The quality of care for sexually transmitted infections in primary health care clinics in South Africa: an evaluation of the implementation of the syndromic management approach.

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ABSTRACT

Sexually transmitted infections (STIs) are a problem for both developed and developing countries. Sub-Saharan Africa has the highest rates in the 15-49 years old group. The discovery that these infections play a vital role in the transmission of HIV raised their profile and made their control one of the central strategies of stopping the HIV/AIDS epidemic. In response to the challenge of improving the quality of care for people infected with STIs in the public health sector, the South African Ministry of Health adopted the syndromic management approach, recommended by the World Health Organisation as suitable for resource-poor settings, for use in primary health care clinics. In addition to providing guidelines on clinical management of STIs, the syndromic approach requires health providers to counsel and educate patients about STIs, encourage patients to complete treatment even if symptoms abate, promote condom use and the treatment of all sexual partners. While the management guidelines are clear and detailed around the diagnostic and medication issues, the processes of education and counseling are not as clearly outlined. Furthermore, although the syndromic approach is a viable way of providing good quality care to larger sections of the population than could be serviced through dedicated STI clinics, it requires health providers working in primary health care clinics, most of whom are professional nurses, to perform some tasks for which they may not be adequately trained. This study evaluated the quality of care for persons infected with STIs by examining the extent to which the syndromic approach was being implemented in primary health care clinics. Interviews, using semi-structured interview schedules, were conducted with STI patients and health providers in twenty-four clinics located in four provinces. In-depth qualitative interviews were also conducted with a sub-sample of the patients. For further triangulation the methods of participant observation, through the use of simulated patients, and focus group discussions with various community groups were used. The findings of the study indicate that although primary health care clinics in South Africa are well-resourced, the management of patients with STIs is inadequate. Adherence to the various aspects of syndromic management was poor. Similar to other studies in South Africa, the attitudes of health providers towards patients with STIs were found to be problematic, a finding that has implications for health-seeking behaviours. The thesis argues that a large part of the problem is related to the multiple roles that nurses have to play in primary health care settings, as well as the content and methodology of the training of nurses who manage STI patients. It further argues for the constitution of the basic health team at primary health clinics to be multi-disciplinary, and for a multi-disciplinary input in the training of health providers.

DECLARATION

I declare that this whole thesis, except where otherwise indicated, is my own work. All sources used or quoted in the text have been acknowledged.

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CHAPTER ONE

OVERALL INTRODUCTION

INTRODUCTION

Sexually transmitted infections (STIs) are considered the most common group of notifiable infectious diseases in most countries and rank among the top five diseases for which adults in developing countries seek health care (Buve, Laga & Piot, 1993; De Schryver & Meheus, 1990; Eng & Butler, 2002). These infections are considered a major public health problem because of their serious consequences, particularly in women and children. For example, pelvic inflammatory disease (PID) can cause infertility, with 50-80% of infertility in sub-Saharan Africa being attributed to this, and ectopic pregnancies. Also, being infected with an STIs during pregnancy can result in prematurity, stillbirth and neonatal infections (Buve, Laga & Piot, 1993; De Schryver & Meheus, 1990; Judson & Wolf, 1978). However, the importance of STIs as a major health problem has increased dramatically since the discovery of a strong link between STIs and HIV/AIDS (Laga, Nzila & Goeman, 1991; Wasserheit, 1992).

South Africa is believed to have one of the highest infection rates of STIs in the world, particularly syphilis, human papillomavirus (HPV) and cervical intraepithelial neoplasia (CIN) (Leiman, 1976; Pham-Kanter, Steinberg & Ballard, 1996). Furthermore the country is now considered to have the fastest growing HIV/AIDS epidemic in the world, with reports showing that 11,4% of the population is infected with HIV (Shisana & Simbayi, 2002). Indeed, Abdool Karim (1998) reports that while extrapolations from antenatal clinics may indicate there is a rapid growth among Africans[1], rates of HIV infections are growing in all groups. A recent report from a national household survey conducted by the Human Sciences Research Council (HSRC) and other collaborators indicates that while Africans, particularly those living in informal urban settlements, have the highest rates of HIV/AIDS infections, rates in some provinces, and among the white group, are higher than previously estimated from antenatal clinic surveys (Shisana & Simbayi, 2002). Among the complex ways in which the two disease entities interact, STIs have been found to facilitate infection with HIV (Ballard, Htun, Fehler & Neilsen, 2000; Wasserheit, 1992). However, in spite of their social, economic and health costs, STIs have been largely neglected as a public health issue in South Africa.

The care and management of patients with STIs is thought to be inadequate (Coetzee & Magwaza, 1997). As a legacy of apartheid there has been and continues to be unequal access to quality and adequate medical services for the overwhelming majority of the South African population, who are predominantly African, poor and live in rural areas. Whites and, to a lesser extent, urban blacks had the privilege of receiving treatment in dedicated (or specifically designated) STI clinics that were located in urban areas. The STI problem has been further

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[1] While the author acknowledges the problematic use of these racial categories, it is sometimes still necessary to use them because, although apartheid has been abolished, the effects of that racial system are still evident in social inequities of various forms. For this study, the racial classifications of African, Coloured, Indian and White will be used. Blacks will be used to refer to the first three groups together.

worsened by the judgmental attitudes of health care workers as well as the stigma associated with seeking treatment, particularly for women (Abdool Karim, Mathews, Gutmatcher, Wilkinson & Abdool Karim, 1997). Therefore, tackling the STI health problem was essentially marginalised for a long time, primarily for social and cultural reasons.

Following the first democratic elections in 1994 and the subsequent change of government, there has been a move towards more equitable distribution of resources and medical services for all sections of the South African population. The new government inherited a system of government that was racially unequal in both quantity and quality. The first Minister of Health in the new government articulated the task of her ministry as that of 'developing a unified system capable of delivering quality health care to all citizens efficiently and in a caring environment' (Republic of South Africa, 1997, p. 5). The vehicle for doing this was identified as the primary health care approach. In line with the adoption of the primary health care approach, as from 1996 management of STIs has also shifted from the vertical delivery system of dedicated STI clinics to a horizontal service provision through integration into primary health care clinics, as recommended by the World Health Organisation (WHO) (WHO/UNAIDS, undated). In addition, the syndromic management approach was adopted to replace the previous clinical approach that was based on aetiological diagnosis and treatment.

The commitment of the new government to making HIV and STIs a priority is clearly reflected in its multi-sectoral strategic plan which is based on WHO principles and policies (Department of Health, 2000; WHO/UNAIDS, undated). The principal goal of the plan is to reduce the transmission of STIs (including HIV infection) and provide appropriate treatment, care and support for those infected and affected, through collaborative efforts within all levels of government and outside of government.

In spite of all these policy initiatives in the health sphere, particularly with respect to STIs, it appears that little has changed with regard to improving the delivery of STI services. Since the syndromic approach was only implemented in 1996, it is too early at this stage to thoroughly assess its impact on STI and HIV prevention and control in South Africa. Instead there is a need to investigate related issues that influence the effectiveness of the approach, such as its implementation and the quality of care at primary health care (PHC) centres, since these will obviously impact on the success or failure of the management strategy. For example, findings by Mathews, Magwaza, Coetzee, Karpakis and Grimwood (1998) suggest that the effectiveness of the syndromic approach is undermined in South Africa by patient misunderstandings about STI transmission and treatment, and by patients' difficulties in persuading partners to visit clinics and to use condoms. Therefore, an optimal environment for the successful implementation of the syndromic case management approach for STIs at primary health care settings will only be attained once hindrances that interfere with both the public's and STI patients' health seeking behaviour are removed.

Professional nurses, who constitute the highest number of health professionals in the country, are at the forefront of service delivery in PHC clinics (Denill, 1999). As the primary health providers, nurses have found themselves having to perform, more and more, roles that fell in the scope of practice of other professionals. There are continuing efforts to achieve a more equitable distribution of other health professionals to all communities, in line with the World Bank recommendation for the use of more effective policies in financing training, such as national service mechanisms (World Development Report, 1993). Most of these, such as the proposal to implement a two-year internship for medical doctors and introduce mandatory community service for newly qualified health professionals, have met with resistance from different sectors.

Despite the controversies, the government's commitment to affording all sectors of society good quality health care is manifested in progressive legislation aiming to formalize mandatory community service. In line with this trend, the Health Professions Council of South Africa (HPCSA), through the Professional Board for Psychology, approved the training of psychological counsellors, a lower level qualification attained after completion of a four year degree and a six-month internship at a community setting. Guidelines for the education and training of this level of provider were developed and, at the writing of this thesis, were awaiting the approval of the Minister of Health (HPCSA, 2003). Although the developments in psychology are continuing and a number of issues relating to the scope of practice and employment opportunities for this new category of psychological service providers still need to be finalized, a few universities have started training this category of service provider. The implication for STI services is that PHCs may soon have the services of psychological counsellors who have the skills to deal with the psychosocial aspects of STI infections and management. However, this will require more investment in developing the infrastructure for such service delivery to occur. There is also a need for ongoing evaluation to identify gaps that impact on the quality of health care provided in public health settings.

AIM OF THE STUDY

The aim of this study is to investigate the quality of care for persons with sexually transmitted infections in South African PHCs. For the purpose of this study, quality of care is defined as the degree to which the actual care of patients resembles the standards adopted by the programme, which in this case is the syndromic management approach. Thus, quality of care will be assessed by looking at the implementation of the syndromic approach in PHCs.

STRUCTURE OF THE THESIS

Chapter Two will provide background information, beginning with problem definition. This will include both historical factors about STIs as well as the epidemiology of the infections in developed and developing countries. In addition, a brief discussion of socio-economic correlates of STIs will be offered. The second section will discuss theoretical understandings underpinning the management of STIs, beginning with a brief critical overview of the biomedical model that has largely informed responses to the STI epidemic.

Chapter Three will present a review of the management of STIs in the public health sector. After a brief look at the vertical and horizontal models of service delivery, a discussion of the evolution of public health policy in South Africa, together with the racial differences in both quantity and quality of service will follow. The next section will present an overview of the syndromic approach, in which the different dimensions will be discussed, together with pertinent issues deriving from international and local studies. The last section will focus on the concept of quality of care for STIs, looking at structural issues as well as the process and outcomes aspects of quality.

Chapter Four will describe the methodology used in the collection and analysis of data for the study. The first section will describe the process of triangulation, in which quantitative and qualitative methods were used to gather data from multiple sources, including health providers, patients and community members as potential consumers of the service being assessed. The second part will be a description of the research sites, participants as well as the different instruments used with each group. The last part will describe the analysis of both quantitative and qualitative data and the chapter will end with a presentation of the ethical concerns addressed.

Chapter Five will present the quantitative findings, beginning with structural provisioning and proceeding to process and outcomes of health care-giving for patients with STIs. The next section will focus on the process of care-giving, including diagnostic and treatment findings. The last section will look at overall quality of care, measured through computed composite scores derived from health providers, STI and simulated patient reports.

Chapter Six will present a discussion of the findings, drawing on the qualitative data from depth interviews with STI patients, focus groups and field notes kept by the simulated patients. The first part will focus on structural issues and this will be followed by a discussion of findings on the actual process of care-giving. The last part will involve a discussion of overall quality of care, including health provider and patients' perceptions of quality of care.

The concluding chapter will provide reflections on some issues presented in the thesis and methodological problems related to the study. Following a brief summary of the study, broad issues deriving from the study will be discussed, including thoughts on the mode of service provision, structuring of primary health care clinics as well as implications related to health provider training. The chapter will end with some critical thoughts on the methodology used in the project.

CHAPTER TWO

PROBLEM DESCRIPTION

INTRODUCTION

The aim of this chapter is to provide background information that will shed light on the problem of sexually transmitted infections (STIs), including some of the important issues that make control of these infections difficult. The first section consists of problem definition and will include some historical facts about the group of illnesses called STIs that will partly show the genesis of the stigma attached to them. The next section will provide an overview of the problem, starting with prevalence patterns in developed and developing countries, as well as differences between and within countries along socio-economic lines, and go on to give a brief discussion of their consequences. The last section will discuss, briefly, the biomedical model within which the management of STIs has been located before presenting the biopsychosocial model of illness and health, which is seen as a holistic way of understanding and managing STIs.

