in the black wards and empty beds in the white wards. In the mid-1980s, the hospital staff began to integrate its services without official permission (Bond & Pillay, 2005).

### **2.2.3 Segregation in Medical Education**

Segregation prevented black medical students from attending to white patients on the same basis as white medical students. Only in the final years of apartheid were some black medical students allowed to attend to white patients at all, and even this varied from medical school to medical school. White medical students at the Afrikaans-speaking universities were allowed to rotate through both white and black hospital wards. However, the small number of black medical students (usually Asians) who attended these universities were not allowed to rotate through the white hospitals. Some medical students at several universities refused to rotate to hospitals that cared

only for white patients, as a means of pressing for desegregation (Van Rensburg, 2001).

For many years, blacks had a difficult time gaining admission to medical schools. From 1959 to 1984, the Extension of the University Education Act provided that everyone accepted by a medical school had to obtain individual ministerial consent from the ethnically relevant ministry in order to attend the university. Such consent was not readily given to all qualified applicants, and was disproportionately denied to Africans (Van Rensburg, 2001).

The loss of trained medical practitioners due to emigration was another serious problem. Physicians at the University of Witwatersrand estimated in 1989 that 50 percent of its medical graduates, white and black, left the country within ten years of graduation. A similar situation existed in other universities. A considerable number of white male graduates left to avoid military service, which was mandatory (Van Rensburg, 2001).

#### **2.2.4 White Paper on Transformation of the Health System for South Africa**

The White Paper for Transformation of the Health System in South Africa was published as Notice 667 of 1997 in the Government Gazette no. 17910. It was preceded by a document called "Towards A National Health System" and was widely consulted on before publication. Its basis formed the RDP and the African National Congress's National Health Plan ( cited in DOH, 2000).

The objective of the White Paper was to "present to the people of South Africa a set of policy objectives and principles upon which the unified National Health System of South Africa will be based." In addition the document contains a series of implementation strategies designed to meet the needs of South Africans within the constraints of available resources (DOH, 2000).

Five key strategies are outlined in the White Paper based on the principles of the RDP. These are : -

- The health sector must play its part in promoting equity by developing a single, unified health system;
- The health system will focus on districts as the major locus of implementation, and emphasise the PHC approach;
- The three spheres of government, NGOs and the private sector will unite in the promotion of common goals;
- The National, Provincial and District levels will play distinct and complementary roles; and
- An integrated package of essential PHC services will be available to the entire population at the first point of contact (DOH, 2000).

The mission of the Health sector is to "provide leadership and guidance to the National Health System in its efforts to promote and monitor the health of all people in South Africa, and provide caring and effective services through a primary health approach"(DOH, 2000).

The White paper spells out seven key goals (and a range of related objectives). The goals are:

- To unify fragmented health services at all levels into a comprehensive integrated National Health System (NHS);
- To promote equity, accessibility and utilisation of health services;
- To extend the availability and ensure the appropriateness of health services;
- To develop health promotion activities;
- To develop the human resources available to the health sector;
- To foster community participation across the health sector; and
- To improve health sector planning and the monitoring of health status and services (DOH, 2000).

The White Paper; Transformation of the Health System in South Africa aimed to remedy the segregation of health services, inequalities, lack of facilities and resources and change from a hospicentric to a District Health System. However, simultaneously occurring with changes to health system, the HIV/AIDS /TB epidemics have engulfed the country (DOH, 2000).

The South African health system, has components such as national health, provincial health and district health. National health ensures the implementation of national health policy and issues national guidelines. They liaise with national health departments in other countries and promote adherence to norms and standards on health matters, including the training of human resources for health. It is the duty of the national health to identify goals, prioritise and monitor progress of the

implementation of policies. The national health department co-ordinates health and medical services during national disasters, and co-ordinates health services rendered by the national department with the health services rendered by provinces. They facilitate and promote the provision of health services for the management, prevention and control of communicable disease as well as promoting health and healthy lifestyles (DOH, 2002).

The provincial departments of health, in accordance with national health policy and the relevant provincial health policy (in respect of or within the relevant province)-:

- Provide specialised hospital services;
- Plan and manage the provincial health information system.
- Provide technical and logistical support to the district health council.
- Conduct or facilitate research on health and health services, etc. (DOH, 2002).

The health system consists of various health districts, and the boundaries of health districts coincide with the district and metropolitan municipal boundaries. The district health system (DHS) is the vehicle through which the delivery of Primary Health Care takes place (DOH, 2002). As Primary Health Care is the foundation of the health system it is critical for the overall functioning of the system that there is a well- functioning DHS in place. The three hospitals where this study was conducted are part of Uthungulu and Zululand districts, previously they were called district hospitals. They provide some primary care, but mostly secondary and tertiary health



care. They are central to the health care system and adequate health care cannot be provided without them (DOH, 2002).

In this regard since hospitals are parts of the health system, understanding the health system requires knowledge of the purpose of the health system which aims at optimal health for all, and hospital goals are thus in line with those of the health system. Furthermore surgical specialties such as general surgery, gynaecologic and obstetric surgery, urology surgery, orthopaedic surgery, ophthalmic surgery, plastic and reconstruction surgery, otorhinolaryngologic and head and neck surgery, neurosurgery, thoracic surgery, cardiac surgery, peripheral vascular surgery and organ procurement and transplantation surgery are part of surgery, which is also part of the health system. It is important to note that if one part of the health system does not function well then the whole system is affected. Patton (2002) suggests that the foundational question is how and why does this system as a whole functions as it does? (Patton, 2002).

The thrust towards the National Health System and the move away from a hospicentric system in South Africa has detrimentally affected the distribution of resources to hospitals (DOH, 2002).

### **2.3 Surgery and HIV/AIDS**

The management of surgical disorder requires not only the application of technical skills and training in the basic sciences about the problems of diagnosis and

treatment, but also a genuine sympathy and indeed love for the patient (Way, 1998). Morgan et al, (1999) suggest that the surgeon must be a doctor in the old-fashioned sense, an applied scientist, an engineer, an artist, and a minister to his or her fellow human beings. Patients' lives depend upon the validity of surgical decisions, and the surgeon's judgment must be matched by courage in action and by a high degree of technical proficiency (Morgan et al,1999).

Way (1998) summarizes the research literature on the approach to the surgical patient. At their first contact the surgeon must gain the patient's confidence and convey the assurance that help is available and will be provided. The surgeon must demonstrate concern for the patient as a person who needs help, not just as a "case" to be processed through the surgical ward. Most patients are eager to meet a sympathetic and understanding doctor. Some surgeons are able to establish a confident relationship with the few words of greeting; others can only do so by means of a carefully acquired bedside manner. It does not matter how rapport is established as long as it is established (Morgan et al, 1999).

Way and Human (2000) further emphasize the importance of taking a past-medical history, and the physical examination. They say taking a history is detective work; preconceived ideas, snap judgment, and hasty conclusions have no place in this process. The diagnosis and decision for treatment must be established by inductive reasoning. The interviewer must first determine the facts and then search for essential cues, realizing that the patient may conceal the most important symptoms e.g. opportunistic infections related to HIV/AIDS. The complete examination of the

surgical patient includes the physical examination, certain special procedures such as gastroscopy, laboratory tests, x-ray examination, and follow up examination. These examinations can indicate or confirm whether the surgical patient is HIV positive and this will help the surgeon to make the decision to operate (Way and Human, 2000).

Equally important is the need for these doctors to find ways of coping effectively with their own concerns and levels of lived stress. These doctors serve the disadvantaged communities, who are poor. This poverty, in all its shapes and forms, remains the fundamental health problem of South Africa and indeed the whole world. Most of these areas that were poor 30 years ago are still poor today. Despite their valiant efforts it is impossible to expect people in such areas to pull themselves up by their own bootstraps. Poverty, whether at national or international level, is not just children in rags, or tramps drinking raw alcohol. Poverty is a product of the way we run the whole society. It is still endemic in South Africa and still the biggest cause of ill health and conversely sickness, like unemployment, is a significant cause of poverty. Hospitals will not remove poverty; they only cover its disease patches until they break out in another place or as in this case in HIV/AIDS (Whiteside & Sunter, 2000).

A myth has grown up around the helping professionals that they are not immune to the same sort of stress related problems as their patients (Rousseau & Tafelberg, 2000). This may influence the doctor's own health and the quality of service

provided to those in their care. People are said to be HIV positive when the HIV antibodies are detected in their blood. In areas where CD4 counts and viral loads can be measured, people are regarded as having AIDS when CD4 count falls below 200 cells mm<sup>3</sup>. AIDS can also be defined clinically, i.e. by examining the patient and making an assessment of his or her condition. There are a number of opportunistic infections that take particular advantage of a depleted immune system, some of which are fairly unique to HIV infections; TB is one of the diseases which is increasingly seen in HIV positive people (Rousseau & Tafelberg, 2000).

A growing body of theory and research suggests that operating on HIV/AIDS patients is risky to both the surgeon and the patient. These operations increase post-operative complications and death due to infection in patients with immune deficiency disorders. Many deficiency states are linked to malnutrition, which can cause delay in wound healing and other complications (Rousseau & Tafelberg, 2000).

Wilson and Glaros (1998); Human and Tafelberg (2000) and O'Donnel (1998), further state that the surgeons strive to help their patients to cope with their lives and stay healthy as they pledged on the completion of their medical degree.

A body of theory and research (Bailey and Bailey 2001; Parkhouse 2002 and Whiteside and Sunter 2000), indicates, that many diverse groups of professionals may be experiencing difficulties in coping with the care which they provide. These

frustrations can range from being mildly discomforted to the more seriously alarming "care giver burnout", a complex stress state peculiar to individuals which can paralyze their functioning as helping professionals (Bond & Pillay, 2005).

### **2.3.1 Testing patients for HIV before surgery**

The only effective way to increase the protection of health care workers against the risk of occupationally acquired HIV infection lies in the adoption of internationally recognised and approved universal precautions in all institutions and in all clinical situations (Bailey & Bailey, 2001).

The HIV serostatus of any patient should not be determined as a routine prior to surgery or other interventions. In those procedures, which are perceived by the surgical team to pose an exceptionally high risk of percutaneous inoculation injury, or of skin/mucous membrane contamination despite the application of standard universal precautions, appropriate additional special precautions must be universally applied. However, where pre-treatment HIV testing is clearly necessary for determining which treatment may be in the patient's best interest (i.e., operations in which a state of immunocompromise would effect the outcome), HIV testing with the patient's free and informed consent is obviously acceptable (Bailey & Bailey, 2001).

Where any risk of virus transmission exists, universal precautions must be applied. These should be applied with sufficient uniformity as to render the pre-treatment

knowledge of a patient's HIV status irrelevant. In regard to the prevention of HIV transmission in the health care setting, doctors (and other health care workers) have an ethical duty to apply universal precautions in every clinical encounter, and to act as if every patient whom he/she treats, is HIV positive. The doctor has a responsibility not only to himself/herself and his/her family, but also to all other health care workers who could become infected as a result of the doctor's neglect of universal precautions. It must be noted that, to date, the majority of health care workers sustaining occupationally acquired HIV infection have been non-professional workers infected as a result of the carelessness of professionals in disposing contaminated sharps. Failure to apply universal precautions also poses a significant risk of patient-to-patient transmission of infection resulting from the doctor's or nurse's activities (Bailey & Bailey, 2001).

### **2.3.2 General guidelines for health care workers on HIV**

The following guidelines are available (DOH, 2002):

- The South African Medical Association's revised HIV/AIDS Ethical Guidelines (Draft, 1999);
- The Health Professions Council of South Africa's document: The Management of Patients with HIV Infection or AIDS (1999);
- Other Professional Boards of the Health Services Professions;
- The South African Nurses' Council;
- The South African Law Commission's reports on HIV/AIDS;
- Responses of the Department of Health regarding HIV/AIDS;

- Legislation and regulations regarding the handling of persons with HIV/AIDS(1999);
- A Draft National Policy on Testing for HIV (1999);

The recognition by our Supreme Court of Appeal of the legal status of guidelines set down by a professional board (2000).

The Health Professional Council of South Africa (HPCSA) acknowledges that although infection with the HIV/AIDS viruses is incurable at the moment, HIV/AIDS is considered as a manageable life-threatening disease. The health care worker has a big responsibility towards the individual patient, the other health care workers, other parties that might be in danger of contracting the disease from the patient, the community, himself/herself and his/her family. Universal precautions should be adhered to in all health care encounters to try and minimise all the exposure of health care workers and their patients (Parkhouse, 2002).

There is no persuasive evidence that knowledge of a patient's HIV positive status diminishes the incidence of exposure incidents. Routine or universal testing of a patient in the health care setting is therefore unjustifiable and undesirable.

Pre-testing may be approved of when certain well-defined, high-risk procedures are to be undertaken (Whaleside, 1999).

Post-exposure treatment of health care workers in whom inoculation or significant contamination might have occurred, may be beneficial and should be considered in

consultation with the Infection Control Medical Officer of the Institution, or other designated person (Fuller, 1999).

A good patient-doctor relationship and mutual trust are essential pre-requisites for the implementation of reasonable and equitable guidelines that will ensure that the requirements of both health care workers and patients are satisfied. Education and training are essential components of the successful implementation of universal precautions, that is those precautions which should be universally applied to prevent transmission of HIV and other diseases in the health care settings (Fuller, 1999).

**a) Consent to HIV testing**

As a general rule, a doctor should investigate or treat a patient for HIV infection only with the informed consent of the patient. Every effort should be made to adhere to this principle, including provision for skilled pretest counselling by the doctor or an appropriate counselor. The patient should whenever possible, clearly understand what advantages or disadvantages testing may hold for him/her, why the doctor wants this information and what influence the result of such test may have on his/her treatment. The counselling procedure should be one that is appropriate to the setting and is the least burdensome to the person being tested, as well as to those responsible for testing. Guidelines on appropriate counselling may be found in the South African Medical Association HIV/AIDS Clinical Guidelines booklet (Way, 1998).



When the patient is unable to give consent (i.e. in emergency settings), vicarious consent must be sought where possible (i.e. the consent of another person legally competent to give consent on behalf of the patient). If this is not possible under the circumstances, the doctor may decide what is in the best interest of the patient. If the patient is unwilling to consent to an investigation necessary for accurate diagnosis, the doctor is free to discontinue treatment of the patient. However, the doctor must be able to prove that he cannot proceed with appropriate treatment without knowledge of the HIV status. In this situation, however, it remains the doctor's duty to ensure that the patient continues to receive all necessary symptomatic or palliative care, provided either by himself or by other sources. Where it is appropriate and practicable, the doctor should treat a patient who refuses the necessary HIV testing as if the patient is HIV seropositive (Way, 1998).

The South African Medical Association urges all doctors to respect the patient's right to decide whether he/she will undergo HIV testing or not. Nonetheless, when a doctor or other health care worker has sustained an injury, which carries the risk of transmission of HIV, he/she has a right to information about the HIV serostatus of the patient whose body fluid may have contaminated him/her. If in this situation, the patient refuses consent to HIV testing, or is not in a fit state to give consent (for example: unconscious or confused) the doctor is advised to have the test performed on blood obtained for other purposes, and to inform the patient that the test has been performed. All requests for consent to testing must be accompanied by full

counselling concerning the possible consequences to the patient of a positive result (Fuller, 1999).

When a doctor has gained knowledge of a patient's HIV serostatus against that patient's wishes (for example: where a risk bearing "exposure" of a health care worker has occurred), or without the patient's consent (for example: in an emergency situation involving an unconscious patient), he/she should inform the patient that a test has had to be performed, but he/she must convey the result of the test to the patient only with the patient's informed consent and after counselling. In other words, the patient must be told that he/she has the right to refuse to be informed about the result of the test, and that the result will then be known only to the at-risk health care workers. In this way, the conflicting rights of the patient (not to be tested) and of the health care workers (to information crucial to his/her welfare) are reconciled (Fuller, 1999).

If a health care worker is inoculated during the course of patient management and the HIV status of the patient is unknown and the patient refused consent, in view of the fact that immediate post-exposure measures may be beneficial to the health care worker, information as to the HIV status of the source patient may be obtained in the following way:

Testing any existing blood samples - this should be done with the source patient's consent, but if consent is withheld, the specimen may nevertheless be tested. If, in the latter situation, the test is positive, the source patient must be counseled and, if

requested, informed about the result. Testing a blood specimen to be collected from the source patient - the informed consent of the patient must be obtained but, if he/she refuses to give it, the Medical Officer of Health should be approached in terms of the communicable diseases regulations for the necessary statutory authorization. If the patient is unable to give informed consent, and is likely to remain unable for a significant length of time in relation to the prophylactic needs of the health care worker or other patients, then every reasonable attempt should be made to obtain appropriate vicarious consent. Vicarious consent means the consent of the patient's closest relative or, in the case of a minor, the consent of the medical superintendent in the absence of a relative (RSC, 1999 ).