THE PROBLEM OF STIs

Sexually transmitted infections are a group of bacterial and viral infections, together with the clinical syndromes that they cause, that are transmitted through sexual activities. STIs have occurred as long as human beings have been in existence, with evidence for this found in various cultural settings. While there is no consistent name for them, most ancient writings allude to the existence of STIs as a common health problem. For example, Egyptian papyri dating to about 1550 B.C. allude to genital disease that 'causes stricture in the flesh [genitalia] of a man or a woman' (in Waugh, 1990, p. 3) and certain old testament passages, such as the plague of Egypt described in Exodus 11:1, are regarded as references to syphilis. Greek and Roman writings also make several references to genital diseases that manifested with ulcers and purulent genital discharges, which were assumed to afflict those who had violated the shrine of Venus-Urania (Waugh, 1990).

Until 1976 this group of infections was commonly called venereal diseases (VD). Towards the end of the sixties new developments in the public health sector, the identification of new strains of causative organisms and the increasing involvement of health professionals from sectors other than the traditional dermato-venereal field of medicine, led to the renaming of these infections as Sexually Transmitted Diseases (STDs). The term VDs was seen as being morally judgemental and not in keeping with the spirit of progressive public health approaches. More recently the name was changed to sexually transmitted infections (STIs), since the word disease was felt to be a misnomer in the face of the multiple asymptomatic infections that were being identified. Furthermore, there was a need to understand such infections within the broader context of reproductive tract infections, whether they are transmitted sexually or not. The term STIs is more able to accommodate the various fields of medicine that deal with these infections, including dermatologists who work with skin eruptions due to syphilis, gynaecologists who work with women suffering from PID, etc. This move towards a changed conceptualisation and understanding was accepted and endorsed by the WHO, which recommends the utilisation of STIs in the place of STDs (WHO, 2002). However, the two are still used interchangeably in the literature, although STIs will be used in this document.

The term encompasses a large and growing number of infections that can be categorised as curable and incurable. Gonorrhoea, chlamydia, syphilis, chancroid and trichomoniaisis, often referred to as the classical STIs, are ranked among the most common curable infections in the world (WHO, 1998). Advances in diagnostic technology have led to the identification of causative organisms for infections which have a long history but for which the aetiological agents were unknown, such as those resulting in non-gonococcal urethritis (NGU) in women, as well as identifying emerging strains of bacteria and viruses and the syndromes they produce.

The most common of the newly identified viruses, the human papilloma virus (HPV), has over 80 strains. Some of these have been linked to the development of genital warts and lesions not visible to the naked eye. Several others have been strongly implicated in the development of over 90% of cervical cancer, as well as neoplasia and dysplasia. Another virus, the Human T-cell lymphotropic virus (HTLV), which is transmitted both sexually and perinatally, is related to HIV and causes a type of leukaemia as well as a neurological syndrome that results in paralysis. A few other pathogens have been identified which have not yet been linked to specific diseases, such as the Mycoplasma genitalium, which is strongly suspected of causing some cases of non-gonococcal infections and pelvic inflammatory disease (PID), and Mobilluncus, which is linked to vaginosis – the most common cause of vaginal discharge (Dallabetta, Field, Laga & Islam, 2002; De Schryver & Maheus, 1990; University of Washington Department of Health Services, 1998).

Together with the emergence of drug-resistant strains of gonorrhoea and chancroid, the identification of an increasing number of incurable but preventable new viruses in addition to the deadly HIV, herpes simplex and hepatitis B, has made the control of STIs more difficult and expensive, thus impacting negatively on treatment especially in developing countries (Dallabetta *et al.*, 2002).

Scope of the problem

Obtaining an accurate epidemiological picture of STIs is made difficult by a number of factors. Not all STIs are reportable or notifiable diseases, and even where they are, there is rarely accurate and/or complete reporting. The latter is particularly true of developing countries in which methods of reporting may be compromised by structural deficits in the diagnosis and management of these infections, as well as the selection of samples for measuring prevalence of specific STIs (Adler, 1996; Aral & Holmes, 1990; De Schryver & Maheus, 1990; Orroth, Korenromp, White, Changalucha, Vlas, Gray *et al.*, 2003). The issues around sample selection are particularly important considering that most of the prevalence data from developing countries comes from studies conducted on those attending STI clinics and high-risk groups like sex-workers and long-distance truck drivers (Adler, 1996), and the findings then extrapolated to the general population. The lack of representivity in these studies is evident in findings of high rates of gonorrhoea, trichomatis and chlamydia among pregnant women, often not regarded as a high-risk group, in many settings in sub-Saharan Africa (Buve, Laga & Goeman, 1991; De Schryver & Maheus, 1990). Further difficulties arise from variations in the descriptive characteristics of different STIs, such as time, place and person that may cause confusion and/or influence the outcome of analyses undertaken (Rothenberg, 1990). For example gonorrhoea, a disease of high incidence and short duration (thus low prevalence) is a transient characteristic and any study of the disease needs to distinguish between those who are infected presently, those who were infected in the past and those at high risk for infection in the future, since this may have implications for sexual behaviour studies or interventions. Furthermore, because infection with gonorrhoea does not produce immunity, there may be repeated infections in some people, thus producing problems where one is counting cases (Rothenberg, 1990). Despite the above-mentioned issues around methods of reporting and their implications, STIs are acknowledged as a global problem and have reached epidemic levels in various settings.

Epidemiology of STIs

According to the WHO (1996) approximately 333 million episodes of STIs occur annually around the world, with the highest rates among 15 to 49 year olds occurring in sub-Saharan Africa (11-35%), Latin America and the Caribbean (7-14%), and South Asia (9-17%). North Africa, the Middle East, Eastern Europe and Central Asia have rates ranging between 3 and 8%, while Western Europe, Southeast Asia and Northern America have lower recorded rates of between 1 and 4% (Dallabetta *et al.,* 2002). Trichomoniasis has the highest incidence rates at 170 million followed by chlamydial infection, gonorrhoea and syphilis at 89, 62 and 12 million new cases, respectively, per annum.

Despite advances in diagnostic and treatment technologies, the management and control of STIs has remained a major public health problem for both developed and developing societies. Most developed countries have, in general, experienced fluctuations in reported rates of STIs, with higher rates being evident during periods of social turbulence and/or transformation when sexual behaviour patterns are affected, as can be seen in increased rates of gonorrhoea and syphilis during World War II in the United Kingdom (UK), United States (US), Denmark and Sweden (DeSchryver & Maheus, 1990). Following these peaks most of these countries have maintained low rates of STIs since the 1950s, with a few variations in the occurrence of particular syndromes and varied successes in the control of viral STIs. The UK, for example, saw significant declines up to the 1970s but experienced growth in incidences of gonorrhoea and syphilis in the 1970s, with the trends being reversed during the 1980s. However, there is evidence of a resurgence in rates of gonorrhoea in some developed countries from the mid- to late-1990s, which Green, Anis, Gandacu and Grotto (2003) suggest is a trend that can be partly explained through psychosocial and behavioural determinants of STIs and partly through the behaviour of the organism itself.

Furthermore, it is difficult to present an accurate epidemiological picture of STIs in developed countries because of variable occurrences of the different disease entities. Thus, while the incidence of trichomoniasis is more difficult to estimate, a steady growth since 1966 has made non-gonococcal urethritis (NGU) three times and four times more common in men and women, respectively, than gonorrhoea in the UK (De Schryver & Maheus, 1990). These authors suggest that this may be due to improved diagnostic procedures. Rates of genital herpes, a viral infection, have been declining steadily since a 1985 peak, possibly as a result of the availability of acyclovir, a drug that prevents recurrence of the disease. However, human papillomavirus (HPV) infections increased about nine times in the UK between 1970 and 1988, making them the second most commonly reported STI, while in the US they constitute the most common viral STI with an estimated cumulative prevalence of 75% (De Schryver & Maheus, 1990; Lachman, 1999).

A complex epidemiological picture emerges when one examines closely the data from most of the industrialised world, particularly those whose populations are characterised by cultural, ethnic and socio-economic diversity, with STIs remaining a major problem among marginal groups. Race, age and socio-economic factors define boundaries for the epidemic. Australia, for example, generally has low rates of syphilis and gonorrhoea but more than 75% of them occur among rural aboriginal people who comprise only 2% of the population (Hart, Adler, Stapinski, Mroczkowski & Wiesner, 1990). A similar but more complex picture emerges from the US, which has more levels of social stratification than most other developed countries. Although the US has the highest rates of curable STIs in the developed world, even higher than some developing countries (Eng & Butler, 2002), Aral and Holmes (1990) argue that the US has experienced both a relative and an absolute growth in rates of STI.

Whereas STIs constituted five of the top ten most frequently reported infections in the US in 1995, these occurred mostly among minority groups and young people across racial groups (University of Washington, 2002). Despite significant declines among some groups, rates of syphilis and gonorrhoea have remained stable and even increased among urban, poor and minority populations, particularly female adolescents. High rates of STIs have also been consistently found among African-American women, who also have the fastest growing rates of HIV infections (Lachman, 1999). These complex patterns of disease occurrence suggest that well-resourced social groups have better control, either through personal factors, such as the ability to implement the required behavioural changes; or structural factors like access to good quality health care.

STIs in developing countries

While the industrialized countries have experienced relative declines in rates of bacterial STIs, developing countries continue to experience epidemic levels of STIs, with these infections ranking among the top five diseases for which adults in these settings seek health care (Buve, Laga & Piot, 1993). Africa, in particular the sub-Saharan region, carries the biggest burden of both HIV and STIs other than HIV. While estimates of incidence rates vary from 100 to 300 for gonorrhoea and 10 to 300 for syphilis in Latin America, the incidence of gonorrhoea in Africa is estimated to be between 3000 to 10 000 per 100 000 population. In sub-Saharan Africa, STIs account for more than 10% of adults who present at health centres. Mason, Gwanzura, Latif and Marowa (1990), for example, found one or more pathogens of STIs in 90% of patients presenting at a genito-urinary clinic in Harare. Other studies from various parts of Africa suggest that STI rates among pregnant women attending antenatal clinics range between 2-5% and 15% for gonorrhoea and chlamydia, and between 1 and 15-20% for syphilis (Buve, Laga & Piot, 1993; De Schryver & Maheus, 1990).

Gonorrhoea remains the most common infection among patients presenting with acute urethritis in southern Africa, with the problem being complicated by the growing presentation of gonococcal strains that are resistant to traditional antibiotics. O'Farrell, Hoosen, Kharsany and Van Den Ende (1989), for example, indicate that there has been an 87% increase in penicillinase producing N. gonorrhoea as well as growth of tetracycline resistant Haemophilus ducreyi. In addition, up to 20% of all cases of gonorrhoea are also infected with chlamydia, one of the leading causes of NGU. According to Ballard *et al.* (2000) the coexistence of two or more causes for vaginitis is the rule rather than the exception in southern Africa, and discharges due to trichomoniasis may mask more serious and sinister infections. While most African countries are confronted by this epidemic, there are regional variations in predominant causal agents.

South Africa is believed to have one of the highest rates of STIs in the world. Although no national surveillance has been conducted to determine the prevalence of these infections, the Inter-Ministerial Committee on AIDS (IMC) indicates that approximately 11 million episodes of STIs are treated annually, with about 5 million of the patients being treated by private practitioners (Department of Health, 2000). An unpublished study (1996, cited in Harrison, Wilkinson & Abdool-Karim, undated) conducted in several antenatal clinics in KwaZulu-Natal found that more than 50% of the women attending were infected with at least one STI. High rates of genital ulcer disease have been found in many mining communities and about 25% of family planning services clients are reported to test positive for syphilis (Ballard, 1998; Klugman, Patel, Sischy & McIntyre, 1991).

In addition, there are regional variations in patterns of causation, with Swaziland, Kwa-Zulu Natal (KZN) and the Eastern Cape having more lymphogranuloma venereum (LGV) infections than the Gauteng and Western Cape provinces, and Mpumalanga and KZN seeing more cases of donovanosis than other areas in the subcontinent (Ballard *et al.*, 2000). The implications of regional variations and the complex presentations of STIs are immense when one considers intra- and inter-country migration patterns, which are crucial vectors in the spread, treatment and control of the disease.

Social factors associated with STIs

There are numerous factors influencing the transmission and spread of STIs. Sweat and Denison (1995) outline four levels of causation for HIV incidence, a framework that can easily be extended to other STIs too: first is the superstructural level of macrosocial and political arrangements (e.g. economic underdevelopment, poverty and sexism); second is the structural level of laws and policies (e.g. unregulated commercial sex and lack of human rights laws); third is the environmental level of individual living conditions, resources and opportunities (e.g. health services, mining compounds, migrant labour, urbanisation and few condoms) and fourth is the individual level of how the environment is experienced and acted upon by individuals (e.g. lack of knowledge, low risk perception and perceived self-efficacy).

The impact of the multiple socio-cultural, economic and political factors that are linked to the STI epidemic differ from setting to setting, in line with social dynamics in each place. Race and socio-economic status, for example, appear to be salient variables in the US, while for both Russia and China the epidemic was linked to the end of the Cold War and the opening-up of their borders. In the latter countries this was attributed to declines in public health facilities, declining economies that contribute to an increase in prostitution and increased internal migration, among other things (University of Washington, 1998). Similarly, a number of psychosocial and political factors are linked to the STI epidemic in sub-Saharan Africa. Some of the common social correlates of STIs include gender inequality, particularly women's lack of bargaining power in negotiating safer sexual practices, poverty, prostitution, migration and urbanization. Setel (1999) also indicates that the historical determinants of the problem in Africa are inextricably tied to the colonial legacy and post-colonial political economies in the continent. While there are inter-country variations, some of the common themes identified for sub-Saharan Africa include social and cultural change, racism, gender, labour migration and political instability.

A crucial aspect of South Africa's colonial and racist past is the migrant labour system, which saw massive movements of men, mostly young able-bodied ones, from rural to urban areas in search of work. Jochelson (1999) indicates that the loss of male partners and financial support for rural women contributed to increased rates of STIs as women often have to resort to commercial sex work in order to maintain themselves and their off-spring. Abdool Karim (1998) and Laga, Nzila and Goeman (1991) add that rapid urbanisation results in a concentration of young, sexually active individuals in the cities and that, because men outnumber women, these males tend to be serviced by a small core group of sex workers. The migrant labour system in South Africa is also hypothesised to have resulted in the loosening of personal and community constraints, with the result that norms that govern sexual behaviours were weakened (Evian, 1993). With rural areas continuing to be underdeveloped and to experience high levels of poverty, the migration from rural to urban areas has not been reversed in post-apartheid South Africa. In the current context of poor economic growth and high unemployment rates, migration to urban areas contributes to socio-economic conditions that give rise to high STI rates, such as the exchange of sex for payment in money or in kind, increased poverty in urban townships and poor access to good quality health care.

Another socio-cultural variable that has been recognised internationally as contributing to the problem is the powerlessness of women in society. The literature suggests that gender inequality impacts negatively on women's ability to negotiate safe sex practices, such as using condoms, within heterosexual relationships (Adler, 1996; Shefer, Strebel & Foster, 2000; Strebel, 1993; Willig, 1997). A number of studies have also highlighted the impact of gender violence and coercive sexual practices in the spread of STIs, which limits women's abilities to negotiate safer sex with their male partners (Fullilove, Fullilove, Haynes & Gross, 1990; Mkhonza, 1998). This is reflected in women bearing the biggest burden of STIs. 1987 figures show, for example, that American women under 16 years of age accounted for 60% of all cases of gonorrhoea in this age cohort

(De Schryver & Maheus, 1990). Similarly, a 1993 World Bank estimate indicated that STIs were the second highest cause of healthy life lost in women aged 15 - 44 years in sub-Saharan Africa (Adler, 1996).

However, the oft-cited gender divide is not as simple or linear as suggested above, with race and socio-economic status impacting on this. For example, while overall rates of STIs decreased among men who have sex with men (MSM) following the early discovery of high HIV rates in this group, black MSM in the US continue to have high rates of syphilis (De Schryver & Maheus, 1990; Lachman, 1999) and in the UK higher rates of HPV have been found in males than in women (DeSchryver & Maheus, 1990). In addition, Redfern and Hutchinson (1994) found that women who had repeated episodes of STIs had various other reasons for not practising safer sex in addition to powerlessness, such as idealizing their relationships/encounters with men and trusting their male partners 'long after it was rational to do so' (p.431). Thus, gendered explanations of STIs are complex and require more exploration, during one-on-one consultations with health providers, than can be addressed by public education campaigns and knowledge.

Other groups have been identified by WHO/UNAIDS (undated) as being vulnerable to STIs. These include young people, especially when out of school and not employed, with data indicating that teenagers and young adults constitute the bulk of those infected with STIs, including HIV/AIDS. Dallabetta and colleagues (2002) suggest that this is due to a combination of factors such as sexual networking, socio-economic factors that influence their ability to implement safer sex behaviours and an earlier sexual debut that increases the chances for exposure to STIs because of the longer period of sexual activity (Dallabetta *et al.*, 2002). Other particularly vulnerable groups include commercial sex-workers (CSW), whose dependence on clients diminishes their bargaining power, and prisoners, who are often subjected to coercive sexual intercourse.

A number of studies have indeed found high rates of STIs among CSWs (Ward & Day, 1991), thus making them an important vector since they have sexual contact with a number of clients. In their study on HIV prevalence, low condom use and gender differences in sexual behaviour among STI patients in a Nairobi primary health care clinic, Ndinya-Achola, Ghee, Kihara *et al.* (1997) found that in 26% of married men living with a spouse and 60% not living with one, the last sexual contact was with a CSW or a casual partner. Moses, Muia, Ngugi *et al.* (1994) thus suggest that CSWs play a role in the epidemic in that they serve as a conduit of STIs between the men who use their services and the general public. Sex-workers' vulnerability is increased by the stigma attached to their work, the judgemental and moralising attitudes they often encounter within the health sector as well as legal constraints, particularly in developing countries where prostitution is illegal (Plummer & Ngugi, 1990).

The relationship between STIs & HIV/AIDS

Despite the well-known and documented social, economic and health costs of STIs, they have been largely neglected as a public health issue in both developed and developing countries (Yankauer, 1994). The discovery that both ulcerative and nonulcerative classical STIs interact in complex and intriguing ways with HIV, raised the profile of STIs as a public health issue (Laga, Nzila & Goeman, 1991; Wasserheit, 1992). Wasserheit in fact suggests that this complex interrelationship may partly explain the varying presentations of the HIV epidemic around the world, and highlights a number of methodological issues that make it almost impossible to describe precisely the nature of the relationship between the two. Analytic studies are hampered by the fact that HIV itself is an STI, and both have a common mode of transmission, common human reservoirs and common behavioural risk factors (Ballard *et al.*, 2000; James, Gillies & Bignell, 1991; Wasserheit, 1992). Thus, unless studies control for sexual behaviour it will be impossible to establish whether STIs are an independent biological risk factor for HIV and/or a surrogate factor.

Further complications arise from the frequency of multiple co-infections in persons infected with an STI. Since both STIs and the persons who acquire them are diverse, it is unlikely that the relationship between specific STIs and HIV is uniform. In addition, the potential impact of HIV on other STIs makes it difficult to determine without temporal sequencing whether in fact STIs facilitate HIV transmission or merely act as markers for it. Also, detection bias may occur where HIV infection makes STIs more prominent or more identifiable in laboratory testing (Ballard *et al.*, 2000). Despite these methodological issues, there is consensus that the two do interact in significant ways, so that Ballard and colleagues (2000) argue that, in sub-Saharan Africa, it is very unlikely that the first STI one acquires will be HIV and more likely to be one of the asymptomatic infections commonly found in the subcontinent. Higher rates of HIV infections have been found among STI clinic attendees than in the general public. For example, while rates of seropositivity were 22% among antenatal clinic attendees, a rate of 52% was found among patients attending STI clinics in the Gauteng region (Ballard *et al.*, 2000).

Initial reports on the interaction of STIs and HIV tended to focus on the role that curable STIs played by providing entry for the virus. More recent research has found that the two infections have a reciprocal effect on each other. HIV may alter the patterns of STIs, such as have been noted in atypical presentations of both primary and secondary syphilis, as well as contribute to the relative frequency of complications and responses to standard STI treatments, particularly where single-dose treatments are administered. Furthermore, there is evidence of increased progression of HPV to dysplasia and neoplasia in HIV positive women (Ballard *et al.*, 2000; Laga *et al.,* 1991; Wasserheit, 1992).

STIs themselves have an influence on transmission of HIV. Ballard *et al* (2000) suggest a number of factors are implicated in this. Firstly, they argue that the behavioural factors that put one at risk for STIs are the same ones that increase the risk for HIV infection, so that poor, single, mobile persons who abuse alcohol or other habit-forming substances and/or who earn a living through sex work or have frequent intercourse with sex workers are at higher risk. Secondly, ulcerative genital sores increase chances of being infected with HIV. They argue that under normal circumstances HIV has a low transmissibility rate (1% for heterosexual intercourse compared to 80% for gonorrhoea, 50% for chlamydia and 10% for rectal sex in gay men). Genital ulceration compromises the effective barrier to HIV infection provided by a healthy vaginal wall and skin of the penis. In fact having a lifetime history of STIs was found to be significantly associated with a risk of seropositivity (Lachman, 1999)

Statistics indicate that HIV infections in South Africa have increased at a rate of 33,8% since 1997, with AIDS estimated to kill at least 20-30% of the economically active population in South Africa (Department of Health, 1999; Matchaba, 1999). The recent population-based survey by the HSRC in fact revealed that estimations based on data from antenatal clinics underestimated HIV prevalence in some provinces and among certain groups (Shisana & Simbayi, 2002). The country is considered to have the fastest growing epidemic and biggest number of people living with HIV/AIDS in the world. Ballard and others (2000) argue that controlling STIs is probably the most important means of controlling the AIDS epidemic, through the reduction of HIV transmission. The government strategic plan thus identifies and prioritises early detection and effective treatment of curable STIs as a major, explicit component of the comprehensive HIV prevention programme in South Africa (Department of Health, 2000).

There is now a growing recognition that the traditional conceptualization of STIs in purely bio-medical terms has failed to control these infections, even in contexts where the resources for this are available. Responses to the epidemic thus need to be broadened to include all sectors of society. At policy level, South Africa's strategic plan (Department of Health, 2000) was the result of collaboration between different ministries and other non-governmental bodies involved in different aspects of HIV/AIDS control and management. The plan reflects a more systemic approach and requires both professionals and policy makers to look beyond the narrow biomedical focus and acknowledge the impact of the socio-cultural context in which they occur.

THEORETICAL APPROACHES TO THE MANAGEMENT OF STIs

Biomedical approach

One of the factors that make control and management of STIs difficult is that interventions have tended to focus on the biological and to ignore the social and behavioural aspects of the diseases. This manner of understanding and managing STIs is rooted in the biomedical model, which is characterised by Taylor (1995) as essentially a single-factor model that views disease and illness as originating solely from biological factors. In reducing illness to what Taylor describes as low-level processes, such as cell or chemical imbalances, the model excludes the social, psychological and behavioural dimensions of illness. In addition to biological reductionism, another feature of the model is a belief in the separateness of body and mind (Engel, 2002). Both these aspects of the model can be traced to historical factors that shaped the development of medicine.