#### **b) Confidentiality**

According to the Royal Surgeons' College (RSC), guidelines for HIV Voluntary Counselling and Testing (1999), the results of HIV positive patients should be treated at the highest possible level of confidentiality. The transmission of clinical data to those medical colleagues and health care workers directly involved, or who will probably become involved with the care of the patient, will dictate the extent of disclosure of such confidential information and the health worker will use his or her discretion whether or not to divulge the information to other parties involved. Such a decision must be made with the greatest care, in accordance with the principle of professional secrecy that applies in respect of the patient. The decision whether to divulge the information to other parties involved must therefore be in consultation with the patient.

The report of HIV test results by a laboratory as is the case with all laboratory test results, should be considered as confidential information. Breach of confidentiality is however, more likely to occur in the ward, hospital or doctor's reception area, than in the laboratory. It is therefore essential that health care institutions, pathologists and doctors formulate a clear policy as to how such laboratory results will be communicated and how confidentiality of results will be maintained (RSC, 1999).

### **c) Confidentiality between health-care workers**

Doctors should use their discretion whether or not to confidentially discuss a patient's serostatus with any other health care worker who is at risk of infection from the patient. It is essential to attempt to obtain the patient's free and informed consent to this disclosure, but exceptional circumstances may necessitate the transmission of this information to other health care workers without the patient's consent (RSC, 1999).

Doctors may divulge information on the sero-status of a patient to other health care workers without the patient's consent only when all of the following circumstances exist:

An identifiable health care worker or team is at risk. The doctor is not certain that universal precautions are being applied. The doctor has informed the patient that under the circumstances he/she is obliged to inform the other health care workers involved. The health care workers or team thus informed are duty bound to maintain confidentiality. Where such information may affect the treatment of the patient in the patient's own best interest, the doctor should be duty bound confidentially to discuss

the patient's serostatus with all members of the health care team administering such treatment, but only with the patient's consent (RSC, 1999).

**d) The doctor's duty towards HIV positive patients**

No doctor may ethically refuse to treat any patient solely on the grounds that the patient is, or may be HIV seropositive. No doctor may withhold normal standards of treatment from any patient solely on the grounds that the patient is HIV seropositive, unless such variation of treatment is determined to be in the patient's interest and not by perceived potential risk to the health care worker. A doctor is not ethically or legally obliged to put his/her life at risk by undertaking interventional treatment of a patient in circumstances where facilities for the application of universal precautions do not exist (Fuller, 1999).

**2.3.3 HIV/AIDS and reasons for surgeon's stress**

The pandemic of HIV/AIDS would feasibly make the work of the surgeon stressful. South Africa has probably the largest number of HIV infected people of any country in the world. The rapid increase in prevalence of women attending antenatal clinics in KwaZulu-Natal, from 1994, (7.6%), to 22.4% in 2000, has proved a challenge for everyone especially the health providers and has had many deleterious consequences (DOH, 2002). Anecdotal information and a few recent studies suggest that the epidemic's impact on the health system is devastating, particularly as it affects human resources (DOH, 2002). Effects include attrition due to illness and death, absenteeism, low morale, increased demand for provider time and skills due to

increasing case loads of HIV/AIDS patients, diverting provider from care of other illnesses, budgetary and managerial inadequacies, and other effects of managing systems under stress (DOH, 2002). The scope and quality of health becomes vulnerable unless commitment can be mobilised and resources optimised (DOH, 2002).

The possibility exists that doctors performing surgery will be exposed to the HIV virus by infected blood and body fluids as the epidemic expands. The Worcestershire Infection group considered the use of pre-operative risk assessment to predict potential higher risk needle stick injuries. The average risk of a general surgeon sustaining a needle stick injury was 4.14. For consultant general surgeons, the average risk was 1.98. For orthopaedic surgeons the average risk was 1.14 and for consultant orthopaedic surgeons was 1.28 (Bhanduri, 2001).

Doctors, nurses and other health care workers are increasingly exposed to HIV/AIDS patients and it is, therefore, necessary that clear and definite guidelines be laid down. For years official guidelines at national level existed for medical practitioners to guide them in surgical management with patients who are affected with HIV/AIDS and/or the Hepatitis B virus. For nurses and other health care professions, no such official guidelines exist.

The serious legal implications, both criminal and civil, which surround HIV/AIDS, confirm the urgent need for acceptable uniform guidelines for the whole spectrum of

health care workers. The HIV/AIDS Ethical Guidelines of the South African Medical Association, which currently is the only representative body of practising physicians in South Africa, are practical and to the point. They give specific guidance for specific circumstances and enable the practitioner to do his or her duty towards the patient who is infected by HIV/AIDS or the Hepatitis B virus, in a legally and ethically correct manner (DOH, 2000).

#### **2.3.4 Duties of doctors infected with HIV**

Any doctor, who has reason to believe that he/she is likely to have been exposed to infection with HIV, has a responsibility to have his/her HIV status ascertained, and/or to act as if their serostatus were positive. Any doctor who finds or suspects himself/herself to be HIV positive must regularly seek counselling from an appropriate professional source, preferably one designated for this purpose by a medical academic institution. This is to ensure that there is no risk to the patients, and no compromise in the physical or mental ability of the doctor to perform his or her professional duties competently or safely. Counselors must of course be familiar with current recommendations so that unnecessary, onerous, and scientifically unjustifiable restrictions are not placed on the professional activities of the HIV positive doctor (Antsey, 1999).

Infected doctors may continue to practise, after they have sought and implemented the counselor's advice on the extent to which they should limit or adjust their professional practice in order to protect their patients. Any doctor who has counseled

a colleague who is infected with HIV and is aware that the advice is not being followed, has a responsibility to inform an appropriate body that the doctor's fitness to practice may be seriously impaired (Egan, 1999).

The HIV positive doctor has the same right to confidentiality as does any other patient. Knowledge of his/her serostatus may only be shared with others under the circumstances defined above in the section dealing with confidentiality. It is important to bear in mind that in case of the health care workers it is particularly difficult in an institution to maintain full confidentiality and great care must be taken in this respect (Egan, 1999).

Health care workers who are exposed to possible virus transmission should record the injury and must undergo serial blood tests to ascertain their serostatus at the time of injury, thereby they should rule out / confirm seroconversion with subsequent blood tests at three and six months after the injury (Hogan et al, 2005).

The Health Professions Council of South Africa (HPCSA previously the South African Medical and Dental Council) also issued a document regarding guidelines for handling HIV/AIDS (1989 and revised in 1993). The document, The management of patients with HIV infection or AIDS, states that HIV infection and AIDS have emerged as the most challenging health matter of modern lifetime (Antsey, 1999).



### **2.3.5 Knowledge of the HIV status of patients**

If a patient is known to be HIV seropositive, "extended" universal precautionary measures, such as special gloves, clothing and face masks, should be used. The number of assistants at operations should be limited and inexperienced personnel should not be allowed to perform the surgery. The selective use of such expensive measures will be cost effective (Egan, 1999).

### **2.3.6 Exposure to HIV infection**

The possibility that doctors performing surgery will be exposed to the HIV by infected blood and body fluids is increasing as the pandemic expands.

The implementation of infection control procedures as used for other infectious diseases such as hepatitis B can minimise the risk of HIV transmission during surgery. These involve the avoidance of contact with potentially infected body fluid and tissues. Such precautions include wearing gloves for procedures involving contact with blood and body fluid and, as the rate of glove puncture has been estimated to be as high as 30%, double gloving has been recommended and has been found to reduce the number of perforations of the pair next to the skin and therefore reduce skin contamination by blood /body fluids (Matta et al.,1998).

Masks and protective eyewear can be worn to protect the face especially the conjunctiva from splashing or contact with blood-containing aerosols such as those generated by orthopaedic drills and fluid-resistant drapes and gowns worn in order to contain blood/body fluid spills and to minimise skin contact. Beyond these

guidelines, which are necessary to protect from many infectious pathogens not just HIV is the avoidance of hand-to-hand passage of sharps (placing them in a dish first) and the use of means of dissection other than scalpels when such can be implemented successfully (Stotter et al., 2000).

However, objections to the implementation of such precautions in all surgical procedures have been made, including the increased financial costs because of additional equipment and the disposal required. The increased time necessary for each action may also result in a possible impairment of the surgeons' ability: for example, double gloving may result in less sensitivity, vision may be impaired when eye protection is worn and visors & facial mask may impair communication between members of the surgical team. Alternatively, it has been suggested that such precautions could be taken selectively, i.e. when there is a perceived high risk of HIV infection being present. The difficulty here is in the identification of 'high risk' patients. This is not efficiently achieved by taking case histories as many people may not acknowledge, or may not even know, that they have been exposed to the virus (Williams et al., 1997; Hargreaves et al., 1994).

Kelen (1994) have shown that clinical suspicion is not sufficient to identify patients who are infected with HIV. Indeed, any reliance on the concept of 'risk group' to identify patients with HIV infection may be unsound: HIV transmission results from engaging in high-risk behavior rather than membership of a 'risk group'.

Many surgeons have called for the facilitation of HIV antibody testing for patients prior to surgery so that additional infection control procedures can be implemented for those who are HIV positive (Stotter et al., 2000).

A reliance on voluntary testing would not identify all people who were HIV positive; indeed, there is some evidence that those people most likely to be infected are least likely to consent to take the test (Hale, 1999). On the other hand, any form of compulsory testing would be associated with serious ethical difficulties regarding confidentiality, loss of civil rights and loss of privacy (Miller, 1996).

The study conducted by Chapman in London (1998), investigating the attitude of doctors performing surgery who are working in an area with one of the highest HIV seroprevalence rates in UK, confirmed that the level of knowledge regarding transmission and prevention was generally good, although there were a number who believed that HIV could be transmitted by the respiratory and oral routes. However, knowledge regarding surgical management was unsatisfactory. Although a large majority felt they had the ethical obligation to surgically treat HIV patients, only half of them indicated their willingness to do so if they were given a choice. The majority (62%) supported the idea of routine preoperative HIV testing for patients, but fewer (40%) supported mandatory HIV testing for health care-workers. Dentists seemed more sensitive to issues involving transmission in the workplace, and 95% of them practised universal precautions. Continuing surgical education on HIV infection is

required to improve and maintain the level of knowledge and competency of doctors and dentists (Stotter et al., 2000).

Muskin & Goodwin (2001) conducted a survey in Philadelphia (US), looking at the surgeon's attitude and practices concerning HIV- infected patients. This survey revealed that 40-60% of the hospitals coped inadequately with operating on HIV/AIDS patients. Therefore it is important to arrange a system so that HIV infected patients will be able to receive necessary surgical treatment. For that purpose, a surgical educational program for health care professionals is needed.

Exposure to HIV in Muskin & Goodwin's study was described as: needlestick immediately after it was used in a HIV/AIDS patient, injury with a surgical needle while operating on an HIV infected blood, and work without protective gloves, performing surgery on HIV positive patient, or contact of HIV infected blood with damaged skin. The following conclusions were drawn from the study: 1. Health care workers undertake safety precautions only when they are informed about the HIV seropositivity of the patient. 2. Patients whose HIV serologic status is not known are considered not to create health risk for medical staff. 3. The level knowledge of health care workers about the risk of acquiring HIV infection, lack of risk and ways of diminishing the risk was poor (Hale, 1999).

### **2.3.7 Doctors infected with HIV**

Any doctor who finds himself to be HIV positive must seek counselling from an appropriate professional source, preferably one designated for the purpose by a

medical academic institution. Counselors must of course be familiar with recommendations such as those of the Centre for Disease Control so that unnecessary, onerous and scientifically unjustifiable restrictions are not placed on the professional activities of an HIV positive doctor. Infected doctors may continue to practise. They must however seek and implement the counselor's advice on the extent to which they should limit or adjust their professional practice in order to protect their patients (Stotter et al., 2000).

### **2.3.8 Post operative complications in HIV/AIDS patients.**

Ferrero & Bentivoglio did a study in 2003, which evaluated complications associated with caesarian section in HIV positive women. Most positive women (64,5%) had a complicated recovery after surgery. A higher incidence of major and minor postoperative complications was observed in the HIV positive group than in the control group. There was a statistically significant greater incidence of mild anaemia, mild temperature or fever, urinary tract infection and pneumonia in the HIV seropositive group (Stotter et al., 2000).

HIV seropositive women with less than  $500 \times 10^6$  CD (+) lymphocytes/ml had higher post-caesarian section morbidity than HIV seropositive women with higher CD4 counts and the median duration of hospital stay was significantly higher in the HIV positive group (median 7 days) than in the HIV negative group (median 4 days). The rate of HIV vertical transmission was 8.8%. Higher post caesarian section morbidity was found in HIV seropositive women than controls."Unfortunately", concluded the

authors, " the HIV positive women (with low CD4 lymphocytes counts whose infants theoretically will benefit most from caesarian delivery, are also the women who are most likely to experience post -operative complications" (Stotter et al., 2000).

Hajek et al, (2003) have made extensive investigation into HIV/AIDS patients in surgery. They reported that the main risk for surgical patients related to decreased immunity is not due to complications in the wounds and anastomoses, but in the severe opportune infections like tuberculosis.

Saunder & Scott (1999) in U.S.A, noted that pathologies directly related to the HIV infection were found in 81% of AIDS patients and 35% of asymptomatic HIV infected patients ( $p < 0.05$ ). These included opportunistic infections, non-Hodgkin's lymphoma, Kaposi's sarcoma, immune disorders, lymphadenopathy and pancreatic pseudocysts. It was noted that AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis. The hospital mortality was 12% (Saunder & Scott (1999).

### **2.3.9 Surgeons' attitudes toward HIV/AIDS.**

Willingness to give care and treatment to surgical patients with HIV/AIDS is an important personal and professional requirement for health care professionals. It is acknowledged that there are many factors, which can influence the attitudes of

doctors towards operating on HIV/AIDS patients. Some of these are internal to the workplace while others are dependent on more external and broader influences.

Studies which asked respondents to indicate their willingness to provide care and treatment for surgical patients with HIV/AIDS, found that most, though not all, doctors were prepared to work with these individuals (Bredfeldt et al, 2004), which influence their willingness to care for and treat, include a belief in a professional obligation of a duty to care, and that providing care and treatment for such patients is a rewarding experience.

Every doctor takes an oath, and an example of the traditional hippocratic oath requires that; "I will exercise my profession to the best of my knowledge and ability for the good of all persons whose health may be placed in my care and for the public welfare. I will not knowingly or intentionally do anything to any person to their hurt or prejudice for any consideration or motive what so ever. I will keep in due regard the honorable obligations of the medical profession and will do nothing inconsistent there and I do also declare that I will keep silence about those things, which I have seen or heard while visiting the sick, which ought not be divulged."(Medical University of Southern Africa: Faculty of Medicine Declaration 1997).

Studies by Byrne & Murphy (1999), Steinborg (1998) and Van Wissen & Woodman (1999) also indicate that previous social and work experience with people with HIV/AIDS can have a positive influence on decisions about caring for and treating

such patients. There is also a common belief expressed in other studies that health care professionals should have the right to choose whether to provide care and treatment, and that care and treatment must be provided voluntarily and without coercion from more senior colleagues. Generally, however, these studies found that when it comes to questions about providing or withholding surgical care and treatment, only a small minority will actually refuse to provide care and treatment (Kerr & Horrocks 2000, Lewis & Montgomery 2000).

It is not only the ability to provide surgical care and treatment, and the conditions of surgical caring for and treating which influence the willingness of health care professionals. The stigma of caring for and treating patients with HIV/AIDS also inhibits certain individuals from being involved. This is illustrated in the findings of a study by Bredfeldt (2004) in North America, which shows that 40% of family physicians believe that they might lose patients if it was known that they are treating HIV -positive patients.

A survey of previous literature (Adeleka, 1998; Ope, 1999; Eriguch, 2000; Chan, 1998 and Mandelbrot, 2000) reveals a remarkable consistency in the way the knowledge of a patient's HIV positive status affects the doctor's attitude and management. The study has highlighted that doctors working in a situation where the epidemic has only recently emerged perceive themselves as being inadequate with regard to managing HIV infection in operated patients. There are indications that doctors may be influenced by the HIV positive status of patients when making



decisions regarding their surgical management. One of the major concerns with regard to the management of surgical patients with HIV, expressed by doctors in these studies, was the lack of management protocols and policy guidelines (Maxwell, 2001).

The literature review revealed a dearth of management protocols and policy guidelines in many countries, and generally, information is lacking if such protocols / policy exist (Brown & Gilligan, 1999).

Ideally what should happen?:

- Evaluation and staging of the patient and associated nutritional status and complications, and weigh the advantages of operating on the patient following an appropriate protocol that needs to be formulated.
- If the patient cannot do without the operation, an appropriate method of surgical intervention should be selected, for an example endoscope surgery instead of open surgery, to prevent wound healing complications that might occur with open surgery.
- If the patient is on antiretroviral drugs proper precautions in anaesthesia should be taken to prevent complications. Presently there are no protocols guiding these surgical interventions, doctors' discretion are considered right.

## **2.4 THEORETICAL FRAMEWORK**

The development of a framework of interaction and experience as it relates to surgical intervention of HIV/AIDS patients is presented to better understand

surgeons' experiences. The themes were selected after a review of literature and based on the author's experiences as a theatre sister for seven years. Theories provided a framework for the study.

#### **2.4.1 Motivation, helping experiences and consequences**

In response to the plight of others, many doctors regularly contribute their time and skills to help those in need. Whether in emergencies or in long-term prosocial behavior, the five cognitive steps are followed as summarised below. For example, the surgeons are aware of the HIV/AIDS problem because elective patients are tested before operated; they make the correct interpretation of the difficulty concerning the need for an operation; decide that they are responsible for helping fellow human beings; decide what to do (namely to operate on these patients); and then actually engage in the necessary operating behaviors (Tappan & Brown, 1999). But why do these doctors engage in helping these patients?

Some doctors choose general surgery, orthopaedics, ophthalmology, medicine, obstetrics and gynecology, while others choose disciplines without any surgical interventions like anaesthesia, and they may also specialise in the chosen discipline. There is also a choice that the doctor makes as to whether to operate or not, with elective operations depending on the condition of the patient and possible complications. Doctors however are unable to apply the same principle to emergency operations, in that they do the needed operation to stabilise the patient without an

HIV test on such patients unless it has major significance on the kind of operation to be performed.

Snyder and Omoto (1992) have identified five different basic motivations that lead individuals to engage in this kind of pro-social response to the HIV pandemic. These five underlying factors include values "because of my humanitarian obligation to help others", the need to understand "because I want to learn how to cope with AIDS", community concern "because of my concern and worry about the community", the desire for personal growth "I want to challenge myself and test my skills", and attempts to enhance one's own self-esteem "I want to feel better about myself.

Why do some people continue to help while others do not? Snyder and Omoto (1992) contacted a set of AIDS volunteers/helpers, asked them about the details of their work, and then contacted them again a year later. About half had quit during this period. The researchers then interviewed both the continuing volunteers/helpers and those who had dropped out. Both groups were satisfied with the work they had done, and both remained committed to the purposes of the organizations with which they worked. One differentiating factor was their original motivation. Those who continued as volunteer workers/helpers were more likely to be motivated by self-esteem enhancement or personal development, and this turned out to predict continued helping better than the "selfless" motives.

Another major difference was that those who quit simply perceived the costs being too high. That is, it took too much of their time and they felt embarrassed and uncomfortable about working with HIV/AIDS patients (Manither & Doucet, 2001). These volunteers seem to feel that the stigma of the disease might rub off on them. Social rejection based on mere association with stigmatized individuals is known as responding to a courtesy stigma (Goffman, 1963). That is, it is as if a sympathetic outsider (the volunteer/helper) becomes a "courtesy member" of the stigmatized group and hence becomes the target of whatever negative stereotypes may be associated with that group. The findings on volunteerism/helping can now be used to make more recruiting more efficient.

#### **2.4.2 Empathy-Altruism theory: unselfish helping**

Empathy is defined, as responding to another person's emotional state with a vicarious emotional reaction that resembles what the other person is experiencing distress in response to the distress of others. This appears to be an evolutionarily useful response, and it has been observed in monkeys and apes (Brothers, 2000) and in some children as young as twelve months of age (Ungerer et al., 2000). By the time we reach adulthood, this capacity for empathic concern is a common one, especially if we have grown up in a supportive family in which such reactions are encouraged.

### **2.4.3 Egoistic Theory: helping others reduces uncomfortable feelings**

The basic idea is that individuals who are experiencing negative emotions are motivated to help the victims as a way to relieve themselves of such feelings. It does not matter whether the negative emotions are already present when the emergency arises or if they are aroused by the emergency itself. Either way, helping is motivated by a desire to make oneself feel better. In support of this model, Cialdini and his colleagues (2002) provided evidence that when empathy occurs, sadness is also aroused. When these researchers examined the effects of empathy and sadness separately, they found that helping increases, if sadness increases, but not when feelings of empathy increase.

The empathy-altruism theories counteracted with additional research designed to show that sad feelings were irrelevant. They demonstrated that empathy leads to helping even when study participants know that their unpleasant mood will be relieved by other means—that is, when researchers have told them that they will be engaging in a mood-enhancing experience very shortly. As is often true with such controversies, the final conclusive answer is still a matter of debate (Cialdini, 2002).

### **2.4.4 Empathic Joy; an alternative to egoistic theory**

According to Smith, Keating and Scotland (1999), empathy leads to helping- but not because of a selfless concern for the welfare of others or because helping reduces uncomfortable emotions. Instead, prosocial behavior is motivated by the joy one experiences when observing that someone's needs have been met. These theories

explain the reason why surgeons want to help by operating on the HIV/AIDS patients.

The overall health of the patient should, of course, be a physician's main concern, and so it follows that a "good" doctor should be willing to at least seriously consider new ideas or treatment approaches which a patient may suggest, no matter how unusual these may at first seem to be. Physicians, who quickly dismiss such ideas out of hand, without taking the time to hear the patient out, are not the kind of physician a person with AIDS needs. People with HIV/AIDS need a physician who is willing to become a partner with his/her patients in developing a coherent plan for medical treatment. Such a relationship is a powerful weapon with which to efficiently fight illness. The elements of this relationship are flexibility, imagination and balance (Smith, Keating and Scotland 1999).

#### **2.4.5 Flexibility**

Flexibility, mean the ability to change, and the willingness to try new and different surgical approaches. In operating HIV infected patients, flexibility is of paramount importance to the patient and his or her doctor, due to the incredible diversity of the virus and its highly variable course in each operated case. Every surgery in HIV infected patients is completely different in its effects upon the human body. No two operated patients respond to HIV infection in quite the same way. Some operated HIV positive persons live, with few opportunistic infections and an overall high quality of life (Baron & Byne, 1999).

Others are just the opposite, deteriorating rapidly while constantly plagued with a variety of opportunistic infections. The vast majority of patients fall somewhere in between these two extremes, and display greatly varied symptoms in the course of their disease after the operation. Thus there is a tremendous variance in clinical outcome between the infected human body, and physical differences between individual patients. What this means is that each person with HIV is unique in many ways. Only a doctor who understands the incredible diversity of HIV infection and is prepared to deal with it flexibly can be effective enough to be of real help to the patient with HIV when it comes to surgical interventions (Baron & Byne, 1999).

#### **2.4.6 Seed and Soil Germ Theory**

Post-operative complications related to wound healing can be explained using seed and soil germ theory.

In negotiating "the constructions, meaning and uses of germ theories and practices", Worboys is striving to "place early work on tropical medicine and parasitology in the wider context of the development of microbiology and new theories of disease" In so doing, he clearly demonstrates the range of germ theories of disease that were prevalent between 1865 and 1900. But Worboys goes beyond a mere discussion of germ theories, as he considers practices relating to germs as well that is, how germs were viewed, killed, cultured, altered, and represented in medical practice (Worboys & Lister, 2000).

Antiseptic surgery is the main topic, attempting to place the ideas and work of Joseph

Lister into the wider technical and ideological development of the larger field of surgery and germ theories. In particular, the developing innovations and ideas on wound management are discussed (Worboys & Lister, 2000).

He looks at the ways surgeons increasingly used bacterial germ theories, namely how to avoid germs and how to destroy them, as well as the laboratory research on germs and sepsis that would inform a revision in germ theory understandings.

The evolution of theories of sepsis (Listerism and its transitions) is considered and Worboys argues that "instead of just focusing on combating the 'seeds' of sepsis coming from outside, surgeons had also to consider the human soil in which they might 'germinate' and produce disease" (Worboys & Lister, 2000).

According to Worboys' theory HIV/AIDS patients "soil" are likely to experience and "germinate" wound sepsis this will "seed" post-operatively even if other surgical protocols are observed such as aseptic technique as "a way of combating the seed from outside"



#### **2.4.7 Systems'theory**

Systems theory is basically concerned with problems of relationships, of structures, and of interdependence, rather than with the constant attributes of object. Kahn defines a system as a "regularly interacting or interdependent group of items forming a unified whole," which "is in, or tends to be in, equilibrium"(p. 56). Katz says that "a system's attributes, which are the interdependence and interlinking of various subsystems within a given system, and the tendency toward attaining a balance, or equilibrium forces one to think in terms of multiple causation in contrast to the common habit of thinking in single-cause terms" (Katz and Kahn, 1966, p. 787)

Since 1994 the health system in South Africa has undergone transformation towards a National Health System (NHS) (HST, 2001). However this has occurred as the HIV/AIDS epidemic has escalated (DOH, 2002).

Some of the problems of surgical intervention on HIV/AIDS patients stem from the health system. A system is, as defined by Van Bertalanfy, 2000 "a dynamic order of parts and processes standing in mutual interaction with each other"(p.381). A system cannot be understood by studying each part individually. Understanding the whole requires knowledge of the purpose of the system and how its parts interact to attain that purpose. In short to look at doctors' problems when operating on HIV/AIDS requires us to look at the whole health system, since the whole is different from the sum of its parts (Mcwhinney, 1998).

The three major perspectives of organizations are a rational system, a natural system and an open system. The rational system and the natural system tend to view the organization as a closed system, that is, separate from the environment. In contrast to closed system in the open system, organization is open to and dependent on the environment, especially, connections with external and internal components. This is how the previous health system is viewed before the White Paper Transformation of Health services. The systems are independent of environmental influences. Tanner and Williams suggest that a closed system allows most of its problems to be analyzed with reference to its internal structure and without reference to its external environment.

Closed systems focus on internal components such as variables of size, technology, location, ownership, managerial strategies, and leadership style. Thus, this approach can be applied at the technical level of the organization because it is necessary to reduce uncertainty. However, the nature the health system is not isolate rather than dependent on environment. Negandhi has stated that closed systems overemphasize principles of internal organizational functioning with consequent failure to develop and understand the processes of feedback which are essential to survival. (Tanner and Williams, 1972)

A natural system includes many client-oriented service organizations - i.e. rape-counseling centre, HIV/AIDS comprehensive care, management, treatment and support. Miskel suggests that these systems deny the authority of office, seek to minimize the promulgation of rules, and procedures, attempt to eliminate status

gradations among participants, and do away with role differentiation and specialization of function. In natural systems, individual members and their personal qualities are great importance. Hence, Hoy defined a natural system as "an organization whose participants share a common interest in the survival of the system and who engage in collective activities, informally structures, to secure this end. Therefore, organizations share with all collectivities and focus attention on the behavioral structure" (Hoy and Miskel, 1978, p. 1850)

The type of system can be determined on the basis of how the boundaries of the system are defined. Levine and Fitzgerald note "Whether a given system is open or closed depends on how much of the universe is included in the system and how much in the environment"( Levine and Fitzgerald, 1992, p. 55).

A system is a functional whole composed of set of subsystems and components, when coupled together, generate a level of organization that is fundamentally different from the level of each individual subsystem. General systems theorists believe that, in spite of the obvious differences among the many kinds of living and nonliving systems, they share very general characteristics and that it is important to discover what these are.

The study of systems is by definition concerned with change. Components of a system are the factors or elements that are involved in the processes of a system. They can affect the system and may be affected by it. A component of a system may be a part of the process of more than one subsystem, e.g. structures in an

organization, the skin in a living creature, etc. (Levine and Fitzgerald, 1992).

Subsystems or parts of a system, are systems at the level below the one of which they are parts. Each of a living system's subsystem, like the system as a whole, keeps a number of variables in steady state (Levine and Fitzgerald, 1992). A system's function and structure may be studied, analyzed and described through basic subsystems. Tanner and Williams (1981) presented the subsystems developed by Katz and Kahn (1966) and integrated them with genotype functions outlined by Hoy and Miskel (1978).

Production and technical is concerned with converting inputs into outputs and may also be classified as a productive or economic part, which provides services, that is an organization that provides services like the health system. Supportive Subsystem are concerned with two major functions which are procuring input and disposing output; and promoting and maintaining good relationships with the between the organization and its environment (for example, getting new operating theatre equipment for endoscopic surgery, educating HIV patients about possible complications resulting from operating on HIV positive patients and educating surgeons on how to assess patients who can survive operations and how to deal with possible complications there of.

Maintenance Subsystem. Activities of this subsystem deal with personnel in the organization in all facets (e.g. role, arrangements, recruiting, selecting, motivating, disciplining, and socializing). The focus is on maintaining stability of the organization.

Adaptive subsystem. The functions of this subsystem are designed to insure that the organization can meet the changing needs of the environment (e.g. research, planning, development and so on). Adaptive organizations may include educational organizations that are responsible for the development and testing of theories, the creation of knowledge and for applying information in a limited extent to problems.

Managerial subsystem. The function of this subsystem is to coordinate the functions of the other subsystems, settle conflicts among them and hierarchical levels, and relate the total organization to its environment. This subsystem, cuts across all subsystems of the organization in its goal to encourage all the subsystems to obtain a concerted effort to achieve the highest level of functioning of the total system.

Whether we like it or not, doctors are enmeshed in many systems. It is to their benefit to gain some basic understanding of how systems work. They can more effectively care for HIV patients pre, intra and post operatively, families and communities when they do understand, they can more effectively bring about desired changes in their workplace if they are able to step back & consider how best to accomplish this within their workplace system.

## **2.5 Summary of Themes arising from Literature review.**

The increasing HIV/AIDS pandemic has become a serious health and development problem in many countries around the world, and these problems have been noted when doctors are electively operating on HIV/AIDS patients. In summary, it is essential that treatment of HIV/AIDS patients, like this study, begin to take

cognisance of dynamics involved in elective surgery of HIV/AIDS patients. Ignoring facts like South Africa's serious HIV epidemic, with millions of its people living with the disease, because of its turbulent past makes the situation worse for HIV patients who need elective surgery.

Theoretical framework in this study assist the understanding why the complexities surgical interventions of HIV/AIDS patients are aggravated by structural, personal, lack of guidelines and protocols in HIV/AIDS surgical care and patient related factors arising from the operated patients. Structural factors include, the challenge of recasting apartheid social and health policies, transforming a moribund bureaucracy's mode of governance and restructuring public institutions. Personal factors include how doctors perceive these problems, their fears of contracting the disease and their relationship with their patients.

Factors arising from the operated patient are complications pre, intra and post-operatively, such as anaesthetic difficulties because of respiratory infections, sepsis, delay in wound healing etc. In addition the literature review suggests which factors, and when and how such factors may motivate or constrain operating doctors. This study will compare the experiences of doctors when electively operating on HIV / AIDS patients with the evidence found in the literature review.

## CHAPTER 3

### 3. RESEARCH METHODOLOGY

This chapter will describe the methodology used in this study. A narrative analysis was undertaken. The research process is viewed as a potential source of change in the health system and empowerment for the research participants (who are surgeons) as well as a process for influencing professional practice. The view that all knowledge has social, cultural and historical contexts has given rise to the qualitative paradigm. According to Patton (2002) the qualitative research method has part of its foundation in phenomenological philosophy, which is a doctrine characterized by the belief that people both create their own social world and are also created or shaped by external social processes (Patton, 2002).

The objective of the phenomenological philosophy in this study is to reveal and accurately outline the fundamental meanings inferred from the objective description of the experience of surgeons when operating on HIV/AIDS patients. This will permit general statements to be researched phenomenologically without losing any integrity of meaning of each individual subject's idiosyncratic experience. Since this qualitative research was undertaken within the surgical doctor's contexts, it can produce results that directly represent how such people feel. During this process the aim will be to get closer to the feelings and functioning of surgical doctors in the HIV/AIDS era (Patton, 2002).

The results obtained are descriptions of real experiences rather than statistical measures, and will be useful for the production of new ideas and may provide information for other studies. Using probes allows flexibility of the qualitative method to pick up on verbal cues. Qualitative research methods are thus useful and a valuable addition to an epidemiologist's collection of skills. Epidemiology has traditionally focused on the use of quantitative methods but qualitative methods provide a research opportunity to extend the quality of information that may be gathered, particularly as it provides a greater level of understanding of the processes that affect the result we seek in the health field (Patton, 2002).

### **3.2 Study area and sites**

This study was conducted in Northern KwaZulu-Natal at Zululand and Uthungulu health Districts. The study sites were three hospitals, two hospitals at Uthungulu health district, one at Zululand health district. Each of these hospitals will be further described below.





**FIGURE 3.1 Map showing the location of Benedictine, Lower Umfolozi District War Memorial and Ngwelezana hospitals.**

Uthungulu health district has a population of 917451 and comprises six local authority areas. The district has two regional hospitals, six district hospitals, 44 fixed clinics and 14 mobile clinics with 256 visiting points. The district also has six local authority clinics (Uthungulu Health District, 2005). Zululand health district has a population of 833037 and has six local authority areas. The district has seven district hospitals, 50 fixed clinics and 13 mobile clinics (Zululand Health District, 2005).



**FIGURE 3.2 Photograph showing Ngwelezana hospital, Uthungulu Health District.**

The hospital is at the Lower Umfolozi Sub-district the hospital is situated five kilometers away from Empangeni, faces the Ngwelezana township and is surrounded by the Madlebe Tribal Authority Community under Chief Zungu.

The hospital shown in figure 3.2 began to operate in 1970 as a convalescence hospital. In 1974 the hospital was taken over by the State Health, since it had previously been operating under Empangeni hospital. In October 1977, all services were taken over by the KwaZulu Government. Initially Ngwelezana hospital was intended to be one of the T.B settlements in the Province. The hospital has grown to be one of the largest hospitals in District 28. The hospital has a staff of over 1500 and it services about 8000 patients per month including referrals from other hospitals (Ngwelezana hospital, 2005). Ngwelezana hospital is situated in an urban area although patients are from both urban and rural constituencies.