The roots of the biomedical model can be found in early writings about physiology, disease processes and the mind dating back as far as 500 to 300 BC (Sarafino, 2002). Although Greek philosophers, especially Plato, were the first to propose the body-mind dualism, this was reinforced by positivist analytic science that required entities under investigation to be reduced to isolated/isolable causal units. The underlying assumption was that the whole could be understood by reconstituting its parts (Engel, 2002). The scientific approach to disease thus began by focusing, in a fractional-analytic way, on the biological processes and excluding psychosocial and behavioural aspects. According to Taylor (1995) the major advances made in the 19th and 20th century in the technical basis of medicine resulted in physicians looking more and more to the laboratory and less to the mind for understanding disease processes.

The model has been criticized for viewing the human body as a machine and for failing to consider seriously the psychological and social processes involved in both illness and health. McDonald (1992) argues that the biomedical model views health and illness from an engineering perspective, with diseases being seen as 'something objective, somehow *in* the individual or in the community, but separable from them' (p.30) which can only be fixed by the mechanic/doctor. The inappropriateness and insufficiency of the medical model is amply demonstrated by the failure to decrease infectious and endogenous diseases such as malnutrition, typhus and malaria in developing countries as well as its failure to control the global epidemic of STIs.

However, despite certain inherent weaknesses, biomedicine has made significant contributions in identifying and developing drug treatments against various causative organisms. Engel (2002) describes the application of scientific methods in the elucidation and classification of disease, in the generic sense, into discrete entities as one of the strengths of biomedicine. While there has been criticism of the inordinate amount of resources directed at biomedical research in the field of STIs, Rogers (2002) argues that the pragmatic usefulness of biomedicine is undeniable. What is problematic is the way in which its knowledge base assumes a position of superiority and of having the status of 'fact'. Within the current context, where science has solved many human problems, STIs should be easy to prevent and control, particularly as they derive from the performance or non-performance of safe sexual behaviours (Baker, Morrison, Carter & Verdon, 1996).

As aptly articulated by Baker and colleagues (1996), infection with an STI results from engaging in specific volitional behaviours, and risk reduction occurs through a slight modification of these behaviours, namely using a condom. Despite widespread knowledge of this, and increased availability of condoms, STIs continue to be a problem. Darrow and Siegel (1990) suggest that one of the reasons for this failure is that these infections occur within intra- and interpersonal spaces, as well as relationships that are constructed within particular social discourses of sex and sexuality. Psychological factors are intimately linked to STIs in both an immediate sense, such as in decisions to engage in safe or unsafe sexual practices, as well as a more distant sense, as in a personality style or attitude to sex and sexuality that will affect one's chances of getting an STI (Ross, 1990).

It has been suggested that the main reasons that STIs remain a big problem are primarily behavioural in nature, including the behaviours of persons who contract and transmit the infection, and those of health workers who manage the patients (Parra, Drotman, Siegel, Esteves & Baker, 1990). There is growing consensus about the need to re-conceptualise STIs in a manner that accommodates the psychosocial and behavioural correlates of STIs. The challenge has been taken up by both the psychology and sociology disciplines, with the former emphasising the role of psychological variables and the latter focusing on social factors such as gender, race and social class. One of the earliest models to come from these developments is the biopsychosocial model.

The Biopsychosocial model

As indicated in the previous section, the major criticism of the biomedical model came from its failure to recognise the role of social and psychological factors in issues of illness and health. The growing recognition of the behavioural and social coordinates of the STI epidemic suggests that sexual behaviour, both risky and non-risky, cannot be fully understood outside the social context in which it occurs. A variety of psychosocial factors, from large-scale cultural, historical and socio-economic factors to person-variables like perception of risk and intimate relations between two people, have been shown to influence sexual decision-making and behaviour (James *et al.,* 1991; Willig, 1997). In response to demands for a more socially-useful application of psychological theories, a number of constructs and models were developed or modified for specific application to health and illness-related issues. The systemic orientation of the biopsychosocial approach allows for a more holistic view of the person and argues for an analysis of both microlevel and macrolevel processes (Ogden, 2000).

The biopsychosocial approach is commonly associated with Engel, an American psychiatrist who developed it in response to the crisis faced by psychiatry as a field of medicine in the 1970s and presented it as a new model for understanding illness and health (Marks, 2002). The underlying systems approach challenged the body-mind dualism of biomedicine and acknowledged the complexity of human behaviour. The inclusion of psychological and social factors conceptualises the individual as a whole system located within larger systems (Sarafino, 2002). Thus, in addition to a recognition that problems in one part of the body affect the whole person, there is acknowledgement of the importance of psychological factors, such as beliefs and cognitions, and the social factors that shape these factors.

The major contributions to health psychology and to biopsychosocial formulations come from cognitive psychology, behavioural and social learning theories. These fields have yielded a number of constructs and theoretical models. Most of the work has focused on the role of cognitions and beliefs in understanding and managing varied health issues. Both have been shown to be important determinants of illness and health behaviours (Allen, 1996; Beaman & Strader, 1989; Weinstein, 1984; Wilson, Jacard, Levinson, Minkoff & Endias, 1996). In their investigation of the link between sexual risk behaviour and psychological distress, self-esteem and sexual risk cognitions, for example, Beck, McNally and Petrak (2003) found that in their sample of MSM, those who practised riskier sex were more likely to meet criteria for depression. They suggest that depression may contribute to a reduced ability to negotiate safer sex or initiate harm-reducing behaviours or subjects engaging in unsafe sex as a form of self-harming behaviour. They also identified a number of erroneous cognitions, such as uncontrollability of risk, that were linked to increased sexual risk behaviours.

Psychological constructs and theories

Attribution theory, which argued that people tend to make explanations of and perceptions about the cause of particularly events because of a need to see their social world as predictable and controllable, provided some of the earliest inputs towards understanding health and illness behaviour (Craighead, Kazdin & Mahoney, 1976). The original formulations have been extended through descriptions of various dimensions of the process of making attributions that have since been refined to internal vs external, stable vs unstable, controllable vs uncontrollable and global vs specific attributions (Ogden, 2000). The construct of health locus of control, which focuses on individuals' differing perceptions of events as controllable or outside their control is one derivative of attribution theory that has been shown to be related to behaviour change as well as to the type of communications individuals require from health professionals (Ogden, 2000; Wallston & Wallston, 1982).

Weinstein (1984) focused on the role of faulty cognitions and beliefs in the production of inaccurate perceptions of risk and susceptibility, which he called unrealistic optimism. He identified these as lack of personal experience with the problem; a belief that the problem is preventable; a belief that if the problem has not yet happened then it will not appear in the future; and a belief that the problem is infrequent. Wilson *et al.* (1996) investigated the effect of perceived susceptibility to STI/HIV as a mediator between testing for these diseases and behaviour change. Their findings indicated that these function differently between groups and for the two infections. They concluded that perceptions about STIs were resilient and that beliefs, as proposed in the health belief model, were important and interventions should aim at increasing perceived vulnerability to STIs and HIV.

In addition to the use of individual constructs, a number of other formulations and constructs have been combined in the development of different models, such as the Health Belief Model (HBM), the Theory of Reasoned Action (TRA) as well as Prochaska and Di Clemente's (1982) stages of change model, among others. Ogden (2000) divides these into cognition and social cognition models.

Cognition models, such as the health belief and protection motivation (PMT) models emphasize the role of rational thought in health decision-making. The HBM, initially developed by Rosenstock (1966, cited in Ogden, 2000), suggests that behaviour is the result of a set of core beliefs which have developed over years, including one's belief about susceptibility to an illness, the severity of the illness, costs involved and benefits in carrying out the behaviour as well as internal or external cues to action (Taylor, 1995). Other constructs have been added to the model, including health motivation as a reflection of the person's readiness to be concerned about health (Ogden, 2000) and perceived control (Becker & Rosenstock, 1987). The PMT model sought to augment the HBM by suggesting that health-related behaviours derive from the interplay of four components, namely severity, susceptibility, response effectiveness and self-efficacy, which predict behavioural intentions that are related to behaviour.

Social cognition models, based on Bandura's social cognitive theory, include the individual's representations of their social world in understanding health decisions and behaviours. The theory of planned behaviour (TPB) (Taylor, 1995), a revised version of the earlier Theory of Reasoned Action proposed by Ajzen and Fishbein (1980, in Beaman & Strader, 1989) argues that behavioural intentions are dynamically determined by one's attitude towards a particular behaviour (behavioural beliefs), subjective norms that are constituted from perception of a social norm and pressures to conform (normative beliefs) as well as one's motivation to comply with the said norm, and perceived behavioural control (Beaman & Strader, 1989; Ogden, 2000). Furthermore, Beaman and Strader indicate that social referents in respect of sexual normative beliefs vary for different groups, with younger subjects being influenced by parental and older ones by sexual partners' attitudes towards condom use. Baker *et al.* (1996) also found gender differences with respect sexual decision-making, with males likely to be influenced by their own attitudes to condoms whereas social norms had more of an effect on women than on men.

The above discussion is by no means a comprehensive presentation of intervention models. In recognition of the need for effective intervention models that are appropriate for public health settings there is ongoing work towards the development and modification of earlier models for implementation in primary health care settings. Some of the existing models, for example, require patients to attend a series of counselling sessions and need levels of counsellor expertise that may not always be available. Thus, efforts are directed at the development of brief and more focused models, such as the Information-Motivation-Behavior (IMB) Skills Model (Fisher &

Fisher, 1992, cited in Belcher, Kalichman, Topping, Smith *et al.,* 1998). This model can be used in a one-on-one format delivered in a single session, and has been used effectively for HIV counselling with a sample of women by Belcher and colleagues (1998). One of the important points raised by these authors is that practical behavioural skills training, coupled with increased self efficacy and behavioural intentions, is more likely to result in decreased risky sexual behaviours than enhanced self-efficacy and intentions on their own. In line with demands for brief psychological interventions that are appropriate for PHC settings to stop the spread of HIV in South Africa, Simbayi and Kalichman (L. Simbayi, personal communication, 26 August 2003) are currently involved in piloting the IMB model, in Cape Town, South Africa. If successful, the project promises to provide a sound, theory-based model that is likely to produce better results that the person-centred approach that is implicit in the counselling guidelines outlined in the treatment protocols issued by the Department of Health (1997).

Critique of the biopsychosocial model

While the biopsychosocial model is seen as an alternative to the reductionism of biomedicine, it has been criticized on a number of issues, with most of the critiques coming from critical social psychology. The model and constructs presented above have been criticized for their focus on rational information processing and not emphasising social and economic factors in their theorizing (Ogden, 2000). Despite incorporating the social into their theorising, for example by highlighting the role of subjective and social norms, social cognitive models are seen as limited in that the broader social context in which the patient is located is not dealt with. People live in a social world, and this influences the way they construct and are constructed by their world (Shefer, 1998). Postmodernists maintain that the world as any individual and collective knows and interprets it, is always a product of representational labour, made out of meanings and understandings which the same labour has brought into being (Rogers, 2002). In managing and controlling STIs, interventions that focus on the individual only, and those that fail to consider the patient's explanatory understanding of STIs, seem to be inadequate (Redfern & Hutchinson, 1994). There is a need to develop intervention models that take into account the social, economic and political environments that contribute to the social factors associated with STIs, such as migration, prostitution and women's difficulties in negotiating safer sex with their partners.

It has also been argued that the biopsychosocial model is neither a model nor a theory in a formal sense of these terms (Marks, 2002; Stam, 2002). Rogers (2002) refers to it as a position and Armstrong (2002) talks of it as a perspective in medicine. Marks (2002) describes it as more a way of thinking about health and illness. In addition, the model is seen as not adequately challenging the dominance of biomedicine. Rogers (2002) argues that the problem is that the field of health psychology, and the biopsychosocial model which is a large part of the field, has not dared to move beyond mainstream psychology. For example, there is explicit acceptance of certain positivist notions such as the existence of a 'real' world where attitudes and cognition are 'real things' that influence how one views the 'real world' out there. There is an assumption that all psychology needs to do is remove a thin, social, group-specific and/or culture-specific veneer to uncover universal 'laws of human nature' (Rogers, 2002, p. 292).