The hospital provides a referral service for adults and children (excluding maternity) to the district hospitals of district 26, 27, 28 and a district (which is level two) level service to Ngwelezana and is moving towards becoming a tertiary hospital (which is level three). This hospital serves a 440 000 catchment population. Ngwelezana has 550 beds and offers the following services; medicine, general surgical, intensive care, medical laboratory services, operating theatres, occupational therapy, orthopaedics, physiotherapy, psychiatry, specialist services, tuberculosis, x-ray department and telemedicine. Ngwelezana hospital has six operating theatres, one recovery room and pre-operating room. These operating theatres are run by 60 nurses and 17 doctors including specialists, medical officers, community service doctors and interns. They do an average of 550 operations per month both minor and major operations (Ngwelezana operating theatre statistics for 2004). It is important to note that half of these doctors (17 doctors) are involved in other respective outpatient clinics while others continue with operations so each doctor will do a minimum of eight operations per day (Ngwelezana hospital, 2005).

Resources such as the latest technology equipment, which is the equipment for level two hospitals are not available in the hospital, and doctors struggle to get equipment because of budgetary constraints.



**FIGURE 3.3 Photograph showing Lower Umfolozi District War Memorial hospital, Uthungulu health district.**

Lower Umfolozi District War Memorial hospital (figure 3.3) started as a three roomed wood and iron shack in the backyard of the home of Dr G K. Moberly in 1912. He was the second District Surgeon of the area. During 1964 there was a threat to close the hospital and due to shortage of staff the Empangeni Hospital Advisory Board was given 57 hours to close the white section of the hospital. Again in September 1992 the hospital was facing closure due to lack of funds. The hospital amalgamated with Ngwelezana Hospital in 1998 to become one Regional Hospital Complex. On 1<sup>st</sup> April 1998, obstetrics and gynecological services moved over to LUDWM hospital. All other disciplines moved to Ngwelezana hospital (LUDWMH, 2005).

The Lower Umfolozi District War Memorial Hospital is a district hospital (which is level 2) moving toward being a tertiary institution (level 3), dedicated to the highest quality of customer services to meet the challenges of maternal and child health in

Uthungulu, Zululand and part of Zululand district. They offer the following services; maternity, obstetrics, gynecology and neonatal and also clinical psychology. There are 9800 deliveries and 2000 gynecological operations carried out per year. The hospital has four operating theatres, three for major cases and one for minor cases. These operating theatres are served by 25 nurses and 12 doctors, only four of these doctors were involved in the study (LUDWMH, 2005).



**FIGURE 3.4 Photograph showing Benedictine hospital, Zululand health district.**

Benedictine hospital was as shown in figure 3.4 started in 1937 by African Benedictine sisters better known as Twasana sisters. They devoted themselves mainly to the care of the sick. In 1938 they opened a maternity wing, further sections were added in the course of time, a general hospital, a children's ward, a TB patient ward and finally a training school for nurses. In June 1976 the hospital was handed over to the Government (Benedictine hospital, 2005).

Benedictine Hospital has developed into a District hospital (which is level two), that provides a sustainable, co-ordinated, integrated, comprehensive and compassionate

health service based on the Batho Pele principles through the district health system. The hospital has 250 beds and offers the following services: dental facility, general medical and surgical, high care and intensive care, maternity, medical laboratory services, neo-natal intensive care, operating theatres, orthopaedic, psychiatry, special services, tuberculosis and x-ray (Benedictine hospital Information, 2005). There are three operating theatres run by 15 nurses and six doctors, they do an average of 100 operations per month including both minor and major cases (Benedictine operating theatre statistics, 2004). Three of the six doctors were involved in this study and these were the doctors who had been at the hospital for more than two years.

### **3.3 The study sample.**

Purposeful sampling was used to select participants for this study. This sampling strategy illustrated characteristics of particular subgroups of interest and it also facilitated comparisons (Patton, 2002). Maxwell, (2001) argues that this strategy "in which particular setting, persons, or events are deliberately selected for the important information they provide that cannot be given by other choices" It has already been noted in the preceding literature review that much of HIV/AIDS research in South Africa has focused on nurses (Barman, 1999). A sample of doctors was therefore chosen for this study. A fundamental aim of this study was to explore doctors' experiences when operating on HIV/AIDS patients. Doctors, who have been involved in operating HIV/AIDS patients, over the past couple of years were therefore chosen as the sample for this study as it was felt that their narratives would

allow for an exploration of the way in which contextual factors impact on operating on HIV/AIDS patients.

Participants of the study were doctors who were currently working and had worked at Ngwelezana, Lower Umfolozi Memorial and Benedictine hospital operating theatres (ophthalmic, orthopaedic, and general surgery) for at least for two years, were set as selection criteria, and fifteen doctors met this selection criteria. The researcher felt after discussing with a number of her colleagues that two years in surgery is enough time for doctors to have a rich experience. The researcher also realised that two years experience in surgery will be different in different hospitals depending on the number of surgical patients the hospital sees annually, but two years experience in surgery was seen as sufficient<sup>1</sup>.

All fifteen doctors were recruited by the researcher. Of the fifteen doctors who were involved in electively operating on HIV/AIDS patients who were interviewed for this study, seven had been in the Department of Health service for more than twenty years, and they had experienced doing operations in the era with lower HIV/AIDS prevalence. They could therefore compare the changing times, and their narratives show many commonalties.

The researcher was employed at the Ngwelezana hospital operating theatre. This position allowed for easy access to individuals who met the study criteria. Being familiar to most of the participants, as opposed to a complete stranger had the added advantage of ensuring certain levels of trust. Although interviewing people with

whom one is familiar may have problems of its own, and as a nurse interviewing doctors, the researcher was aware that she might be met with distrust or skepticism. This was overcome by being receptive and listening non-judgmentally. It is suggested however that the opportunity to interview social contacts "facilitated greater disclosure and reflexive commentary" (Barman. 1999, p. 123).

The interviewer contacted each doctor separately and set up convenient times and a venue to conduct the interviews, and each interview conducted took one hour. Most of the interviews were conducted at the hospitals during lunch or immediately after work, and conducive areas, promoting the respondents to relax were chosen. Fewer, about a quarter of interviews were conducted at the coffee shops around the hospitals after official working hours, the rest of the interviews were conducted at the operating theatre resource centre and the rest at the hospital library, in the discussion room.

### **3.4 Ethical considerations**

Each of the participants was informed about the purpose and the procedure of the interview, through the information leaflet (see appendix A). The researcher explained that the narratives were to be used for research purposes only and that they would be used in the write up of the study and possible future publications. Each participant gave informed written consent before the interview (see appendix B). Interviews were tape-recorded and these tapes were locked away ensuring confidentiality. The

<sup>1</sup> Personal information: Dr B. Lawal



final report, containing anonymous quotations, will be made available to all participants at the end of the study.

Subsequently one of the fifteen selected participants asked to have the interview removed from the study, as the doctor felt uncomfortable about having revealed so much about her experiences when electively operating on HIV/AIDS patients in the narrative. This request was respected and the final sample size on which this report is based consists of a total of fourteen doctors.

Permission to conduct research at the different hospitals was obtained from the hospitals' ethical committees (see Appendix C). Further approval was also obtained from the Biomedical Research Ethics committee and Postgraduate Education Committee of the University of KwaZulu-Natal (see Appendix D).

### **3.5 Interview guide**

An interview guide was developed to conduct the study (see appendix E). The design of the guide was guided by the voice-centred-relational method developed by Brown and Gilligan (1999) and adapted by Manither and Doucet (2001). This method could be described as 'relational' because it explored interviewees' narratives in terms of their relationship with other people. In addition, it took into account the socio-cultural milieu in which the interviewee's exist. This method is also regarded as 'voice-centred' as it focused on the speaking subject that was, how the individuals speak about themselves (Gambu. 2000).

The interview guide opened with an invitation to the interviewees to tell a story about their experiences when electively operating on HIV/AIDS patients. This initial question was followed by a number of probes to gain a deeper understanding of social, historical, and other factors that might have influenced their experience in electively operating on HIV/AIDS patients. The interviews were conducted in English and tape-recorded with the permission of the respondents, the interviews were immediately transcribed by the researcher.

### **3.6 Data collection**

Performing an operation has to do with human action and our access to that action for hermeneutic study is through its expression in narratives (Young & Collin, 1999). Doctors made sense of their experiences in undertaking elective operations on HIV/AIDS patients by conveying their experiences through narrative. A narrative contains elements of their context, which they may not necessarily be aware of. Based on the ideas of Young and Collin (1999), this study chose to make use of narrative structure as a vehicle for capturing the meaningful narratives/ life-stories of the fourteen participants. The narratives thus provide the content for meaningful and hermeneutic study. Peacock and Holland (1999), suggest that narratives / life-stories, considered as content, "offer a window-though not a perfectly transparent one-on historical periods, cultural practices, and psychic events".

During the interviews the researcher guided the interview and kept the doctors on the topic, by preparing open-ended questions before the first interview (see Appendix E). The researcher established rapport and developed trust during the first interviews,

and this process was facilitated by the provision of a quiet environment, being receptive and listening non-judgmentally.

When seeking the information the researcher listened for implicit and explicit meanings in the explanations and descriptions provided by the doctors involved in surgery in selected public hospitals. Limited information was identified during the interview and additional information was gathered through probing, to make associations and verify assumptions so that the topics were understood from the doctor's perspective.

All interviews conducted were done either during breaks in between operations or after working hours and they all one hour. Between interviews, the researcher listened to the tapes of the interviews, transcribed the interview word by word and planned direction of the next interview if necessary, ten of the fourteen participants had follow up interviews because of the gaps in the content of narratives. Transcripts were evaluated for quality by the researcher's supervisor.

### **3.7 Data analysis**

Qualitative data analysis was used to analyse the thematic content of the narratives to uncover themes, attitudes, hopes and fears of doctors.

Before the official interpretation and analysis of the narratives, each narrative was transcribed in full. It should be noted that the interpretation of the narratives began while the participants were sharing their narratives, as the data were collected by the researcher. The narratives of the doctors were further analysed during the

transcribing process, which was completed in full by the researcher. The involvement of the researcher highlights what Miles and Huberman (1994) refer to as the "interactive, cyclical nature of qualitative analysis. Analysis during the process of capturing of the narratives helps the researcher to cycle back and forth between thinking about the narratives that had already been collected and to develop strategies for the next interview. This provided a healthy corrective for built-in-blind spots, and aimed to make the analysis an ongoing, lively enterprise (Miles & Huberman, 1999).

This methodology also provided a framework for the reading and interpretation of the interview narratives. Tappan and Brown (1999) refer to this methodology as a Reading Guide which is: "A voice-method that attempts to record the complexity of narratives of conflict and choice, and attempts to capture the personal, rational, and cultural dimensions of psychic life" (Tappan and Brown, 1999, p.451).

The method and tool (interview guide) were not only the source of the story being told, but of the social and cultural framework in which the story was embedded as well. By focusing on the speaking subject, it became possible to listen and highlight the various voices (and the similarities, differences and struggle between them) of others that had been appropriated into the self. The researcher engaged in at least four readings of the interviews. All four of these readings were interdependent and in the process of interpretation, each reading fed into each other, rather than following an exact, sequential format so that the analysis and interpretation was grounded in

the data. Thus the discussion of results did not fall under neat categories that reflect the separate readings, but reflected the interdependent /cyclic nature of the reading/ interpretation process (Tappan and Brown, 1999 ).

A matrix was developed to provide a summary of the major interpretations and to enable the researcher to pull significant and re-occurring themes together across the interviews. An A4 landscape page was divided into four columns, the first column was used for recording recurrent images, metaphors and tensions picked up through the reading process. Column two recorded the sense of self that emerged from the narrative, column three recorded incidents where the interviewees describe themselves in relation to others, and column four recorded the emergence of broader social, political, economic, technical and cultural and gender factors through the reading process (see Appendix G).

Comprehensive data treatment was done in this study by actively seeking out, and addressing deviant cases and deviant-case analysis was done. The method began with a small batch of data. A provisional analytical scheme was generated. The scheme was then compared to other data, and modifications made in the scheme as necessary. The provisional analytic scheme was constantly confronted by 'negative' or 'discrepant' cases until the researcher had incorporated all the data in the analysis.

If engaged in four different approaches in the readings of the interviews. It is important to note that for the purposes of clarity in each of these readings is

discussed separately in this chapter. The data and interpretation were then reviewed by the supervisor to confirm that the analysis and findings were grounded in the data.

### **3.7.1 First reading**

In the first reading, the researcher concentrated on understanding the experiences of doctors when electively operating on HIV/AIDS patients as the narrator experienced it. In particular, attention was paid to the recurrent images, metaphors, and inconsistencies and contradictions in the story. Part of this reading involved reflecting on the impact the story had on the researcher who was privileged and in the powerful position of reading other stories. Tappan and Brown (1999) argue that interpretation is a relational activity. They argue that when interpretation is understood as entailing a relationship: i.e. there was, at one and the same time, both an attempt to understand the true meaning of another's text/experience, and a realisation that such understanding would necessarily be influenced by the researcher's standpoint and perspective, informed by her own values, biases, and assumptions.

Viewing interpretation as a relational activity suggests that both the interpreter and text share authority and responsibility for shaping the meaning of a given text. Tappan and Brown (1999) highlight the need for self-reflection by the interpreter during analysis. The aim is to enter into a "genuine relationship with the person whose text she is interpreting". In addition they highlight the responsibility of the researcher to be aware of her powerful position in analysing the narratives and

caution the researcher to be aware of the temptation to violate the symmetry of that relationship and to assume ultimate power to interpret another story. As a result, during the interpretation process, the researcher had to be constantly aware of how her position as a nurse, working in the operating theatre, could influence her interpretation.

### **3.7.2 Second reading**

In this reading the researcher paid particular attention to the sense that emerged from the doctors' experiences when electively operating on HIV/AIDS patients. The researcher paid attention to the voice of the T, the speaking subject in relation to the 'we': (groups and important others in the individual's life), the tensions between the two, and how they were negotiated.

### **3.7.3 Third reading**

During this reading the researcher paid close attention to how the self was/is experienced in relation to others (brought out in reading two), whether real or imagined. This involved exploring the feelings, actions and thoughts around the doctor's career development in relation to these others.

### **3.7.4 Fourth reading**

The last reading involved exploring the broader social, cultural and all other context in which the individual's experience in electively operating on HIV/AIDS patients

development had taken place. Issues of power, oppression, gender, the role of family and community were all explored in the narratives.

### **3.7.5 Reading matrix display**

In line with Miles and Huberman's (1999) recommendation, a matrix display was created for each analysed interview (see attached appendix G). A matrix provided a summary of the major interpretations and enabled the interpreter to pull significant and recurring themes together across the interviews. The used matrices facilitated the identification of recurring themes and tensions across each interview.

### **3.1 Justification for a qualitative approach**

This descriptive study was conducted using qualitative research methodology. Morse (2000) describes particular research purposes for which qualitative studies are especially useful. Three of these purposes centre around understanding the meaning of life experiences, the particular context within which people act, and the process by which events or actions take place. All three of these purposes were central to this study and it was partly for these reasons that a qualitative methodology was selected for this study. The relational nature of the qualitative research enabled the interviewer to probe the interviewees. In addition, it has been argued that a qualitative approach picks up on tensions and conflicts between different ideas and experiences that a quantitative study may overlook (Morse, 2000).



During this process the researcher explored and attempted to get closer to the feelings and the general social functioning of the persons/ doctors involved in surgical intervention. The hermeneutical approach, like experience construction, holds that all reality is historically, and socially constituted. This approach "shifts the focus of the study of human phenomena from an explanation of them to the process of their construction" (Collin & Young, 2000).

This shift requires an interpretation of social realities like experience. From this perspective the choice of a qualitative approach was not simply methodological, it was first and foremost a challenge to the existing approaches to this kind of research, which is situated within a modest framework. As Sketchley, (1999) puts it "the activity of interpretation is not simply a methodological option open to the social scientist, but rather the very condition of human inquiry itself.

## CHAPTER FOUR

### RESULTS

#### Introduction

This chapter presents the major themes that emerged throughout the interpretation process of the narratives of fourteen doctors, involved in surgical interventions who participated in the study. Interview extracts are presented to illustrate the main themes that emerged through the process of interpretation. The reading process has already been discussed in chapter three. However, it is important to reiterate that the findings will show that all four readings are interdependent. During the process of interpretation each reading fed into each other, rather than following an exact, sequential format.

The researcher acknowledges that the interpretation of narratives reflects a relational activity. However, the researcher took the responsibility of her own assumptions and values that may have influenced the process of interpretation and thus engaged in an ethic of interpretation based on care and responsiveness. In addition it is important to note that the context in which the individuals reside constrains the number of alternative ways of understanding doctors' experiences when electively operating on HIV/AIDS patients, which prevent the interpretation from leading to total subjectivism.