Despite the political and ideological problems posed by the lack of clear theoretical articulations and the vagueness of the model, the term model will be used to indicate an understanding of STIs that moves beyond only the identification and treatment of causal organism. While recognising the short-comings of the biopsychosocial model, its systems-oriented approach suggests a helpful way of addressing the treatment and management of STIs. Given that health psychology, and its theoretical formulations, is relatively new and still developing within the discipline of psychology, this model offered an appropriate way for understanding the care of STIs in the public sector. Its underlying systems theory approach fits in well with the syndromic case management approach, at least theoretically, in that it requires health providers to offer education and counselling to patients as a way of engaging with psychosocial factors that will influence how the patient manages the illness, treatment as well as prevention of future infections. As such, it represents a shift from previous, predominantly biomedical approaches that focused primarily on aetiological diagnosis and treatment of causative organisms. Therefore the biopsychosocial model will be used to locate the study and to argue for a more central role for psychological input in the fight against the epidemic.

CHAPTER SUMMARY

This chapter presented background information about sexually transmitted infections. The first section looked at the epidemiology of STIs, which showed that they are a public health issue for both developed and developing countries. Variations in disease characteristics and social factors that produce different and complex patterns within and between countries were discussed. While most developed countries have been relatively successful in controlling bacterial STIs they continue to battle with emerging viral infections. Developing countries, particularly in sub-Saharan Africa, are struggling to control both bacterial and viral STIs. A brief discussion on the relationship between STIs and HIV/AIDS was presented. The second section focused on theoretical approaches in the management of STIs. The discussion highlighted the failures of biomedicine to control STIs and presented the biopsychosocial model. A brief overview of some concepts and models that have been used to understand illness and health behaviours, particularly sex-related ones, was presented. The underlying systems approach of the model allows for a more holistic understanding of STIs, including as it does psychological and social factors in the conceptualisation of illness and health behaviours, and is in line with the syndromic approach in STI management. The next chapter will present public health management of STIs, with the primary focus being the syndromic approach in primary health care settings, and a discussion of quality of care.

CHAPTER THREE

THE MANAGEMENT OF STIs IN THE PUBLIC HEALTH SECTOR IN SA

INTRODUCTION

This chapter aims to describe the management of STIs in the public health sector in South Africa. After a brief introduction, the first section will describe the development of public health policy in South Africa, particularly the influence of racial factors in the management of STIs. The section will also look at the vertical and horizontal STI service delivery, focussing largely on the syndromic management approach. The second section will focus on the concept of quality of care and will include a discussion of the elements of structure, process and outcome.

The management of STIs has tended to reflect the socio-political and economic factors that influenced all the development of public health in the country. The discipline of public health, in general, emerged in response to pandemics of dread diseases. These responses included the treatment of affected people, prevention of infection of others by isolating infected cases and managing environmental factors that were vectors for the specific causative organisms. Scientific advances, beginning with the Renaissance, contributed to the understanding and control of transmittable disease and were in part responsible for general alignment of public health with medical treatment (Beaglehole & Bonita, 1997). In the growing dominance of the biomedical approach, psychosocial variables in the control of transmittable diseases were marginalized, so that public health, for example in the US, began to be equated with the provision of medical treatment to economically disadvantaged groups that could not be serviced by the private health sector (Macdonald, 1992). The management of STIs is similarly influenced by socio-economic variables, with more affluent groups tending to consult private practitioners for the treatment of STIs while public health sectors service mainly socially under-privileged groups. Although only about 18% of South Africans have full access to the private health sector, many more patients, even those without access to medical aid schemes, tend to consult private practitioners for STIs, mainly because their services are seen to offer more privacy, anonymity and humane care than the public health care settings (Coetzee, Ahmed & Kagee, 1994; Schneider, Blaauw, Dartnall, Coetzee & Ballard, 2001).

PUBLIC SECTOR MANAGEMENT OF STIs IN SA

Public health policy in the country was shaped by both international trends in the management of STIs and the development of a racist state in which whites were privileged and blacks systematically disadvantaged in all areas of life. The impact of segregationist policies can be seen in a complex public health policy that made it possible for the country to be characterised as having a free-market privatised health care system while the majority of the population was dependent on state provisioning (Van Rensburg, Fourie & Pretorius, 1992). Jochelson (1999) indicates that, until the promulgation of the 1919 Public Health Act, black and white South Africans were treated similarly by or suffered similar neglect from state institutions. She argues that although this Act was not overtly racially discriminatory, it introduced a state welfarist attitude to white health and contributed to Africans being treated differently, for example by calling for compulsory STI examinations in this group.

With the introduction of the 1923 Native Urban Areas Act, aimed at controlling the influx of blacks into urban areas while still assuring the economic sector of a steady supply of labour, the government approach to STI management was altered. The basic premise was that African people's health was important only in so far as it impacted on their fitness for labour and their suitability for contact with whites. It was in the state's interest to provide effective STI services for blacks in urban areas as part of ensuring a steady and reliable labour force. Therefore, while the state approach to their health was coercive and punitive, urban blacks had access to STI services that were not available to their rural counterparts (Jochelson, 1999).

Until 1994 STI service delivery in the public health sector was done through local authority clinics, state hospitals and selected STI clinics in urban areas. Rural areas, on the other hand, were serviced mainly by state hospitals, most of which had been previously established and maintained by foreign missionary groups until their nationalization in 1973 (Van Rensburg *et al.*, 1992). Coordination of health policy in relation to STI provisioning was further complicated by the existence of independent and self-governing states (homelands) for different African ethnic groups, each with its own health department. Van Rensburg *et al.* (1992) indicate that by the 1980s the homelands had become problem societies plagued by a number of social ills, including promiscuity and violence, which made them reservoirs of diseases. In addition to these problems, the duplication of health departments in each homeland led to a bulky and uncoordinated public health policy that was expensive to maintain.

While there is no clear indication of what STI care was like, there is sufficient evidence that health facilities, like all social services, were not meeting the health needs of rural communities and other previously disadvantaged groups. In view of this skewed and unequal distribution of health services, the task facing the post-1994 government in South Africa can thus be understood as two-fold: the first challenge involved the extension of the infrastructure such that access could be given to groups that were previously missed by existing services and, secondly, improving the clinical management of patients who do seek help from the public health sector.

Two broad trends can be identified in public sector management of STIs. Service may be rendered through the establishment of dedicated/specific STI clinics, the incorporation of STI services into broader health provisioning or a combination of these. Both approaches are guided by the same underlying principles, namely that the control of STIs is based on accurate diagnosis and management, including drug treatment, of infected persons on the one hand and prevention of infection on the other (Buve *et al.*, 1993). Ballard *et al.* (2000) add a third dimension, which is the detection and treatment of asymptomatic carriers and those with symptoms who would not otherwise present for treatment. In an ideal situation, the management of STIs should be based on diagnostic accuracy that is confirmed by findings from well-resourced and technically sound laboratory facilities (Ballard *et al.*, 2000). Decisions regarding which system to use are influenced by the economic realities and public health policies of individual countries.

Dedicated STI clinics

An attractive feature of dedicated STI clinics is that they are focused only on the management of these infections. As such, health providers working in these settings have the space to develop specialist knowledge of the area. While there is inter-country variation most developed countries tend to have dedicated STI clinics that are run under the auspices of public health authorities, thus enabling a coordinated system of management. In a review of services in Poland, Australia, the US and Britain, Hart *et al.* (1990) found that these clinics are staffed by qualified specialists in STIs as well as support personnel, including qualified nurses, health advisors, laboratory and clerical staff, all of whom are trained in the management of STIs.

Another feature, identified particularly in countries that obtained high ratings in Hart and colleagues' study (1990), is the support that a government gives towards STI management and control as articulated in policy documents, as well as the involvement of other government-funded supportive services. In comparing Poland to the US, for example, Hart and associates (1990) found that services in the former were adequate but not always used in an optimal way, primarily as a result of lack of clearly articulated guidelines on clinical procedures and practice. In the US, on the other hand, the Centre for Disease Control (CDC) had played a crucial supportive role in improving STI service through providing training guidelines, as well as developing and disseminating treatment and quality assurance protocols for use in both the public and private health sector. These authors concluded that successful programs in industrialized countries are characterised by support from central coordinating bodies and governmental involvement, either directly as in the UK or indirectly as with the American CDC. In addition, Behets, Genece, Narcisse, Liautaud, Cohen and Dallabetta (1998) reported that the involvement of civil bodies and other stakeholders, such as non-governmental bodies, enhances service delivery.

Dedicated STI clinics have a number of advantages, including the availability of specialist clinical expertise, prompt attention, early diagnosis and in some cases free treatment (Asuzu, Ogunbanjo, Ajayi, Oyediran & Osoba, 1984; Hart *et al.*, 1990; WHO/UNAIDS, undated). Where STI services are part of an integrated health service, clinic operating times may be limited by a need to service different patient populations, and health workers are expected to be knowledgeable about all areas of health, thus limiting opportunities for developing the specialized skills needed for managing STIs. In addition, because of the concentration of expertise in dedicated STI clinics they are useful as a referral service for primary health clinics and other providers of STI care. They can also serve as reference centres in the training of health providers, provision of epidemiological data and operational research (WHO/UNAIDS, undated).

However, it is clear that such vertical service delivery requires substantial financial, structural and human resources (Asuzu *et al.*, 1984), thus making it difficult for countries with struggling economies to adopt this model of service provision. Additionally, they are often not accessible to all population groups and their acceptability may be compromised by the stigma attached to attending them (WHO/UNAIDS, undated). In South Africa, such clinics were found mostly in urban areas, with a few of these still existing in some cities, for example Cape Town. Integrating STI management into primary health care services was viewed as a cheaper option of giving access to effective and good quality care to all.

Primary health care

The policy shift towards primary health care (PHC) in South Africa has its roots in the Health Care Act of 1977 that came into being during the recession of the 70s and the escalating political unrest. The objective was to minimize costs to the state while at the same time extending basic health care to the whole population at community level (Dennill, 1999; Van Rensburg *et al.*, 1992). The National Health Plan of 1986 that laid the foundation for the provision of comprehensive health was based on principles of primary health care that came out of the 1978 Alma Ata conference. This conference emerged out of international despair over inadequate services, particularly for socio-economically disadvantaged people in the developing world, and was sponsored by the WHO and United Nations Children's Fund (UNICEF) (Dennill, 1999). In South Africa, the primary health care approach was adopted by the new democratic government as the underlying philosophy in its drive to provide comprehensive, equitable and accessible basic health services to all South Africans, particularly those marginalized by the previous government.

The implementation of primary health care as articulated by the Alma Ata and subsequent conferences has been difficult because of economic and political factors, leading to the adoption of selective rather than comprehensive primary health care. In line with the primary health care approach and WHO/UNAIDS (undated) recommendations, STI services were offered as part of an integrated health service, with the National Department of Health (DoH) developing and disseminating standard treatment guidelines and essential drug lists as part of core packages for different health complaints (Department of Health, 1997). Flowcharts that indicate how to manage these complaints are provided to facilitate health providers' functioning in primary health care settings (PHCs). The core-package approach in PHC is primarily concerned with providing medical interventions at low costs and is seen as likely to lead to the neglect of other processes that are fundamental for more comprehensive and sustainable solutions to South Africa's health problems (Chopra, Sanders, McCoy & Cloete, 1998; Denill, 1999).

The core package for the management of STIs consists of national norms and standards to inform the management of STIs in primary health clinics, standard treatment protocols and essential drugs in accordance with the syndromic case management approach (Department of Health, 2001). With respect to norms and standards, three norms are specified: a requirement for each clinic to have a review of quality of care once a year, using the District Quality of Care Assessment instrument (DISCA); every clinic should have at least one member of staff (preferably all professional health providers) trained according to guidelines prescribed in a standard manual; and every clinic should have at least one staff member (preferably all those trained for managing STIs) trained as a counsellor for HIV/AIDS/STI. This document describes the required standard, including a description of necessary resources and setting out clearly the syndromic approach as the basis of all clinical management of STIs.