A description of the study sample is presented in Table 3 and the results are presented in respect of the themes described in Table 4.

#### 4.1 DEMOGRAPHIC INFORMATION

**TABLE 4.1 Demographic profile of public sector doctors involved in surgery in the study.**

Gender	Female (35,7%; n =5) Male (64,3%; n =9)
Nationality	South African (57%; n=8) Foreign Country(43%; n=6)
Marital status	Single (50%; n=7) Married (50%; n=7)
Age	Mean (38 years) SD (5,9 Years) Range (28yrs - 64yrs)
Country where trained	South African (64%; n=9) Foreign Country (46%; n=5)
Professional Experience	Mean(10yrs)SD(5,6yrs) Range (2yrs- 25yrs)
Specialized Training Regarding operating on HIV/AIDS patients.	None
Number of consultants	5 (36%)
Number of medical officers	9 (64%)
Religion	Christian (57%; n=8) Other religious beliefs (43%; n=6)
Semi-urban / Rural	Semi-urban (71% , n= 10) Rural (29% , n=4)

Table 4.1 indicates that the group of participants was mainly dominated by males (64%), mainly because the medical profession is mainly dominated by males. More than half of doctors are South African, this shows that there is a significant number of foreign doctors in the area, 64% of doctors were trained in South Africa. There was a wide range of age (28-64 years) and experience (2-25 years), although there were fewer consultants (36%). More than half of doctors considered themselves as

Christians and most of them (71%) worked in the semi-rural hospitals. No differences were found between the approaches of foreign or South African trained doctors in respect of elective surgery on HIV/AIDS patients.

**TABLE 4.2 Factors influencing doctor's experiences in undertaking elective operations in HIV/AIDS patients.**

No	Theme
<b>4.2</b>	<b>Personal Factors.</b>
4.2.1	Professional obligation and perception of the problem of HIV/AIDS in surgery
4.2.2	Doctors' empathy, Relationship with patient, altruism, fears and stress when operating on HIV/ AIDS patients.
<b>4.3</b>	<b>Structural Factors.</b>
4.3.1	The Health System.
4.3.2	Health Service Delivery.
4.3.3	Risk of exposure.
<b>4.4</b>	<b>Patient Related Factors.</b>
4.4.1	Consequences of HIV/AIDS epidemic for surgery
<b>4.5</b>	<b>Protocols and Procedure required when operating during an HIV/AIDS pandemic</b>

Table 4.2 shows the re-interpreted and clustered themes from the matrix display that was created for each analysed interview throughout the interpretation process of the narratives of fourteen doctors, involved in surgical intervention who participated in the study. These themes were re-interpreted so that they are easily understandable in the health system.

## **4.2 Operating Doctors Personal Factors.**

### **4.2.1 Exploring doctors' professional obligation to electively operate on HIV/AIDS patients.**

In response to the plight of others, most doctors in this study regularly contributed their time, and skills to help HIV patients through surgical intervention, and explained they do this because they feel sorry for their patients. Doctors in the study knew if the patient who needs an elective operation has HIV/AIDS because some elective patients are tested before being operated and other patients clinically show signs and symptoms of HIV/AIDS. Doctors in the study then made the correct interpretation that the patients require surgical operations even though they are HIV infected. All doctors stated that this interpretation is made through using the generic approach to surgical patients, which begins by history taking, since *"common symptoms of surgical conditions require special emphasis in the history taking"* (48-year old male consultant).

After history taking the doctors reported that they then do the elective physical examination, including laboratory and other examinations as they *"...decide that we are responsible for helping our fellow human and we dedicate our time, and skills and operate on these patients as it is our professional obligation as doctors"* (28 year old South African female doctor).

Doctors also stated that these examinations included the following objectives (1) screening for asymptomatic disease that may affect surgery (e.g. anaemia, which is common in HIV infected patients); (2) appraisal of diseases that may contraindicate

elective surgery or require treatment before surgery (e.g. blood transfusion in anaemic patients); (3) diagnosis of disorders that require surgery and (4) evaluation of the nature and extent of metabolic or septic complications.

In this study all the doctors indicated five different motivations that lead them to engage in their prosocial response to the HIV pandemic and the surgical interventions required for HIV/AIDS patients. These five underlying factors included their values e.g. *"because of my professional obligation to help sick people"*; the need to understand *"... I want to learn how to cope with HIV/AIDS in surgical intervention"*; community concern *"... my concern and worry about the community that is having HIV/AIDS, who need operations"*; the desire for personal growth *"I want to challenge myself and test my skills in HIV/AIDS surgical intervention"*; and attempts to enhance their own self-esteem *"I want to feel better about myself, knowing that I helped HIV/AIDS patients who need operations, since most health care workers are involved in other modes of care, like provision of ARV, but less attention has been given to surgical management of HIV/AIDS patients"* (63 year old male consultant).

Half of the doctors interviewed felt that surgeons or operating doctors must demonstrate concern for the patients as people who need help not just as cases to be processed through the surgical ward. *"HIV patients should be thoroughly assessed pre-operatively not just rush through as we sometimes do to decrease the workload"* (male doctor with eight years of professional experience).

In this study Doctors from more rural areas appeared to be more caring than doctors from semi-urban hospitals, e.g. *"I do not think that it is actually important for the operation to establish rapport with my patients, this is a responsibility of a nurse in the ward"* (new male consultant). This might however be caused by the workload in the urban hospitals. From the three hospitals involved in the study it was found that doctors from the most rural hospital appeared to be more caring than doctors from the other two urban (referral) hospitals, as the following statement indicates *"It is important to establish rapport with patients pre-operatively so that they can verbalise their concerns"* (single, 28 year old doctor)

In this study, during interviews the researcher noticed that younger and less experienced doctors help HIV/AIDS patients who need surgical intervention because they want to learn how to cope with these patients and also challenge themselves and test their skills in HIV/AIDS surgical intervention. Older and more experienced doctors, including specialists help these patients because of their professional obligation to help patients and also because such actions make them feel better about themselves. In this study it was also observed that the doctors who were no longer happy or satisfied about operating on HIV/AIDS patients had initially different motivations, in that either they believed that surgeons earned more money, or appreciated the high status that goes with being a surgeon. On the other hand the doctors who are still happy to operate on HIV/AIDS patients were motivated by self-esteem enhancement or personal development which in this study predicted continued helping better than the other motives.

#### **4.2.2 Exploring - Doctors' empathy - Altruism, stigma, fears and stress.**

When asked the question whether they should feel their patient's pain, most of the doctors agreed that *"...it is human to feel the patient's pain, and to put your self in the patient's place, although one should be careful, if too much caring is shown other people will think you are not sure of your skills and feel that the operation will be unsuccessful"* (female doctor). Doctors explained that this helps them in sharing proper or appropriate information with the patients and also to take proper decisions based on the patient's best interests. These doctors (operating doctors who feel their patient's fear and pain) responded to their HIV/AIDS patients' emotional state with a vicarious emotional reaction that resembles what the HIV/AIDS patients on whom they operate are experiencing, they feel the patients pain and fear, understanding the stigma attached to HIV/AIDS and to people who help such patients.

In this study most of the doctors were more than happy to help HIV/AIDS patients by operating on them. They were sensitive to their fears and pain. *"...being a doctor is a calling from God so it not fair to discriminate HIV/AIDS patients because they need help like any other patients, and I feel great fulfillment after helping such patients"* (48 year old male consultant). It was found that most of these doctors had strong religious beliefs and some of them were from a Christian background. Because of this strong religious background they felt joy when observing that the patients that they had operated on improved post-operatively, and this act reduced uncomfortable emotions. Thus feelings of joy and satisfaction that they experienced confirmed their beliefs about the career that they had chosen, and buffered them



from the stress resulting from the huge burden of disease experienced by patients as a result of the epidemic. This was established in the reasoning behind the consequences of the operation outcome e.g. ".../ *always try to do my best and God does the rest*".

Very few doctors in the study felt doctors operating on HIV/AIDS patients should not feel their pain. "*Doctors should not feel the patient's fears and pain because that causes psychological stress and this will affect the doctors performance, and also embarrassing and uncomfortable to work with HIV/AIDS patients.*" (male doctor with four year professional experience). These doctors however, suggested that feeling a patient's pain is very dangerous. They highlighted that if the HIV/AIDS patients complicate pre- and post- operatively that might cause too much stress and result in depression. This was established in some doctors narratives e.g. "*...how is one expected to go through day-to-day operations on patients when there are so many complications in surgery especially in the HIV/AIDS era*". Feelings of guilt might also prevail thus causing work-related stress and the stigma attached to the disease is very hard to deal with. This becomes a problem when similar operating decisions should be taken for the next patient. These doctors strongly felt that there should be no attachment; this should be taken as another surgical case to be processed so that if things do not work out as planned, there will be no guilty feelings. In this study it was noticed that this group of doctors were relatively younger than the other group who had an opposite opinion.

A noticeable aspect in the study was the fact that those doctors who felt satisfied about operating on HIV/AIDS patients were all married and living with their families. They mentioned that sometimes they take work-related problems home and having an understanding and supportive family contributed to preventing their work related stress, caused by complications that arise in HIV/AIDS patients intra- and post-operatively.

Although older doctors were more willing to operate on HIV/AIDS patients, they were less willing to consider new ideas in surgery, especially when operating on HIV/AIDS patients. For instance, older doctors were used to open surgery, but wound healing is more of a problem in open surgery compared to endoscope surgery, which has smaller incisions. Most doctors agreed that people with *"HIV/AIDS need a surgeon, who is willing to consider new ideas and who is flexible to become a partner with their patients in developing a coherent plan for surgical treatment"* (34 year old male consultant). Such a relationship is a powerful weapon with which to efficiently fight complications that come from operating HIV/AIDS patients, and to reduce doctors' stress.

The older doctors strongly believed that proper assessment of HIV/AIDS patients pre-operatively should be done, so that only patients who can survive and benefit from the operation can be operated. *"Do proper assessment pre-operatively of the clinical status of the patient, weigh advantages versus the disadvantages of the operation, and try to seek alternatives if there are any, thus increasing the quality*

*of patient's life"* (48 year old consultant) commented one of the surgical specialists who has been in the field for more than 25 years. Some of the specialists even suggested that CD4 counts, should be done pre-operatively, and if the CD4 count estimate is below 300 cells / mm<sup>3</sup> the patient should not be operated, although other clinical signs should also be considered.

They also added that the patient should be carefully monitored intra and post-operatively. For longer operations antibiotics for prophylaxis should be administered. If post-operatively there is any sign of opportunistic infections, vigorous actions should be taken. Other precautions should also be adhered to like decreasing the operating time, thus reducing exposure of the operated organ or area to micro-organisms. Adherence to aseptic technique will also prevent the spread of infection.

Doctors highlighted that they have to try their best to help these communities which they serve. They also emphasized that if the operation goes well both intra-and post-operatively their attempts enhance their self esteem *"I feel better about myself* (50 year old female doctor), as one of the doctors commented. They also mentioned that working with a disease such as HIV is intellectually challenging as they strive to be the best for their patients under difficult circumstances.

In this study it was also noticed that older doctors above the age of 50 years were more satisfied with the work they do when operating on HIV/AIDS patients than

younger doctors. Older doctors were more experienced and had developed and honed their skills as the HIV/AIDS epidemic developed. Older doctors also have more experience in operating on HIV/AIDS patients than younger doctors. They might find it easier to pre-operatively assess patients who will be fit for an operation, and thus there will be fewer complications post-operatively. In this study doctors were mainly challenged by complications that occur intra and post-operatively. It was also highlighted in this study that older doctors seem to manage as they have become more competent and they also accept the status quo, but that they no longer try to improve, unlike the younger doctors who are keen improve their skills to do better for their patients.

A few of the young doctors expressed their frustration, *"if patients die after the operation when you really have given it your best that is not nice, it is very frustrating."* (24 year old female doctor). This may impact on the service delivery when the doctor has to make a decision for the next patient who is HIV infected, whether to operate or not.

All doctors interviewed agreed that work related stress was associated with operating on HIV/AIDS patients, and if not treated could result to burnout . *"...it cannot be denied that work related stress can result in burnout if not addressed"* (62 year old male consultant). It was noted that younger doctors were more likely to develop burnout than older doctors, since they did not have much previous experience in operating on HIV/AIDS patients. There did not appear to be differences in burnout based on other possible factors such as gender or marital status.

Although the doctors in this study reported feelings of stress and hopelessness and fatalism in operating on HIV /AIDS patients, the majority of respondents said that they spend more time with HIV positive patients pre and post-operatively because of the complications post-operatively compared to other patients. " *...pre-operatively more time is spent in history taking, elective examination and investigation on HIV positive patients and post operative HIV positive patients stay longer in the hospital, so more time is spent on ward rounds* " (62 year old male consultant with 25 years of professional experience).

### **4.3 Structural Factors**

#### **4.3.1 Problems related to the health system, service delivery and risk of exposure that doctors encounter when electively operating on HIV/AIDS patients.**

##### **(I) Health system**

##### **HIV testing**

All fourteen doctors interviewed in this study confirmed that Northern KwaZulu Natal has a high sero-prevalence of HIV/AIDS. Despite this, patients are not routinely tested for HIV infection pre-operatively, but only if their sero-status will make a difference to their surgical management will they be tested. Patients give written informed consent before they are operated.

Surgical doctors in all institutions were found not to be involved in the counselling of patients for testing for HIV infection. They gave as the reason that the work load

is too much; they do not get a chance to counsel their patients. If they need to do an HIV test on them, they order it in the patient's chart like any other investigation for the nurses to carry out. They added that they trust the nurses who are trained to do voluntary counselling and testing of patients for HIV. They also acknowledged that counselling is an on going process that needs time, which they do not have. Orthopaedic doctors from all three hospitals said although they do not test all patients, more than 60 percent of those they test were HIV infected.

They further explained that their rationale for testing, was in order to decide which operation to perform on the patient, e.g. whether to do internal or external fixation for compound fractures. They explained the effect on the skin determines whether the fracture is, a closed simple or an open "compound" fracture, which a fracture is communicating with an epithelial surface. The surface is usually the skin but may be the rectum in pelvic fractures, or mouth, nose, ears and air sinuses, in skull and facial fractures. For a compound fracture in HIV positive patients an external fixation is preferred for faster wound healing.

Doctors reported that although they do not test all patients pre-operatively for HIV infection clinically about 50% patients that were seen everyday were HIV infected and some displayed signs of AIDS. These doctors are guided by the World Health Organization adult HIV/AIDS staging system (See attached appendix-F ).

Doctors who were involved in obstetrics stated that they test most pregnant women who come for antenatal visits, for the purpose of prevention of mother to child transmission of HIV infection (PMTCT). They reported that almost 60% of these women are HIV infected. Doctors who were interviewed are exposed to a large number of HIV/AIDS patients, and agreed that there is a very high seroprevalence of HIV amongst the patients whom they see. Hence the hypothesis that doctors are operating on a large number of HIV/AIDS patients was confirmed. This is because of programs like prevention of mother-to-child transmission of HIV (PMTCT), where doctors reported that the caesarian section rate has tripled from the normal rate. Similarly there has been an increase in extra-pulmonary TB cases which require surgery for diagnosis e.g. TB bones and lymph nodes. Despite this major increase in the workload, the human resources, namely number of doctors and nurses have not increased.

## **ii) Increasing Workload**

The doctors interviewed in this study agreed that *"the increased demand for health care created by HIV/AIDS related illnesses is heavily taxing the already overstretched public health services"* (35 year old female with 9 years of professional experience). There is a high prevalence of people in the community who are HIV infected, and unfortunately some of these community members need operations. Doctors are faced with this challenge, as they do not receive any special training in operating on HIV/AIDS patients.

In addition the high prevalence of HIV/AIDS in district 28 - Northern KwaZulu Natal, affects the health sector and its human resources, by reducing the supply of service providers through attrition due to death, departure from service, and reduced performance. *"There is a shortage of doctors in our hospital, but the shortage of operating theatre nurses is unbelievable"* (56 year old male doctor).

Most of the doctors who had been involved in surgical management for more than twenty years were consultants. Consultants do not do night calls although they are occasionally called if there are problems being experienced with the operations. They basically have a lesser workload compared to the rest of the doctors. This might be the reason for their having different opinions. Most of the young doctors were from the urban hospitals, and they felt that the health system is not organized well enough, and that they had not received any training on how to surgically manage HIV/AIDS patients. Their narratives also illustrated that they felt that it was not fair for them to be judged as a result of inadequacies in the system.

A significant disparity occurred between responses proffered by consultants, who have less contact with the HIV-infected patients who need operations, as compared to medical officers, who handle more such patients. For example, medical officers objected most strongly to routinely obtaining informed consent before testing for suspected HIV infection pre-operatively. The reason being that the personnel responsible for obtaining the consent have encountered practical problems in doing so. Consultants however see it as the correct procedure to follow, but they are



usually involved in a more advisory capacity. The medical officers were also more inclined to perform invasive operations on HIV-positive patients. Once again, this may be explained by the fact that medical officers are more involved in the daily management of these patients post-operatively than consultants. The rapidly increasing incidence of HIV infection results in a high demand for care. However, this is occurring in the context of existing inadequate health care resources. Doctors explained that operating in the era of HIV/AIDS, they require a lot of equipment which is lacking in the public sector, such as double, strong, and elbow gloves, facial shields including eye shields, protective plastic aprons, a traumatic needles and blades, and instruments for endoscopes and external fixation.

### **iii) Health Service Delivery**

All fourteen doctors in the study agreed that they are obliged to give HIV/AIDS patients information and education before operating on them, which is the major, and most omitted part of health service delivery in surgical intervention. Nurses should only act as the patients' advocates when the doctor gives the patient information pre-operatively. They believe that although information and education should be given to each and every patient before the operation that it was more important for the HIV/AIDS patient because of the many complications that might occur post-operatively. This is also important so that the patient can give informed consent knowing all the possible complications. It is up to the patient to weigh the advantages and disadvantages of going through or not going through with the proposed operation. It is also in the patients' bill of rights and according to Batho

Pele Principles, that the patient should be consulted and be given all the information about his/her illness in the language that he/she can understand. Doctors also highlighted that most of the time they do not personally counsel patients or give information and education to the patients pre-operatively, or when the operation is proposed. They gave as the reason that they are unable to do this because of the workload, which compromise the quality of service delivery. The doctors interviewed emphasized that the pandemic of HIV/AIDS has caused an increased workload, making the work of surgeons stressful.

All fourteen doctors reported that the HIV/AIDS pandemic increases the workload as many patients present with opportunistic infections, for example extra-pulmonary tuberculosis (EPTB), including lymph nodes, abdominal TB and TB of the Bones. The doctors explained that for diagnosis of these extra-pulmonary tuberculosis infections, one is required to do a biopsy, which is a surgical procedure and that EPTB can occur at any age. Young children and HIV positive adults are particularly susceptible. Up to 25 percent of TB cases may present with EPTB. The common form of EPTB associated with HIV is lymphadenopathy, pleural effusion, pericardial disease and meningitis. Diagnosis of extra-pulmonary TB is the presence of constitutional features and local features related to the site of disease, but the certainty of diagnosis is through specialised x-ray, ultrasound and biopsy, which is a surgical procedure. The increase in EPTB has thus resulted in an increased surgical workload, reported by all the doctors.

#### **iv) Risk of exposure**

When doctors were asked about the risk of HIV/AIDS transmission they all felt that health professionals are at risk of getting HIV/AIDS from the patients during operation. They also felt that the personal protective equipment provided by the institutions was of poor quality, and that these are not always available because of inadequate resources in public hospitals. None of the doctors had considered transmission of HIV infection from an HIV infected doctor to the operated patient, during an operation if a needle stick injury occurred.

Most doctors felt that they were personally at risk of contracting HIV infection and that this could easily occur because of the workload. They feel that they do not have enough time to take proper universal precautions. They further highlighted that the workload has increased due to the number patients with HIV/AIDS, resulting in longer ward rounds and those patients who have been operated stay longer in hospital, because of delayed wound healing processes and other opportunistic infections related to HIV/AIDS.

These doctors noted that the incidence of needle stick injuries was increasing as the workload increased and they also noted that these occur mostly during the night. After a long day's work doctors may also be on call during the night, and they are more exposed to HIV infection through needle stick injuries, as they work very long hours. They explained that doctors do 160 hours a month which is their normal shift but then they do extra hours which is their paid overtime. Doctors' calls are optional

but their salaries without such calls are low so they need these calls to boost their income. In referral hospitals which are very busy they sometimes work throughout the night but that does not mean that they do not have to do their 8 hour shift the following day.

Older doctors who have been practising for more than twenty years thought the risk of contracting the disease was not so bad these days because there are protective devices that are available. They felt precautionary measures should be taken with all patients, and advised "*Treat every patient as HIV infected*" (female doctor with 25 years of professional experience). They also highlighted that although protective devices are available, institutions opt for cheaper materials which are not very effective and comfortable, for example, poor quality gloves especially when doubled can hinder good surgical performance, and that can cause even more needle stick injuries. Poor quality visors hinder good sight. This is not so bad for somebody who is very experienced in surgical management, but may limit less experienced doctors.

Pre-operative personnel who provide direct and indirect patient care were also considered to be at risk of exposure to potentially harmful micro-organisms. Wearing personal protective equipment (PPE), such as gowns, gloves, and eyewear, decreases the risk but does not eliminate it. The risk of exposure is proportionate to the proximity to the patient in the operating theatre. They explained that the closer to the surgical field (source of blood and / or body substance), the higher the risk. The surgeon, assistants, and scrub person therefore have a higher risk by role and

proximity. They share an increased incidence of needle sticks and puncture wounds. However, the circulator, environmental services personnel, and instrument processors are also at increased risk for body substance exposure because of specimen handling, cleaning processes, and other contaminants in the environment.

Doctors explained in one of the hospitals where the study was done, exposure rates to blood and body substances for operating theatre personnel were reported as 10 per 100 procedures. Sharps were responsible for 3 of 100 exposures reported. Of glove tears reported 93% were in single-gloved caregivers. Approximately 63% of glove tears in a single-gloved individual revealed a blood exposure. In 20% of double-gloved individuals who had a glove puncture, only 6% had evidence of inner-glove puncture. In 74% of injuries with sharps, the injuries were self-inflicted by carelessness.

The working environment is a very important aspect of HIV/AIDS. Even doctors who were familiar with the infection control guidelines and aware of the standard precautionary procedures, felt that they were at risk for contracting HIV/AIDS from patients and that the risk is high in South Africa. Many doctors are inexperienced in their pre and post operative care and management of HIV/AIDS patients.

Another dimension of the study is the human rights' issue. Almost all of the doctors thought that health care personnel have the right to know the HIV Status of their patients before surgery. This is a complex issue, because doctors must take into

consideration universal precautions for HIV transmission with all patients on whom they operate. This study indicated that although doctors feel a sense of responsibility for providing care, nearly half of them think that they have the right to refuse treatment of patients who are HIV infected and one-third of the sample believed that they themselves need psychological help after caring for these patients on a day to day basis. *"When complications occur either intra or post-operatively one wonders whether a decision to operate the patient was right from the beginning, this becomes worse if a similar decision has to be taken for the next patient, a forum to ventilate such is needed ..."* (34 year old female doctor with four years of professional experience).

Some of the doctors mentioned that the patient is also at risk. If a needle stick occurs, the needle may come in contact with the patient after penetrating the caregiver, thereby exposing the patient. Some patients have health conditions that predispose them to vulnerability for infection. Interestingly however, the situation regarding disclosure is reversed when the physicians are assumed to be HIV positive. Then the majority of the physicians do not want their patients to know their status. Less experienced doctors felt operating on HIV/AIDS patients was putting them at greater risk of contracting the HIV infection. They continue to work because they have no choice and they do it under a lot of stress. *"operating on patients is a skill, this skill is fully developed over a number of years of practice, being inexperienced and having to use protective devices like gloves, which reduce hand sensitivity and visors, reducing vision is very frustrating to us"* (30 year old female with two years

of professional experience). This study confirms however that doctors who fear contracting HIV infection from their patients had sufficient information to take adequate measures for the prevention of transmission of HIV/AIDS in their working environment which is the operating theatre.

#### **4.4 Patient related factors challenging doctors when electively operating on HIV/AIDS patients.**

##### **4.4.1 Consequences of HIV/AIDS epidemic for surgery**

Doctors in this study stated that operating on HIV infected patients is risky to the patients both intra-and post-operatively. Intra-operatively because HIV infected patients normally have respiratory infections, which are common opportunistic infections amongst HIV/AIDS patients. This becomes a problem in anaesthesia. Most of HIV/AIDS patients have difficulty in breathing post-operatively. Post-operatively according to the interviewed doctors there is also a common problem of delayed wound healing. They emphasised that HIV/AIDS patients are considered a compromised or altered host because of their significant impairment of the system and tissues which does not allow a normal response to operative trauma or infection. Most of HIV/AIDS patients are weak, malnourished and anaemic.

Doctors explained that no matter how they try to prevent the infection on the operated site these complications still prevail. They reported that before any operation, theatres are thoroughly cleaned using bactericides and this is also done after each and every operated patient. Operating theatre furniture and machinery is

also cleaned by microbicide spraying agents. Instruments used on the patient are cleaned and sterilized by autoclaving. The researcher has also witnessed these procedures done to minimise micro-organism in the operating theatre, while she was a scrub-nurse at Ngwelezana hospital. Control of the environment is a necessary part of overall infection prevention. The inanimate environment of the operating theatre suite presents a risk for the transmission of micro-organisms. The aim of a microbiologically controlled environment is to keep contamination to a minimum.

The pre-operative environment is designated both to optimize function and safety and to protect patients' sources of contamination. The operating theatre includes specific areas for traffic, support systems, administration, communication, and storage. Traffic patterns are designed to flow smoothly and to prevent backtrack and crossover traffic. Clean and soiled activities, areas, personnel, and sterile and unsterile supplies need to be distinctly separated.

Aseptic barriers such as sterile gowns and gloves protect sterile areas, isolate surgical sites from infectious contaminants, and keep the number of microorganisms to a minimum. To slow or prevent the transfer of organisms, these barriers must be impervious to the passage of such micro-organisms under ordinary operating conditions. Procedures are established to provide barriers against the migration of microorganisms from any potential source of microbial contamination. All doctors interviewed in this study agreed that all these standardized operating theatre procedures are followed in their institutions.



According to the doctors an increased number of complications that occurred intra- and post-operatively cause the patients to stay longer in the hospital, increasing in-patient stay, and also causing an increase in the workload, because of long ward rounds and the care required. *"HIV/AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis and have more inpatient days compared to other patients, this obviously increases the time spent on ward rounds"* (44 year old male doctor). Doctors gave this reason for their failure to finish all their required duties during working hours as they frequently have to volunteer their time, and use their spare time to appropriately manage HIV/AIDS patients pre and post-operatively.

One of the doctors who agreed that the workload was increasing, but did not understand the reasons for the increase, because he had never experienced the working world without HIV/AIDS. *" ...Ever since I started working people have been sick, but now I think they are more sick than before, I feel obliged to help these people, this is like a calling to me"* (52 year old female doctor with 17 years of professional experience).

#### **4.5 Procedures and Protocols required when operating during an HIV/AIDS epidemic.**

All the doctors agreed that protocols and guidelines should be drawn up and made available to guide all doctors in deciding whether to operate on HIV/AIDS patient or not. Such protocols would also allow reasonable flexibility in the surgical treatment

where the patient is HIV infected and flexibility is of paramount importance due to the incredible diversity of the virus and its highly variable course in each individual case. The respondents noted that "*...every infection of HIV is completely different in its effects upon the human body*" (new male consultant). No two patients respond to HIV infection in quite the same way. It should be noted though, that even if guidelines are to be flexible, flexibility will have to be reconciled with standardisation and this should be overseen by consultants in the field.

Some HIV/AIDS patients who are almost at the same stage of infection or disease will not have similar problems intra or post-operatively. "*Others are just the opposite and deteriorate rapidly while constantly plagued with a variety of opportunistic infections*" (female doctor with six years of professional experience). The vast majority of HIV/AIDS patients fall somewhere in between these extremes and display greatly varied symptoms in the course of their disease. Thus there are tremendous variances between individual HIV/AIDS patients intra- and post-operatively.

Consultants also felt that HIV/AIDS patients should be assessed jointly and discussed among themselves as doctors in order to come up with the best possible way of helping the patient, and alternatives other than operating should be considered if available. They further supported this statement by commenting about the common conditions of HIV/AIDS patients, with generalised body weakness, anaemia and malnutrition which make such patients complicate.

In this study obstetric doctors found it very hard to make decision regarding performing caesarian section on HIV infected mothers. In the prevention of mother to child transmission of HIV infection (PMTCT) program, if the HIV infected mothers CD4 Cell count is less than 200 cells / mm<sup>3</sup> caesarian section is recommended to prevent transmission of HIV infection to the baby during delivery. This is the stage where the mother is vulnerable to catching all the opportunistic infections. They are also likely to have wound healing problem post-operatively. The decision to be taken is so difficult whether to save the baby from HIV infection or the mother though the situation has improved with the availability of antiretroviral therapy that can also assist the mother to be better.

Younger doctors from urban hospitals felt all patients should be given a chance since patients do not react similarly even with similar conditions. *"Give the benefit of doubt and see what happens"* (24 year old male doctor). They felt that the consequences of the operation would be dealt with as they prevail, because it was not justifiable to deprive somebody of a required operation based on the possible complications that may not occur.

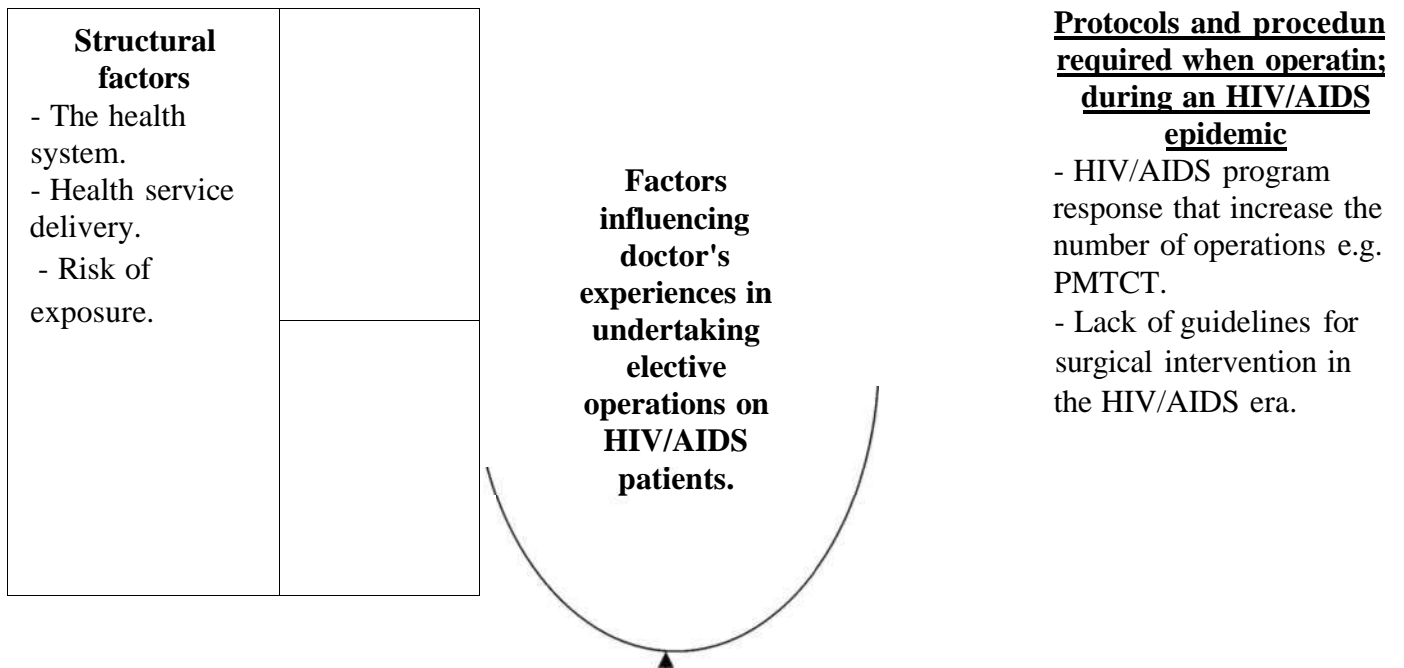
The researcher has observed that some doctors make an effort to better their skills and knowledge about surgical interventions on HIV/AIDS patients while others do not. If the institution or hospital does not provide any in-service education on such topics, those who do not update themselves remain with minimal basic skills and the knowledge they graduated with.

The researcher has also witnessed that some doctors give up their own spare time for their patients pre and post-operatively, for example on an operating day doctors at Ngwelezana hospital where the researcher is working start work at between 07h00 and 07h30 instead of 08h00 to do pre-operative check ups on patients and after finishing the operation list, which normally finishes at 17h00, they do an immediate post operative round and leave the hospital after 18h00 instead of 16h00. This overtime doctors in the public sector are not paid for (only paid for eight hour day's work).

## SUMMARY OF RESULTS

### Personal Factors

- Professional obligation and perception of the problem of HIV/AIDS in surgery.
- Doctor's empathy, relationship with the patients, altruism, fears and stress when operating on HIV/AIDS patients.



### Patient related factors

Consequences of HIV/AIDS epidemic for surgery.

**FIGURE 4.1** Theoretical framework to understand experiences of doctors when undertaking elective operations on HIV/AIDS patients.

## CHAPTER 5

### 5. Limitations of the study and Discussion

#### 5.1 Limitations of the study

##### Credibility of the study

Durrheim and Wassenaar (1999) argue that qualitative researchers have a problem with terms such as 'validity'. Social construction, for example, rejects the idea that the research findings can be accurate reflections of reality. Qualitative researchers argue that research can be evaluated according to its "credibility". They argue that the credibility of qualitative research is established while the research is being undertaken, in that 'the researcher continually looked for discrepant evidence to the hypotheses she was developing as a means of producing a rich and credible account'.