The advantages of the syndromic approach are manifold. Firstly, it is perceived to be easy to use and not to require intensive training (Adler, 1996; WHO, 1998). It can be used by any level of health professional and thus is suitable for primary health settings. Furthermore, it is not time-consuming and does not require the use of expensive laboratory tests, thus allowing for patients to receive treatment at the first visit. Overall, it offers a rapid means of management, thus giving health workers time for control measures such as education on risk reduction, treatment compliance, condom use and partner notification (Adler, 1996; Ballard *et al.*, 2000; Harrison, Wilkinson, Lurie, Connolly & Abdool Karim, 1998).

Syndromic approach in PHCs

The syndromic approach developed out of an identified need to find simpler, more rapid and effective treatment of STIs. While establishing a definitive aetiological diagnosis and giving appropriate treatment remain the ideal medical management of diseases, this ideal is compromised by a number of factors in the fight against STIs in southern Africa and other developing regions. These include atypical presentations of infections, lack of resources especially access to sophisticated laboratory test facilities and suitably trained and experienced personnel (Ballard *et al.*, 2000; Desai, Kosambiya, Thakor, Umrigar, Khandwala & Bhuyan, 2003). Harrison, Wilkinson and Abdool Karim (undated) argue that the sophisticated laboratory tests used to diagnose STIs in richer countries are neither economically nor practically viable in poor settings. Furthermore, treatment is expensive and tends not always to be available, especially in rural settings. Together with other logistical problems, such as access to services in remote areas and transport problems, these factors interfere with the successful management and control of STIs, which depends to a large extent on early diagnosis and treatment (Gilson, Magomi & Mkangaa, 1995). The syndromic case management approach has been found to be particularly useful for such settings because it provides for simpler and more rapid diagnosis and treatment. The approach consists of five broad dimensions.

The clinical dimension

In the clinical dimension, STIs are first classified into one of 11 syndromes: urethral discharge/dysuria, vaginal discharge, genital ulcer, pelvic inflammatory disease, inguinal swelling without ulcer, itching glands/foreskin, scrotal swelling, genital warts, HIV related disease, other STI (which includes pubic lice, genital scabies, molluscum, contagiosum and sexually acquired enteric infections) and not STI (DoH, 1997). In order to identify each syndrome, a thorough medical and sexual history needs to be taken for each patient, including the number of sexual partners, and a physical examination performed. In addition, Ballard and colleagues (2000) recommend that routine serological screening for syphilis should be done in all cases of STIs, since up to 20% of patients have been found to have Treponema Pallidum, the causative agent of venereal syphilis.

Following identification, each STI syndrome is treated through a combination of drugs determined by the most prevalent aetiological agents and by drug susceptibility patterns in particular geographic areas. For this reason treatment protocols may have minor regional and/or provincial variations. Harrison and others (undated) indicate that the use of this method addresses the STI problem in a way that is technologically suitable for resource-poor settings and has increased the proportion of symptomatic and asymptomatic patients receiving adequate treatment.

Compliance

The second dimension of the syndromic approach looks at compliance, which is defined as the degree to which patients carry out the behaviours and treatments recommended by health professionals. This aspect is not only important for effective treatment of diseases, but also to prevent the development of drug-resistant strains of bacteria. In relation to STIs, the widespread misuse of antibiotics and poor compliance have been shown to result in the emergence of new strains of gonorrhoea which are resistant to penicillin and which are, therefore, difficult to treat (Ballard *et al.* 2000; Buve *et al.*, 1993; Laga *et al.,* 1991). Despite this, there is evidence that this part is not emphasised by health workers, with Harrison and associates (1998) finding that only 69% of STI patients in their sample were advised on this.

According to Bennett (2000) the difficulty of adhering to any intervention that involves some behavioural choice is made worse by even the smallest added demands. Even where there are serious health consequences, rates of non-adherence can be high, especially it the treatment regimen is complex (Chesney & Folkman, 1994; Passey, Mgone, Lupiwa, Tiwara & Alpers, 1998). Patients with STIs are required to adhere to certain behavioural rules during treatment, such as using condoms, abstaining from sex until treatment has been successfully completed and to continue taking the prescribed drug even if the symptoms subside.

Factors which influence compliance can be grouped into those related to the characteristics of the regimen and illness, with complex regimes more likely to produce non-compliance than simple ones; psychosocial aspects of the patient, such as patients' cognitions and beliefs about illness, coping strategies as well as patients' analysis of costs and benefits of the treatment, as can be seen when the drug has unpleasant side-effects; and patient-practitioner interactions, such as insufficient information given during consultation (Bennett, 2000; Dolecek, Milas, Van Horn *et al.*, 1986; Francis, Korsch & Morris, 1969; Turk & Meichenbaum, 1991). Ley (1988, in Bennett, 2000) indicates that adherence is determined by three factors: patients' understanding of the treatment regimen, their memory of information given and their satisfaction with the consultation in which this information was given. The critical issue is the finding that knowledge of the implications of non-compliance has been found not to increase adherence.

Assessing levels of adherence is difficult because of the many ways in which non-adherence may occur, such as omitting to take some doses of the drug, `cheating' a little on recommended behavioural change and discontinuing the prescribed drug (Sarafino, 2002). There are also methodological problems in assessing compliance, with studies showing, for example, that doctors tend to over-estimate compliance while patients tend to over-report compliance because they know they should be adhering to the treatment regimen (DiMatteo & DiNicola, 1982; Turk & Meichenbaum, 1991).

Condom use

The third dimension of the syndromic approach requires that health workers actively promote the use of condoms to prevent infection. Condom use is seen as the best preventive measure against HIV infection and has, consequently, been a major target of STI and HIV research. Low use of condoms has been a common finding in both international and local research on STIs (Abdool Karim, Abdool Karim, Preston-Whyte & Sankar, 1992; Baldwin, Whiteley & Baldwin, 1992; Beaman & Strader, 1989; Mathews *et al.,* 1998; Shafer & Boyer, 1991). The gap between knowledge of condoms as a preventive measure against STIs and the actual use of condoms has been found to be very large. Even where behavioural interventions have taken place, they appear to have had little effect and condom use tends to remain inconsistent (Gillmore, Morrison, Richey, Balassone, Gutierrez & Farris, 1997; Orr, Langefeld, Katz & Caine, 1996).

Increasingly it has become apparent that the decision to use condoms is extremely complex, and studies have attempted to research the reasons for the poor use of condoms. Baker and colleagues (1996) argue that a number of the factors that complicate the decision are intuitively obvious. For example, condom use requires that an individual sacrifice immediate pleasure, at an emotionally intense moment, in the interests of a distant threat of harm. Furthermore, condom use occurs in a dyadic setting and the person with whom one is making the decision could have a powerful influence on one's decision. Other factors which act as barriers to condom use include worries about breakage, low perceived need, a decrease in pleasure for the partner, inconvenience, an association of condom use with STIs and lack of trust between partners and, where introduced by the woman, condoms may be seen as a challenge to the male ego ((Abdool Karim *et al.,* 1992; Beaman & Strader, 1989; Detzer, Wendt, Solomon *et al.,* 1995).

As is implied by the above reasons for the low use of condoms, decisions about condom use are influenced by multiple personal and socio-cultural factors, such as gender relations and normative beliefs (Beaman & Strader, 1989; Fullilove *et al.*, 1990; Mkhonza, 1998: Strebel, 1993). This suggests that effective interventions will be those that engage with the patients' psychosocial issues in relation to sexuality.

Partner notification

The fourth dimension of the syndromic approach looks at partner notification. This term, which replaces the previous one called contact tracing, refers to efforts by health providers and the STI patient to locate, counsel and treat persons who have been exposed to an STI, with the aim of breaking the cycle of infection between the patient and his/her partner/s (Asuzu, Rotowa & Ajayi, 1990; Giesecke, Ramstedt, Granath, Ripa, Rådö & Westrell, 1991; Rutherford, Woo, Neal e*t al.*, 1991). It has been argued that the major reason for the STI epidemic in Africa is the common practice of having multiple partners, with men being most likely to report having more than one sexual partner (eg. Asuzu *et al.*,1984; Faxelid, Ndulo, Ahlberg & Krantz, 1994; Wilson, Strebel, Simbayi *et al.,* 2000). Although this construction of the STI problem has been disputed, partner notification and treatment is seen as representing a shift towards a more active role for health workers and remain an important part of treatment especially given the high number of asymptomatic infections in sub-Saharan Africa (Ballard *et al.* 2000; Coetzee, Mathews & McCoy, 1996; Green, 1994).

Most partner notification systems require the patient to notify their partner/s that they have been exposed to an STI (patient referral), thus the index patient's behaviour around notification is important. This raises issues such as the patient's understanding of the importance of the practice, unwillingness and/or inability to notify casual partners (Coetzee *et al.*, 1996). While some studies indicate a higher rate of positive responses where notification was done by trained counsellors, the use of patient referrals is seen as the cheapest and most productive method, particularly in developing countries where poor infrastructure makes tracing by health workers difficult (e.g. Asuzu *et al.*, 1984; Pavia, Benyo, Niler & Risk, 1993; Winfield & Latif, 1985). However, there is some consensus that there is a lack of well-designed studies and data on which to evaluate the efficacy and impact of the different strategies (Oxman, Scott, Sellors *et al.*, 1994; Pavia *et al.*, 1993).

There are difficulties around the process, including concerns about confidentiality and high costs of provider referrals (those in which health providers have to locate and counsel partners of infected persons to present themselves for treatment). Moses, Ngugi, Bradley *et al.* (1994), for example, found that a large proportion of their Kenyan sample had first sought help for STIs from private practitioners or the informal health sector (e.g. traditional healers, drug peddlers and pharmacists) because these were perceived to offer both convenient access and privacy. Furthermore, contextual issues like gender relations and violence against women need to be addressed by health providers (Moses, Ngugi *et al.*, 1994; North & Rothenberg, 1993). Research has shown that success rates are increased where the cooperation of the index patient is ensured through proper counselling by health providers (Asuzu *et al.*, 1984; Faxelid *et al.*, 1994; Mathews *et al.*, 1998; Mathews, Guttmacher, Coetzee *et al.*, 2002; Ogunbanjo, Asuzu, Edet & Osoba, 1986).

Reports indicate that partner notification systems in South Africa appear not to be effective (Mathews *et al.*, 1998). A study that investigated partner notification in three clinics in Cape Town found that opportunities for partner notification were missed because of the quality of interactions between health providers and patients, such as failing to ask about the number of sexual partners and not reinforcing the giving of partner notification cards with verbal messages (Coetzee, Visser, Mofokeng & Hennink, 1996). Harrison *et al.* (1998) found that while both simulated and STI patients were more often correctly advised on this aspect than on asymptomatic infections in men and women, fewer of them were actually given partner notification cards.

It seems clear that the interpersonal dimension of service provision will impact on partner notification. Giesecke *et al.* (1991) emphasise the importance of the quality of patient-provider interactions, arguing that partner notification will not succeed without, among other things, guarantees of good medical and psychosocial care as well as total confidentiality.

Education and counselling

The last dimension in the syndromic approach involves improving health providers' skills in education and counselling. Though mentioned last, it is argued that these are important variables in successfully managing STIs, since none of the other aspects of management can be implemented successfully without the cooperation of the patient. These concepts, particularly counselling, encompass, to a large extent, the interpersonal aspect of the process of treatment, an aspect that is rated highly by patients. It has been found, for example, that lay people tended to rate information-giving and interpersonal relations between providers and patients as more important than the accessibility and adequacy of services (Haddad, Fournier, Machouf & Yatara, 1998; Proctor, 1998). It has been suggested that STIs remain a major problem in South Africa because of inadequate management and care of infected people (Coetzee & Magwaza, 1997).