Richardson and Woolfolk (1999) argue that in order to understand, we need to be open to the possible truth of other points of view. We need to be involved in a "genuine dialogue that involves openness to challenges that may overturn our prejudices or partialities. During this research process, the researcher was open to this dialogue, which meant that she had to often re-think ideas and return to relevant literature to reconstitute the ideas she was working with. Parker (1995) explains that a unique characteristic of hermeneutic analysis is its openly dialogical nature: "the returning to the object of inquiry again and again, each time with an increased understanding and a more complete interpretivist account.

Credibility was assured in two ways in this study. Firstly, during the interviews the researcher was conscious of having to constantly reflect back on what had been narrated, and to ask for clarity and confirmation of meaning from narrators. Secondly, the researcher returned to the transcribed narratives over and over again, asking new questions and thus constantly revisiting her interpretations (Parker, 1999). As Richardson and Woolfolk (1999) argue, "the work of understanding is never finished and is permanently liable to honest doubt. They argue that all understanding is "historically conditioned, essentially prejudiced, in part relative to the perspectives and purposes of the interpreter, and therefore continually changing". The researcher therefore acknowledged that her interpretation of these narratives was partial and permanently liable to honest doubt. In sum, the researcher would argue that her findings are neither accurate nor final reflections of reality, but rather a tentative and plausible account of human agency in the world.

### **Transferability**

As an interpretive study, this study did not seek generalisability. Rather, the researcher acknowledges that meanings are highly variable across contexts of human interaction (Durrheim & Wassenaar, 1999). Through the process of interpretation this study provides a detailed and rich description of the context of participants. Readers are thus able to achieve understandings of the structures of meaning, which develop in specific contexts. These understandings can then be "transferred to new contexts in other studies to provide a framework with which to reflect on the arrangements of meaning and action that occur in these new contexts" (Durrheim & Wassenaar,

1999). In sum, the aim of this study is not 'generalisability' but rather 'transferability'.

### **Dependability**

Closely related to the notion of transferability was that of dependability. Interpretivist researchers do not assume that what they are studying is a stable or unchanging reality and therefore do not expect to find the same results repeatedly. Rather, they expect that individuals will behave differently in changing contexts (Durrheim & Wassenaar, 1999). The researcher has therefore not sought to show reliability, but rather dependability, by giving a rich and detailed description of the contexts in which the participants interacted during the interpretation of the narratives. It is hoped that this study has shown how certain actions and options are rooted in and develop out of contextual interaction and that reliability, as a positivist term, is not appropriate to interpretivist research.

### **Information bias**

The possibility of information bias resulting from interviewing was considered since the researcher was closely involved professionally, so to maintain objectivity the data analysis was checked by the supervisor, who had a different background. However, the researcher's close involvement also provided a better understanding of the context, which enabled her to probe responses and obtain explanatory responses. This limitation could have been overcome perhaps, if another experienced theatre nurse with an interest in research had been available. S/he could have conducted the



interviews, unfortunately at the time of the study there was no suitably qualified person.

### **Researcher bias**

Although the researcher in this study had established rapport, gained the trust of the informants and had practised her interview skills, the fact that the interviewer is in the same field of work may have either positively or negatively affected the amount and quality of data collected. The researcher ensured constant objectivity by making sure that study results are derived from characteristics of participants and study context, not from researcher's biases.

### **'Rashomon effect'**

This effect was noticed in this study where doctors' reports from working in the same hospital, and practising in the same field contradict other reports, e.g. some doctors have experienced difficulties in operating on HIV/AIDS patients whereas others did not (Marks, 1993).

### **Other limitations identified**

In this study purposive sampling was selected so that rich and quality data could be obtained, and the criteria for selection was two years of experience in surgery. However two years experience in surgery may not be the same as some hospitals are busier than others e.g. Ngwelezana hospital does 550 operations per month, while Benedictine hospital does 100 operations per month.

Lack of sufficient literature and studies done on the researcher's topic in Africa limited possible comparison.

Another limitation of the study was that one of the respondents withdrew from the study, preventing the incorporation of salient data. This is seen as a limitation because the unique insights obtained from this respondent, unfortunately could not be used.

## **5.2 Discussion**

This study found many challenges that doctors experience when operating on patients with HIV/AIDS, related to doctors' personal factors, the health system, health service delivery, their risk of HIV infection exposure, and patient related factors.

### **5.2.1 Professional obligation to electively operate on HIV/AIDS patients.**

The interpretation of a variety of extracts from the doctors' narratives in this study illustrates how professional obligation is inextricably embedded in electively operating on HIV/AIDS patients, and that doctors understand their professional obligation to electively operate on HIV/AIDS patients. Various factors, including the process of surgery, motivation to engage in prosocial response, decision to operate, establishing rapport and consoling, HIV testing, pre-operative care, intra-operative care and post-operative care were seen as instrumental in deciding electively to operate on HIV/AIDS patients.

The management of surgical disorders in HIV/AIDS patients requires not only the application of technical skills and training in basic sciences to the problems of diagnosis and treatment, but also genuine sympathy and indeed love for the HIV/AIDS surgical patients. The surgeon must be an applied scientist, an engineer, an artist, and a minister to his or her fellow human beings. Because life or death often depends upon the validity of surgical decisions, the surgeon's judgment must be matched by courage in action and by a high degree of technical proficiency. In summary, the pre-intra and post-operative care and evaluation should be comprehensive in order to assess the patient's overall state of health, to determine the risk of impending elective surgical treatment in HIV/AIDS patients and to guide pre, intra and post-operative preparations for HIV/AIDS patients (Way, 1998)

### **5.2.2 Operating doctors' personal factors, fears, stigma and work related stress**

This study showed that many younger doctors reported negative feelings like bother, worry, fear and anger when they have to operate on HIV/AIDS patients, which results in work related stress. The results of this study correlates with previous research findings that were carried out in foreign countries. In countries where the epidemic has recently emerged doctors lacked self efficiency in managing HIV infection in operated patients (Mac Cann, 1999).

Doctors in this study indicated five different motivations that lead them to engage in their prosocial response to the HIV pandemic and the surgical interventions required for HIV/AIDS patients. These five underlying factors included their values e.g. a

humanitarian obligation to help others, the need to understand, community concern, the desire for personal growth and attempts to enhance their own self-esteem.

According to Smith, Keating and Scotland (1989), empathy leads to helping but not because of selfless concern for the welfare of others or because helping reduces uncomfortable emotions. Instead pro-social behavior is motivated by the joy one experiences when observing that someone's needs have been met. This appears to be an evolutionarily useful response, and it has been observed in monkeys and apes (Brothers, 2000) and in some children as young as twelve months of age. By the time we reach adulthood, this capacity for empathic concern is a common one, especially if we have grown up in a supportive family in which such reactions are encouraged (Ungerer et al, 2000). It has been suggested that job preferences of doctors indicate the desire to dedicate oneself to the patients or serving community and they put their patients' interests before their personal interests (Hale, 1999).

The results on doctors' fear and stress in this study are supported by Demmer, 2004 who highlighted the experiences of health care workers with stress and burnout during more than two decades of HIV/AIDS care. Though physicians represented a much smaller proportion of the sample in this study, he found that younger physicians showed more stress and burnout compared to experienced physicians (Demmer, 2004).

Studies conducted in Singapore (Annals of the Academy of Medicine) consistently showed that many medical professionals have negative attitudes towards people who are HIV positive (Silverma, 1998) and feel reluctant to offer them treatment (RSC,

1999). The results of this study are similar to Wallack's (1999) findings that 87% of physicians experience more anxiety about caring for HIV/AIDS patients than other patient groups. Caring for people with HIV infection can be more stressful (Reed, 1994 & Silverman, 1998) and more fearful for those in the medical profession who perform invasive procedures (Donnell & Weinberger, 1998).

### **5.2.3 Structural factors**

#### **Health System**

All fourteen doctors reported that the HIV/AIDS pandemic has increased the workload, since diagnosis of extra-pulmonary tuberculosis (EPTB) requires confirmation through biopsy, and HIV/AIDS patient are at increased risk post-operatively (WHO, 2002).

Prior to the HIV/AIDS epidemic, the health systems of Sub-Saharan Africa were making a significant contribution to the steadily improving overall health status of populations in the region. There were however virtually no published studies as of 1995, on how the African HIV epidemic would affect the supply, demand and quality of healthcare (UNAIDS, 2000). The experiences of doctors in Northern KwaZulu-Natal indicate the deleterious effect of this pandemic on the health system.

The narratives of doctors in this study demonstrate the importance of aseptic practices in the care of pre-operative patients, and they all confirmed that these aseptic guidelines are followed in the institutions where they are employed. AORN,

the Association of Preoperative Registered Nurses, has developed standards and recommended practices for achieving the optimal level of technical and aseptic practices in the care of preoperative patients. These guidelines are intended to give direction and information for the formulation of institutional policies. Individual hospital policies and procedures reflect variations in the physical environment and/or in clinical situations, which determine the degree to which these recommended practices can be implemented. All health care facilities incorporate into their policies and procedures the recommendations for infection control from the Centres for Disease Control and Prevention (CDC), as well as the regulations for the prevention of exposure to blood-borne pathogens from the Occupational Safety and Health Administration (OHS) (Stotter et al, 2000).

In this study budgetary constraints and difficult working conditions appeared to exacerbate the problem by increasing doctor fatigue, which doctors felt could lead to accidental injuries especially amongst junior staff. The extent of the psychological stress on staff as a result of their perceptions of inadequacy is not known. This feeling of inadequacy may place an additional burden on doctors already operating on HIV/AIDS patients. There are no formal support mechanisms in the health service for staff working with HIV-infected patients.

Visintini et al. (1996) point out that lack of competence leads to burnout and peer support groups could alleviate the stress caused by the feeling of incompetence. In a 1998 survey done in New York City of doctors and nurses specialising in AIDS care,

36% identified workplace-related stressors, which involved staff conflicts, workload and shortage of staff. Similar findings were reported in a study of physicians caring for HIV/AIDS patients. Work overload and social relationships with colleagues, supervisors and administrators were the main predictors of burnout. In a recent study of counselling and administrative staff working in AIDS service organisation in New York City, paperwork and inadequate salaries were cited as the main source of stress (Demmer, 2004). Anecdotal information and a few recent studies suggest that the epidemic's impact on the health system is devastating, particularly as it affects human resources as well (Tawfik and Kinoti, 2001).

This study also highlighted that the workload is increasing while the number of surgical doctors and nurses in operating theatres is decreasing. The Health Systems Trust estimated that 300 nurses are leaving South Africa every month. There is already a shortage of skilled healthcare workers, particularly in the specialist categories of intensive and neo-natal care, as well as in the country's operating theatres. The HIV epidemic is also expected to take its toll on the nursing profession, with an estimated one in five nurses being HIV positive (HST, 2001).

### **Risk of exposure**

As a result of the high prevalence of HIV/AIDS, some doctors in this study feel very anxious about contracting HIV in the workplace. This group of doctors appeared to resent being involved in the surgical care of HIV/AIDS patients. They did not see medicine as fulfilling its role as a healing profession due to the poor health system.

It was also noticed that male doctors felt very strongly that the health system was not providing a conducive working environment for public-sector doctors. The possibility that doctors performing surgery will be exposed to the HIV virus by infected blood and body fluids is increasing as the epidemic expands. There is thus a need to improve awareness of guidelines regarding PEP.

In this study some doctors called for the facilitation of HIV antibody testing for patients prior to surgery, so that additional infection control procedures can be implemented for those who are HIV positive. This study's results are similar to the research findings from studies that were carried out in Turkey (Duyan et al. 1998; Elbas & Send, 1998 and Zencir et al, 1998). Doctors wish for routine HIV antibody testing of pre-operative patients, which has not been endorsed by the college of surgeons or Medical Association. The need for counselling about the HIV test is now recognized by most health care workers (Sketchley, 2001) and the majority of the doctors in this study agree. Asking a patient about to undergo surgery to submit to an HIV antibody test may increase their anxiety at what is already a stressful time. Furthermore, the psychosocial consequences of having an HIV antibody test are likely to lead to some people in need of surgical care avoiding the necessary treatment, if testing prior to surgery is made compulsory (Sketchley, 2001).

The disadvantage of selective testing, whether compulsory or voluntary, is that it is likely to miss a number of infected individuals, including those not perceived to be at



high risk, and even the testing of all patients will fail to identify those in the window period between infection and sero-conversion (Currie, 1998).

Doctors need to be made aware that the risk of contracting HIV following occupational exposure to HIV is low. Epidemiological studies have indicated that the average risk of HIV transmission after percutaneous (passing through the skin) exposure to HIV infected blood in health care settings is about three per 1000 injuries ( Schaller & Cladini, 2000).

It is important to highlight to health staff that besides contracting HIV following occupational exposure, they are subject to similar risks of HIV/AIDS as the general population, with the main mechanism of disease transmission being sexual contact. Health personnel are subject to age-specific risks and the effects of income, education, and social status on their sexual behavior. Studies suggest that although occupational risk is increased in the course of providing health services, this risk is limited. There is also variation in occupational risk across professional cadres and between developed and resource poor institutions (Hajek, 2003). Employers should be aware that, where there is, or is likely to be, a risk of infection in the work-place, the employer shall take and maintain measures, depending on the nature and extent of the risk for preventing infection including, where applicable, the application of universal precautions (Hajek, 2003).

### **Health service delivery**

This study indicates that there is a lack of protocols and guidelines that will give doctors information or a guide on electively operating on HIV/AIDS patients. This finding is similar to that from other countries like Turkey (Elbas & Send 1998, Zencir et al, 1998). Those studies showed that some of the doctors were anxious about their knowledge of surgical care in HIV/AIDS patients. There is no evidence that knowledge of patients' HIV status reduces the risk of HIV transmission to surgical staff through reduction in the rate of needle stick injury. To investigate this, a study was performed in San Francisco in an area of extremely high prevalence, where maximum precautions were probably being taken anyway (Gerberding, 1990). However, this does not detract from the fact that although knowledge about HIV may encourage compliance with infection control procedures, it will not prevent accidental exposure.

Doctors in this study feel that the PMTCT program has contributed to the challenges they face when electively operating on HIV/AIDS patients. Appropriate management of pregnant patients who have HIV disease has a major impact on maternal and infant death. The goals of therapy are to properly manage the pregnancy, treat the maternal HIV infection, and minimize the risk of vertical transmission of HIV. Early detection of HIV through aggressive screening programs is necessary to initiate timely therapy. Multiple prospective cohort studies support elective caesarian section as an additional means to decrease vertical transmission (Stotter et al, 2000). More than 160,000 women of childbearing age in the United States are infected with

HIV disease. Perinatal transmission of HIV accounts for more than 90 percent of all paediatric AIDS cases. Infants infected with HIV at birth are more susceptible to opportunistic infections and a rapid progression to AIDS, including a 50 percent chance of developing AIDS by three years of age. In 1995 AIDS was the leading cause of death in children in the United States. Fortunately from 1992 to 1997 the number of paediatric AIDS cases declined to 66 percent despite only a 17 percent decline in the number of births to women infected with HIV (UNAIDS, 2000).

#### **5.2.4 Patient related factors**

The results of this study confirmed the following patient related factors that make operating on HIV/AIDS patients very challenging, and these have been also reported by other studies.

- Lung diseases are very common in HIV/AIDS patients, which give rise to intra-operative complications, that is complications related to anaesthesia (Bartlet & Gallant, 2001).
- Malnutrition and in particular iron and protein deficiency is a common problem with HIV/AIDS patients. Often, due to lack of absorption from diarrhoea or anaemia secondary to malnutrition and drug side effects. These deficiencies cause depleted immune system. Malnourished patients do not do well both intra and post-operatively (Chambers, 1991).
- Despite the increasing number of patients with the human immunodeficiency virus (HIV) infection, surgical experience with these patients remains limited. A retrospective review over a 9 year period (January 1985 to December 1993) was

undertaken in Australia to determine the indications, operative management, pathologic findings and outcome of major abdominal surgery in these patients. A total of 51 procedures were performed in 45 patients; 30 patients had acquired immunodeficiency syndrome (AIDS) and 15 patients had asymptomatic HIV infection. Indications included gastrointestinal bleeding, complicated pancreatic pseudocysts, cholelithiasis, bowel obstruction, immune disorders, acute abdomens, elective laparotomy, colostomy formation, menorrhagia and Caesarian section. Pathologic findings directly related to the HIV infection were found in 81% of the AIDS patients and 35% of the asymptomatic HIV infected patients ( $P < 0.05$ ). These included opportunistic infections, non-Hodgkin's lymphoma, Kaposi's sarcoma, immune disorders, lymphadenopathy and pancreatic pseudocysts. It was noted that AIDS patients had more complications than asymptomatic HIV infected patients with most complications related to chest problems and sepsis (61% vs. 7%;  $P < 0.01$ ). Emergency operations carried a higher complication rate than elective operations though this was not significant. The hospital mortality was 12%. On follow up, 13 of the 25 AIDS patients had died with the median survival of 7 months, while three of the 14 asymptomatic HIV infected patients had died with the median survival of 40 months. Of the remaining patients, the 12 AIDS patients had a median postoperative follow up of 7 months and the 11 asymptomatic HIV infected patients had a median postoperative follow up of 29.5 months (Saunders & Scott, 1999).

- In orthopaedics soft tissue injuries are more risky in HIV/AIDS patients and the risk of sepsis is higher than in closed fractures. A bone spike pierces the skin from within if the fractures follow indirect violence. There is much less soft tissue damage but the risk of sepsis is still present (Marks, 1993).

### **5.2.5 Protocols and guidelines**

The nature and number of concerns expressed by respondents in this study of the lack of effective surgical interventions for HIV/AIDS patients and complications they encounter post-operatively indicate the urgent need for policy guidelines and protocols. These should be made a priority of health service managers and policy makers. Official management protocols should be developed and supported with the necessary resources to facilitate implementation. The protocols must range from the macro level (national) to the micro level (operating theatre or unit in the hospital).

The care of the HIV/AIDS patient with a surgical problem commonly involves distinct phases of management sequence: the diagnostic workup is concerned with determining the cause and extent of the present illness. Preoperative evaluation consists of an overall assessment of the HIV/AIDS patient's general health in order to identify significant abnormalities that might increase operative risk or adversely influence recovery. Preoperative preparation includes procedures detected by the findings from the diagnostic workup and preoperative evaluation, and by the nature of the expected operation on the HIV/AIDS patient. In summary, the preoperative evaluation needs to be comprehensive in order to assess the HIV/AIDS patient's

overall state of health, to determine the risk of the impending surgical treatment, and to guide the preoperative preparation. The assessment should include: a nutritional assessment, assessment of immune competence, factors leading to increased infection, pulmonary dysfunction, delayed wound healing, drug effects etc.

This study indicated that doctors would like to test patients for HIV/AIDS preoperatively as they believe they will take extra precautions if they know that the patient is HIV positive. However according to AIDS and the Law in South Africa HIV testing is subject to informed consent (DOH, 2002). It states that no medical procedure for establishing whether a person is an infected person shall be performed in respect of such person without the informed consent or that person or someone who is legally competent to consent on her or his behalf (in the act referred to as a legally competent person).

## CHAPTER SIX

### 6. Conclusion and Recommendations

#### 6.1 Conclusion

In conclusion, this study clearly indicates the need for official guidelines to influence the doctors' decisions about surgical interventions for HIV-infected patients. These are difficult decisions, with far-reaching implications and usually call for ethical considerations. At a micro level, these guidelines should be translated into protocols that are developed with co-operation and input of all categories of staff, as the different categories have different concerns and experiences that all need to be taken into account.

It is apparent that many doctors feel they have inadequate clinical and pre-operative counselling skills to deal with HIV/AIDS and its implications. Thus, the training programs at medical school and the continuing medical education of doctors should aim at increasing the confidence and skills of doctors to cope with HIV surgical intervention issues. In addition consultants, who feel more clinically confident, need to provide more active support and teaching advice for the less experienced categories of staff. Counselling skills training in respect of HIV infection should also become part of the basic training of doctors.

Doctors overestimate the risk of operating on HIV/AIDS patients and this can lead to some ethical problems. Education programs are needed to reduce negative attitudes towards operating on HIV/AIDS patients and to remove unfounded fears of

contracting HIV infection and post-operative complications of the patients. Formal, and peer support groups should be organized to handle the emotions related to HIV/AIDS and multidisciplinary health care teams are needed to help with proper pre-operative counselling of HIV/AIDS patients. Further research is warranted.

## **6.2 Recommendations**

### **Workplace support groups for surgical doctors operating in HIV/AIDS era.**

Surgical doctors need regular forums where they can vent and share their experiences in surgery especially in the HIV/AIDS era. These forums should start at a facility level and then have local and international forums. The example of this will be: All doctors involved in surgery in service delivery cluster (Northern part of KZN), comprising of three health districts (Umkhanyakude, Zululand and Uthungulu) will have a local forum, then the representatives of this forum can attend both national and international forums. This type of exposure will help surgical doctors operating in the HIV/AIDS era to exchange experiences and learn from one another especially because when viewing literature for this study very few studies have been conducted in South Africa on HIV/AIDS surgical management.

### **Personal coping resources (physical, emotional, psychological, social and spiritual)**

Facility / hospital management should revive the Employee Assistant Programs (EAP) and provide resources that prevent or help in stress management, for example



provision of gymnasiums within hospital settings, resource centre for information, cafeterias and chapels within the institution.

### **Supportive supervision and work environment**

In hospitals where there are no skilled or experienced doctor in HIV/AIDS surgical management specialists should frequently visit those institutions and make an effort to in-serve doctors in those areas. Monitoring and evaluation system of morbidity and mortality should be established in HIV/AIDS surgical care (intra and post-operatively) and reports should be frequently reviewed by the provincial department of health at all levels of care. This will help to identify gaps in surgical care of HIV/AIDS patients and get ways to remedy the situation.

Supportive work environment (involvement of surgical doctors in the mission of the institution, recognition of work and adequate benefits), methods of nurturing them so as to retain surgically skilled doctors should be considered so as their long working hours because quality of rendered service is compromised especially during this era of HIV/AIDS, patients need more time for assessment pre and post operatively. These pre-operative assessments should be done by both the anaesthetist and surgical doctor to determine the patient's fitness for surgery, a more experienced surgeon and a physician may be involved in severe cases. This will help to identify the actual cause of death other than anaesthetic death.

### **Strengthen Health Services to deal with HIV/AIDS surgical management**

Protective devices for HIV/AIDS during operation should be made available at all times. Enforcing measures should be implemented if there is resistance, by each institution to ensure that all doctors use these when operating. In-service education on international protective measures of HIV infection transmission should be continuously done. The incidence of needle stick injuries should continuously be monitored and evaluated quarterly by the infection control, occupational health and quality assurance officer of each institution. Post exposure prophylaxis chemotherapy should be available at all times together with counselling services.

Undergraduate training on surgical interventions in HIV/AIDS patients for both doctors and nurses should be emphasized, and should included in students curriculum.

Guiding protocols and policies should be formulated by specialists (in HIV/AIDS and surgical intervention) on how to assess an HIV/AIDS patient pre-operatively. A guide on deciding, whether the patient will survive an operation and intra and post-operative care should be developed.

Vacant doctors' and operating theatre nurses' posts need to be filled so that there will an adequate number of doctors and operating theatre nurses in each institution, thus decreasing the workload, and this will reduce work-related stress, which can result in work burnout. Staffing norms should be adhered to, at all times.

Strengthen health services with regard to availability of better and latest technology equipment, such as endoscopes to lessen unnecessary opening of HIV/AIDS patients and better surgical doctors' surgical skills in using such equipment. Improving general surgical intervention in HIV/AIDS patients could also improve the prognosis of such patients.

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## APPENDIX A

### INFORMATION DOCUMENT

#### **Study title: Understanding the Experiences of Doctors Who Undertake Elective Operations on HIV/AIDS Patients.**

Good morning doctor, I am gathering information about doctors' experiences when electively operating on HIV/AIDS patients, this will help in understanding the experiences of doctors who undertake elective operations on HIV/AIDS patients for my research project, which is a partial fulfillment of my MPH program registered with the University of Kwa-Zulu Natal (Nelson R Mandela School of Medicine).

This is a qualitative study and information will be gathered through two interviews and each interview will take about an hour. ±10 doctors will be interviewed. During these interviews questions will be asked regarding your feelings about operating on HIV/AIDS patients. Interviews will be tape recorded and these tapes will not be shared with your colleagues, they will be locked away and will be destroyed after the analysis of data. The final report, containing anonymous quotations, will be available to all at the end of the study.

We are inviting you to participate in this research study. There are no adverse effects expected after conducting the study, though the psychologist will be available if you would like counseling after the interview. All doctors who perform surgical operations at Ngwelezana, Benedictine and Lower Umfolozi hospital will be invited to participate.

Participation is voluntary refusal to participate will involve no penalty or loss of benefits to which you are entitled to, and you may discontinue participation at any time without penalty, or loss of benefits.

For further information or reporting study related adverse events you may contact -J.N.Gwala at (035) 9017099/0832801722.

Contact details of Research Ethics Committee.

Administrator and chairperson:

Cheryl Borreson

Medical Research Administration

Nelson R Mandela School of Medicine

Private Bag 7

Congella, 4013. Phone- (031) 260463 9

THANK YOU.

## **APPENDIX B**

### **Consent to Participate in Research**

Dear Doctor,

You are asked to participate in a research study-

**TITLE:** Understanding the Experiences of Doctors who Undertake Elective Operations on HIV/AIDS Patients.

You have been informed about the study by the researcher- Jacqueline N. Gwala.

If you require further information you may contact Dr Taylor at the University of Kwa-Zulu Natal at (031) 260 4499 any time if you have questions about the study.

In addition you may also contact the Medical Research Office at the Nelson R Mandela School of Medicine at (031) 260 4604 if you have questions about your rights as a research subject.

Your participation in this research is voluntary, and you will not be penalized or lose benefits if you refuse to participate or decide to stop, at any stage during the interview or study.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet which is a written summary of the research, namely:

The research study, including the above information, has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate.

**Signature of Participant**

**Date**

APPENDIX C

PERMISSION TO CONDUCT A RESEARCH STUDY/TRIAL

This must be completed and submitted to the Medical Superintendents / Hospital Manager for signature.

Once the document has been signed it should be returned to the Medical Research Administration Office, Nelson R Mandela School of Medicine so that full ethical approval can be granted.

To: Hospital Manager

PROTOCOL : Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients. J N Gwala, Community Health. Ref.: H130/04

Permission is requested to conduct the above research study at the hospital/s indicated below;

Site 1 address:

v

Investigator/s

Principal: ≤ij - No . V^^v-J-KU^

Co-investigator:

Co-Investigator:

\J

Signature/ aitaLMflnager:

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Site 2 address:

Investigator/s

Principal:\_\_\_\_\_

Co-investigator:

Co-Investigator.

Signature of Hospital Manager

Date:

NB: Hospital Manager/s to send a copy of this document to Natalia.

**PERMISSION TO CONDUCT A RESEARCH STUDY/TRIAL**

This must be completed and submitted to the Medical Superintendent/s / Hospital Manager for signature.

Once the document has been signed it should be returned to the Medical Research Administration Office, Nelson R Mandela School of Medicine so that full ethical approval can be granted.

To: Hospital Manager

**PROTOCOL: Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients, J N Gwaia, Community Health. Ref.: H130/04**

Permission is requested to conduct the above research study at the hospital/s indicated below:

Site 1 address:  
HOSPITAL  
PfeAG, aoo-su

Investigator/s:  
Principal:  
Co-investigator:  
Co-Investigator:

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Site 2 address:" \*  
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MB: Hospital tVlariager/sio **send a copy of this document to Natalia.**

## APPENDIX D

**Copy of letter sent to Dr Taylor -17 January 2005**

Dr M Taylor

Community Health

Nelson R Mandela School of Medicine

Dear Dr Taylor

**PROTOCOL : Understanding the experiences of doctors who undertake elective operations on HIV / AIDS patients. J N Gwala, Community Health. Ref.: H130/04**

The Biomedical Research Ethics Committee and the Postgraduate Education Committee considered the abovementioned application and made various recommendations. These recommendations have been addressed and the protocol was approved by consensus at a full sitting of the Biomedical Research Ethics Committee at its meeting held on 5 October 2004 pending the receipt of the Information to Participants document being translated into isiZulu and permission being received from the Hospital Managers. These documents were received on 10 October 2004.

This approval is valid for one year from 5 October 2004. To ensure continuous approval, an application for recertification should be submitted a couple of months before the expiry date.

Please accept my very sincere apologies for the delay in submitting this letter giving full approval. This was a slip by our administrator.

Yours sincerely

PROFESSOR A DHAI (signed)

Chair : Biomedical Research Ethics Committee

c.c. : Ms J N Gwala : e-mail - [ngoza@medis.co.za](mailto:ngoza@medis.co.za) Mr S Siboto, Postgraduate Education

## APPENDIX E

### THE INTERVIEW GUIDE

#### Opening Question

Please will you tell me about your experience on Electively Operating on HIV / AIDS Patients from A Disadvantaged Community you are serving?

#### Probing Questions

Depending on how the narratives unravel, the following probing questions are anticipated:

Northern Kwa-zulu Natal is said to be having high seroprevalence do you agree with this statement?

If yes, why?.....

If no, why?.....

As a result of a lack of effective surgical interventions on HIV/AIDS patients, what do you think doctors should do to succeed in operating HIV/AIDS patients?

Do you think that you have an obligation to give information and education before operating HIV/AIDS patients?

If yes,why?.....

If no,why?.....

Do you think that doctors should be able to feel their patient's pain and fear?

Before operating an HIV/AIDS patient, do you think that it is important to establish rapport with your patient?

If yes,why?.....

If no, why?.....

Do you think that the pandemic of HIV/AIDS sometimes make your work stressful?

If yes,why?.....

If no,why?.....

If your answer above is yes, how do you cope with stress?

Do you think that operated a number of HIV/AIDS patients, make you feel burnout?



## APPENDIX F

### Adults

#### **WHO clinical staging system for HIV infection and related diseases in adults (13 years or older).**

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##### **Stage 1** - Asymptomatic

- Persistent generalised lymphadenopathy

##### **Performance scale one : asymptomatic, normal activity**

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##### **Stage 2** - Weight loss > 10% of body weight

- Minor mucocutaneous manifestations (e.g. oral ulcerations, fungal nail infection)
- Herpes zoster within the last five years
- Recurrent upper respiratory tract infections (e.g. bacterial sinusitis)

##### **and / or Performance scale 2: symptomatic, normal activity**

---

##### **Stage 3** - Weight loss > 10% of body weight

- Unexplained chronic diarrhoea for more than one month
- Unexplained prolonged fever for more than one month
- Oral candidiasis (thrush)
- Oral hairy leukoplakia
- Pulmonary TB
- Severe bacterial infections (pneumonia, pyomyositis)

##### **And / or Performance scale 3: bedridden < 50% of the day during the last month**

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##### **Stage 4** - HIV wasting syndrome, as defined by CDC

- Pneumocystis carinii pneumonia
  - Toxoplasmosis of the brain
  - Cryptosporidiosis with diarrhoea, for more than one month
  - Cryptococcosis, extrapulmonary
  - Cytomegalovirus (CMV) disease of an organ other than liver, spleen, lymph nodes
  - Herpesvirus infection, mucocutaneous for more than one month, or visceral any duration
  - Progressive multifocal leukoencephalopathy (PML)
  - Any disseminated endemic fungal infection (e.g. histoplasmosis)
-

## APPENDIX G

### MATRIX DISPLAY

#### Opening Question:

Please will you tell me about your expertise on electively operating on HIV/AIDS patients from a disadvantage community you are serving?

1. Recurrent Images, metaphors tension, inconsistencies and contradictions.

- Sympathy for patients.
- HIV positive
- Helping HIV/AIDS patients.
- Needs/demands for operations.
- Decision to operate.
- Personal responsibility
- Assessment of patients
- Pre-operative assessment
- Perceptions about HIV/AIDS
- Rapport with patients pre-operatively.
- Increased workload.
- Gender
- Race
- Age
- Religion
- Nationality
- Marital status
- Years of experience
- Country trained
- Ways of coping
- Consultants
- Attitudes of doctors to HIV/AIDS
- Levels of lived stress
- Counselors for doctors
- Specialized training on HIV/AIDS

3. Incidences where the interviewee described themselves in relation to HIV/AIDS patients

- Anaesthetic difficulties
- Delayed healing
- Enhanced quality of care
- Strategies
- Challenge skills
- Coping strategies
- Diagnosis & decision for treatment
- HIV testing
- Weak HIV patients
- Chest infections & anesthesia.
- Establish rapport with HIV/AIDS patients.
- Obtaining informed consent
- Emotional reaction
- Happy to help HIV/AIDS patients by operating on them.
- Feel patients' fears and pain.
- Communication with patients
- Long working hours.

2. Sense of self that emerged from narratives.

- Humanitarian
- Obligation of "a calling"
- Concern & worry about HIV/AIDS patients.
- Develop surgical skills.
- Feel better about myself having helped HIV/AIDS patients who need operation.
- Dedication to patient welfare.
- Comfortable with career of choice
- Happy
- Sad
- Satisfaction
- Technical skills
- Professional obligation
- Career path
- Empathy
- Rewards / rewarding experience
- Work related stress
- Burn out
- Failures
- Power
- motivation

4. Emergence of broader personal structural, patient related factors. Consequences of HIV/AIDS in surgery and procedures and protocols required when operating during an HIV/AIDS procedure.

- Selection of HIV/AIDS patient for surgery
- Why selected?
- Difficulties
- Fears
- Risk of exposure
- Bill of rights (patients)
- Health service delivery
- Service requirements
- Protocols and policies.
- HIV/AIDS pandemic increased rate of opportunistic infections e.g. extrapulmonary TB
- Increased caesarian section rate from PMTCT.
- Increased demand and supply of health care.
- Increased workload.
- Work unpaid overtime
- Complications Long inpatient stay
- Long ward rounds