Although education and counselling are an important foundation for all the other dimensions, they are the least clearly defined in the protocols, with little indication that they are different processes. Education involves two processes: teaching, which can be roughly defined as the transmission of knowledge, values and skills, and learning, which is defined as relatively permanent change in behavior or knowledge that occurs as a result of experience (Glover & Bruning, 1987; Weiten, 1998). The process of learning is more complex than what is suggested by earlier learning theories, involving as it does a number of cognitive factors, such as cognitions and beliefs. It has been shown that because human beings are active processors of information, learning is most likely to occur if the information is made meaningful to the learner (Glover & Bruning, 1987).

Most of the preventive work in relation to STIs has been focused on education about various aspects of STIs, such as knowledge about symptoms, treatment and prevention. The assumption that increased knowledge about STIs will contribute to attitude changes and the adoption of safer sexual practices by patients has not been borne out by research. A number of local and international studies have shown that increased knowledge about STIs does not necessarily correlate with reduction in sexual risk-taking (e.g. Anderson-Ellstrom, Forssman & Milsom, 1996; Belcher *at al.*, 1998). In fact, Shafer and Boyer (1991) found alcohol and drug use to be a stronger predictor of sexual risk-taking than knowledge among a sample of US urban high school students. At most, some studies have shown decreases in some risk behaviours but not in others. Jackson, Rakwar, Richardson *et al.* (1997) found that a behavioural risk-reduction programme among truckers in Kenya led to significant declines in men reporting extra-marital sex or sex with a prostitute but showed no increase in the use of condoms during extramarital sexual contact. It is possible that the reason knowledge about STIs, including HIV, has not always been correlated with a reduction in sexual risk-taking is that it does not engage with intra-personal issues and the contexts in which such behaviours occur.

Counselling can be defined as a '*dynamic* and purposeful relationship between two people in which procedures vary with the nature of the student's need, but in which there is always mutual participation by the counselor and the student with the focus upon self-clarification and *self-determination* by the student' (italics added) (Wrenn, 1951, in George & Cristiani, 1981, p.60). While there are various theoretical orientations and elements entailed in counselling, what is highlighted in this project is that counselling is a professional activity that is concerned with providing conditions that facilitate voluntary change in the client/patient (George & Cristiani, 1981). A number of constructs and theoretical formulations that influence health and illness behaviours have been identified in behavioural and cognitive psychology literature, as discussed in the previous chapter (Bennett, 2000; Ogden, 2000; Taylor, 1995).

In addition, various theoretical positions are emerging from critical psychology, such as phenomelogical and discursive approaches. According to Crossley (2000) these critical approaches offer possibilities of an integrated understanding of health and illness behaviour, including a deeper understanding of the complex psychological dimensions of human experience as well as the socio-cultural dimensions of such experience. In this way some of the shortcomings of mainstream psychology, including the assumption of rationality in health and illness behaviour that underlies most cognitive theories, are beginning to be addressed.

The requirement for health providers to offer counselling as part of managing STIs implies that some formal training in the basic psychological principles and skills of counselling is a prerequisite for enabling a person to function as a counsellor. While the WHO guidelines and the syndromic protocols (Department of Health, 1997; WHO, 1998) offer clear guidance regarding clinical management by way of well articulated diagnostic and treatment algorithms, the counselling aspect is not as detailed. What is outlined in the protocols reflects basic elements of establishing a relationship of trust between client and provider as outlined in Rogers' person-centred therapy (1951, cited in George & Cristiani, 1981). There is lack of theoretical focus on issues that have been identified as important, such as cognitions, and even less effort towards understanding socio-cultural issues that may impact on STI patients' ability to implement the recommended health behaviours.

Health providers in PHCs

Similar to most developing countries where the shortage of medical doctors makes professional nurses and other auxiliary health workers the primary health providers, the majority of health providers working in South African PHCs are nurses, who constitute 67,8% of all health workers in the country (Denill, 1999; Sanders & Carver, 1985). According to Denill, nurses are the most universally involved in care delivery, often having to play the roles of other health workers where these are not available. In addition to constraints imposed by legal statutes governing the practice of different categories of health care workers in South Africa, the training of nurses often does not prepare them sufficiently to meet the challenges that they are faced with in primary health care settings.

The success of any programme will rest largely on the calibre of people charged with its implementation. Despite the expansion in the number of trained doctors that happened in most parts of the world during the last two decades (Abatt, 1990), the distribution of these doctors has not generally benefited underprivileged communities, especially rural areas. Skewed health provisioning is frequently reflected in the concentration of skilled personnel in urban areas, particularly medical doctors. The latter is attributable in part to the loss of doctors from public health sector through migration to the developed world, joining the more lucrative private sector or entering private practice (Akhtar & Izhar, 1994; Sanders & Carver, 1985). Developing countries, for example Sri Lanka and Pakistan, lose more than half their medical school graduates to developed countries (Sanders & Carver, 1985). While no accurate statistics are available on the migration of doctors in SA, media reports indicate that a large proportion of professionals, including doctors, are leaving the country for more lucrative jobs abroad. Although increasing numbers of nurses are also leaving the country, they remain the biggest category of health workers and primary care providers at PHCs. This suggests that resources need to be invested in training them for this task since, as Abbatt (1990) argues, the quality of PHC depends on the people who provide the service. In particular, the concept of PHC represents a significant shift from the traditional medical model that was the basis of nurses' training.

The training of nurses for management of STIs

The training of nurses in South Africa has traditionally been geared towards curative, hospital-based care and is unlikely to have included training in sound, research-proven educational and/or counselling principles (Denill, 1999). She also indicates that most of the post-basic courses and in-service training to nurses continues the bias towards curative services and, in relation to STI management, does not provide adequate skills to enable them to play the role that they potentially could. A qualitative study conducted in a South African STI clinic, for example, found that health workers lacked the knowledge and skills required for successful health education (Reddy, Meyer-Weitz, van den Borne, Kok & Weijts, 1998).

In recognition of the possible lack of skills with respect to managing STIs, the WHO/UNAIDS (undated) provides guidelines that should inform training models. These are broad enough to allow for programmes to be designed that address specific needs of each setting or country. For example, they do indicate that training should include both qualitative and quantitative aspects, and that non-judgemental communication skills as well as health education and counselling principles should be part of the content areas addressed in training. However one of the problems with the guidelines in this respect is that they do not make provision for training to engage and attempt to alter the attitudes, cognitions and beliefs of health providers about STIs.

The training in syndromic management of STIs focuses largely on the clinical-medical diagnosis and management, with a substantial amount of the time being devoted to ensuring that health providers are able to diagnose and treat according to the syndromic algorithms (J.A. Rakosa, personal communication, 30 January 2003). This focus is reflected in Grosskurth, Mwijarubi, Todd *et al.* (2000) as well as Harrison and colleagues' reports (1998), both of which indicate that the bulk of the five-day training of nurses, as health providers and potential trainers of other nurses, focused on providing diagnostic and treatment skills. Attempts to correct these deficits and focus on interpersonal aspects are, however, beginning to appear from non-governmental organisations (NGOs). For example, the training tools and Job Aids produced by EngenderHealth (2000) use participatory techniques based on principles of adult learning towards the establishment of counselling services and training programmes in STI management.

In summary, while the syndromic approach is viewed as the appropriate vehicle for the management of STIs in resource-poor countries, its effective implementation is likely to be reduced due to the lack of sufficient attention to the counselling and educational aspects. The above discussion attempted to show that the other dimensions of the syndromic approach would be enhanced by the application of sound, theory-based educational and counselling principles. The following section will look at the impact of the syndromic approach on STIs and HIV.

Evaluating the impact of the syndromic approach on STI and HIV rates

There have been few studies that evaluate both the implementation and the efficacy of the syndromic approach in the management of STIs as well as the overall impact on the HIV epidemic. Preliminary evidence from Mozambique (Mbofana, Brito, Saifodine & Cliff, 2002), Tanzania (Grosskurth *et al.*, 2000) and South Africa (Harrison *et al.*, 1998) suggests that it is feasible to integrate the syndromic approach into existing primary care centres without major financial implications to governments. However, most studies also show that the implementation is often problematic, with different aspects not adhered to by health providers.

An interesting finding that emerged from the Mozambique study conducted in primary health care facilities by Mbofana *et al.* (2002) related to gender differences in the management of STI services. They found that only 26% of women were examined compared to 75% of men. In addition, fewer women than men were advised on condom use (19% against 87%) and partner treatment (47% vs. 81%). A contradictory finding was that more women than men were diagnosed syndromically (57% vs. 38%) and had laboratory tests ordered (74% against 45%). Similarly, Boonstra, Lindbaek, Klouman, Ngome, Romoren and Sundby (2003) found gender differences in how different aspects of management were implemented in Botswana PHCs, with fewer women than men receiving correct treatment. In addition, the process of history taking, physical examination as well as giving advice on condom use and partner notification, were found to be poorer for women than for men.

Regarding the efficacy of the treatment, many findings show the syndromic approach to be effective in the treatment of most STIs. Mayaud, Mosha, Todd *et al.* (1997) found that the syndromic approach led to significant reductions in rates of syphilis and urethritis in their samples in Tanzania. Similarly, Grosskurth *et al.* (2000) reported a success rate of 94% after the first treatment, with notable declines in rates of syphilis and symptomatic male urethritis in their trial study at Mwanza, Tanzania. However, Mayaud *et al.* (1997) also found that syndromic management had little impact on rates of symptomatic STIs among antenatal clinic attenders in the district and suggest that this was because few in this population present voluntarily to the health sector for treatment, even if they have symptoms. La Ruche, Lorougnon and Digbeu (1995) also evaluated the efficacy of the therapeutic algorithms, focusing on the decision trees for four syndromes, namely vaginal discharge with and without speculum examination, male urethral discharge and genital ulcers. One of their findings was that clinician adherence to the syndromic approach varied for different syndromes, with higher rates of adherence for genital ulcers than for vaginal discharge for example. However, the overall clinical efficacy of the syndromic approach was satisfactory, with less than 10% of their sample of STI patients needing referral to the next level of treatment.

The positive reports are contradicted by the results of a study by Desai *et al.* (2003), which showed the efficacy of the syndromic approach in a sample of Indian sex-workers to be low for a number of syndromes, such as cervicitis, genital ulcer and vaginal discharges. Similarly, Passey *et al.* (1998) reported a low overall efficacy of the WHO algorithms, especially for cervical infections. They suggest that the better performance in diagnosing vaginal infections compared to cervical ones may be due to higher reports of vaginal discharge, while the former are often asymptomatic.

There have also been contradictory findings about the impact that improved STI management has on HIV prevalence. Some writers indicate that where implemented successfully, the syndromic approach contributes significantly to reduced incidences of both classic STIs and HIV infections (Bryce, Vernon, Brathwaite, Perry, Figueroa, Emerson *et al.*, 1994; Grosskurth, Mosha, Todd *et al.*, 1995; Mayaud *et al.*, 1997), while others found little or no effect on HIV incidence (e.g. Wawer, Gray, Sewankambo *et al.*, 1998). The varying results on the impact of the syndromic approach on the prevalence of both STIs and HIV in the seminal trials conducted in Mwanza (Tanzania), Masaka and Rakai (Uganda) have been attributed to various confounding factors, such as differences in characteristics of both the samples and the HIV epidemic and diagnostic bias (Orroth *et al.*, 2003). Furthermore they suggest that the levels of curable STIs were underestimated in all three areas. Harrison (1999) also suggests that STI control may have a different effect on early versus a mature epidemic and that they may have been differences in the quality of STI services.

While such findings suggest a complex relationship between STIs and HIV, they do not undermine the need for improvement in the quality of STI services. Overall, there is agreement on the need for efficient and effective management of STIs. Effective management of STIs requires a shift from looking at illness and diseases in a purely biomedical way and suggests a need for a more holistic way of addressing physical, social and psychological needs of patients with STIs. There is thus a need to examine the quality of care at PHCs, looking at both structural and process issues in order to identify problems and gaps in service provision that might be a barrier to effective management of STIs.

QUALITY OF CARE

The issue of quality of STI care in PHCs in South Africa is crucial for the effective management and control of these infections. The control of STIs has been identified by Ballard and associates (2000) as possibly the most effective way of halting the HIV/AIDS epidemic in South Africa, a position that is endorsed in the government's strategic plan (Department of Health, 2000). In addition, people's perceptions of the quality of care impact on decisions to seek treatment at these centres when infected with the disease (Ndulo, Faxelid & Krantz, 1995; Wilson, Strebel, Simbayi *et al.*, 2000). Looking at preventive health behaviours in the relation to STIs, Darrow and Siegel (1990) reduced the 109 variables relating to health-seeking behaviours identified in various studies to six factors, including accessibility of care and evaluations of health services.

Most studies that have evaluated quality of care have been done in relation to family planning services. Given the importance of correct management of STIs as part of controlling the HIV epidemic, there is an increased need to focus on the quality of STI care. However, assessing quality of care is difficult because of a number of problems inherent in judging the process of care-giving. Franco, Daly, Chilongozi and Dallabetta (1997), for example, indicate that while an examination of patients' records may give an indication of the management, these records are often incomplete and do not say much about the quality of the process. Also, while observations of the actual consultation would yield better information, research has shown that it produces biases as it may alter the provider's performance for better or worse (Franco *et al.*, 1997; Rethans, Westin & Hays, 1996). The latter also highlight the difficulties that arise from having to distinguish between provider competence and performance. There is thus a need for evaluations that can yield more reliable information for the purpose of improving quality of care for STIs.

The increasing pressure to render good quality STI care as part of the strategy of controlling the HIV epidemic has contributed to a growing recognition of the importance of quality control, self-monitoring and evaluation by organisations. In line with this, the standardised District Quality of Care Assessment Tool (DISCA) (Moys, 2002) was developed for use by different levels of health service managers in assessing quality of care in South African PHCs and its use is an integral part of the DoH norms and standards for STI management (Department of Health, 2001). According to the DoH each clinic should have an annual review of services using the DISCA, and should ensure that there is at least one health provider who has received specialist training in STI management and HIV counselling. In addition, the document outlines standards that include availability of reference prints and educational material, equipment such as condom dispensers and examination lights, as well as drugs in accordance with the Essential Drugs List. Regarding staff functioning, the document indicates that in addition to competence in various clinical tasks, clinic staff need to have friendly, non-judgemental attitudes towards patients. Health providers are also required to counsel and educate STI patients on various aspects of the disease and to ensure confidentiality.

Following extensive piloting of the DISCA, indicators that were included provide information on accessibility of services, safe examination of clients, provision of safe treatment, screening of pregnant women for syphilis, availability of drugs and staff training in syndromic management of STIs (Magwaza, Cooper & Coetzee, 2002). In provinces where it has been used, the DISCA did indeed highlight structural problems, such as lack of drugs as well as lack of training and policy guidelines (Mufamadi & Shongwe, 2000, cited in Magwaza *et al.,* 2002).

The interpersonal aspect has been, and continues to be, the most neglected aspect of service provision. A telling feature of the DISCA is that it excludes counselling and partner notification as indicators of quality because both were found, during the pilot phase in the development of the instrument, to be unreliable or unavailable indicators of quality (Magwaza & Shongwe, 2000, cited in Magwaza *et al.*, 2002). Thus while the instrument captures structural issues and the clinical aspects of service provision, it manifests an explicit biomedical bias through the exclusion of aspects that assess the interpersonal relationship between health providers and patients. There is evidence from local and international studies that patients value the interpersonal aspects as much as medical management in evaluating service delivery.

The concept quality of care is not easy to define because, as Bruce (1990) indicates, quality is not a standard but a property of any programme. As such, some studies have defined quality of care in terms of one or other aspect of health services, such as financial resources, availability of services and effectiveness of interventions. While all these are important aspects of quality of care, it would be erroneous to think of each, individually, as constituting quality of care on their own. As a result of these numerous elements most studies have tended to focus on one or other aspects of service provision, and have made consensus on the definition of quality of care difficult. Jain (1989), for example, defines quality of care in terms of the way clients are treated by the system that is providing the service. On the other hand Hanson, Engvall, Sunkutu, Kamanga, Mushanga and Höjer (1997) indicate that quality of care should be measured against an accepted standard and should include both the technical aspects and the quality of patient-provider interactions. Similarly, Coetzee and Magwaza (1997, p. 2) cite Heiby's definition of quality of care as 'the degree to which actual care resembles the standards adopted by the programme'. This is the definition adopted for the purpose of this study. In South Africa, the programme consists of the WHO's syndromic approach to the management of STIs.

Ndulo, Faxelid and Krantz (1995) indicate that quality of care consists of elements such as consumer participation, consumer and provider satisfaction, continuity, affordability, adequacy, accessibility, effectiveness, efficiency, scientific-technical quality and contribution to overall socio-economic development. While these aspects are operationally related and, according to Bruce (1990, p. 62), 'indistinctly bounded' they need to be separated for purposes of evaluation in order to enable accurate identification of areas that require attention. Donabedian (1980) proposed a generic model of care that captures both the technical and the interpersonal aspects of care. The model divides health care-giving into three elements, namely structure, process and outcome, a useful division that allows for assessments to capture the quality of care as comprehensively as possible. However, while these are presented as discrete entities in the following section, it is important to keep in mind that they are linked and inter-dependent, with issues from one impacting on the other.

Structure

Structure refers to the 'stable characteristics of the providers of care' (Donabedian, 1980, p. 81) and includes infrastructure, resources and organisation. According to Gilson and colleagues (1995), research from developing countries indicates that a lack of financial, infra-structural and human resources are the more central determinants of quality of care rather than health worker performance. In particular, the availability and accessibility of health services has been identified as crucial in the early detection and treatment of infected persons, which is one of the principal strategies towards control of STIs and the HIV epidemic.

While some aspects of health delivery may be similar for all programs, there is a need to tailor the investigation to include areas that are central to the functioning of each and this can be achieved through the development of program-specific indicators. In their investigation of the quality of clinic-based STI services in Jamaica Bryce *et al.* (1994) developed indicators for STI services that include the availability of trained staff who can prescribe treatment, treatment and counselling guidelines, gloves, speculum and condom availability. Further indicators suggested by Fox, Becker, Brimmer and Dallabetta (undated) include: technical competence, measured through written guidelines, staff training and staff knowledge; acceptability of services as indicated by assurance of privacy/confidentiality and sufficient time spent with provider; as well as continuity, measured through an effective system of partner notification, effective follow-up and referral services. In particular, issues of privacy and assurances of confidentiality are important, given the sensitivity around STIs. While studies of quality of STI care in South Africa have identified structural problems in some provinces, such as lack of equipment, treatment protocols, specula, drugs and partner notification cards (Harrison *et al.*, 1998; Magwaza & Shongwe, 2000, cited in Magwaza *et al.*, 2002), South African PHCs are relatively well resourced, especially in comparison to their sub-Saharan counterparts.

Structural provisioning requires adequate finances and, as Hanson and colleagues (1997) argue, providing state of the art infrastructure is not always feasible in Africa, given that resources that are needed for STI control have to be shared with those aimed at controlling other diseases. However, there is a perception that this is the only important variable in the provision of good quality care, with governments in both developed and developing societies tending to focus on quantitative increases at the expense of the qualitative aspects. As argued by Reerink and Sauerborn (1996), part of the reason for quality of care being lowly prioritised derives from perceptions that increasing quality is equal to increasing inputs, thus costly for many governments. While structural aspects are important, they are not sufficient descriptors of the quality of care on their own. Rondeau (1998) recommends the inclusion of what he refers to as consumer driven features. These derive from patients' perceptions of the care they receive, including qualitative evaluations such as the experience of waiting for service, and the interpersonal relations between health providers and patients (Haddad *et al.*, 1998).

Process

Although structural aspects are important variables in the quality of care for STIs, a number of international and local studies have found deficiencies in the interactions between health providers and patients. These relate to clinical activities, such as failure to take a complete history of the STI incident or asking about sexual partners (Shekelle & Kosecoff, 1992). This is the area of management that is given most attention in the training of health providers (J.A. Rakosa, personal communication, 25 January 2003).

However, some studies found that even after health workers had been trained in the syndromic management, several aspects of management were not implemented (Grosskurth *et al.*, 2000; Hanson *et al.*, 1997; Mathews *et al.*, 1998).

South African studies reveal that in addition to structural problems, there are also problems within the actual encounters that patients have with health providers. Several local studies in the Gauteng, Western Cape and KwaZulu-Natal provinces have reported problems in a number of areas (Coetzee, Visser *et al.*, 1996; Harrison *et al.*, 1998; Irlam, Knight & Whittaker, 1996; Mathews *et al.*, 1998; Mofokeng, Bachman, Cooper & Coetzee, 1996; Schneider, 1995). For example, Coetzee, Mathews and Cooper (1996) found that opportunities for initiating partner notification were poorly used. Harrison *et al.* (1998) found that generally syndromic management of STIs was poor in the Hlabisa district of KwaZulu-Natal, where only 9% of patients were managed correctly. The majority of these patients were not prescribed the recommended drug regimens and health education was only provided in 48% of the sample.

In addition to the above clinical issues, in the study by Mofokeng *et al.* (1996) patients complained of inappropriate treatment and negative attitudes from health providers. Other studies, both international and local have also commented on the need for the improvement of communication and counselling skills among health providers who manage STI patients (Hanson *et al.* 1997; Harrison *et al.*, 1998; Ndulo *et al.*, 1995). In line with Bruce (1990), these studies have all recognised the importance of considering both the interpersonal and the 'classical' clinical aspects of service provision. Indeed such interpersonal aspects are perhaps particularly important with STI patient management, given the stigma attached to STIs and the shame experienced by patients (Fortenberry, McFarlane, Bleakly *et al.*, 2002; O'Farrell, 2002).

Outcomes

The third aspect of Donabedian's model (1980) looks at outcomes. Most of the indicators for outcomes are derived from therapeutic effectiveness resulting from patients' responses to illness, safety and satisfaction with the service. In addition to these patient-related indicators outcomes can also be measured through declines in incidences of particular diseases and overall development of communities (Ndulo *et al.*, 1995).

In relation to the syndromic approach, outcome indicators have focused mainly on the extent to which patients were given the recommended drugs for each syndrome and whether they were appropriately managed, as defined by being given partner notification cards and condoms, for example (Franco *et al.*, 1997; Hanson *et al.*, 1997; Harrison *et al.*, 1998). Notably, most studies make no clear distinction between education and counselling. The frequent use of the same indicators for both processes suggests a lack of conceptual differentiation that would prevent ambiguity in operational definition and treat the two as separate concepts. Giving patients information about the importance of adhering to the treatment regime and the treatment of sexual partners are often used interchangeably as indicators for both education and counselling (Hanson *et al.*, 1997; Harrison *et al.*, 1998).

There is now growing consensus that outcome indicators need to include both the quantitative measures of service provision as well as patients' qualitative reports on their experience of consultations with health providers. The latter give an indication of what patients value and require from providers, which may differ from providers' perceptions. Haddad *et al.* (1998) investigated the criteria that the public in two rural communities in Guinea use in judging the quality of primary health care services. They found both similarities and divergences in the criteria used by the two groups. Notably, the general public were found to be particularly sensitive to the interpersonal aspect of service provision.

In addition, differences often emerge when provider and patient accounts as well as direct observation of service-provision are compared, with evidence of over- and under-reporting by health providers of what they actually do in consultations with patients. A study by Franco *et al.* (1997) compared different methods of assessing provider performance and found inconsistencies between providers' reports of their performance of different aspects of management and results from simulated patients and direct observations of the process. Some aspects, for example history-taking, were under-reported by health providers, with only 63% of health providers spontaneously offering this information on being asked what they do with patients whereas 96% of the providers were actually observed doing this. On the other hand, while 86% of providers indicated that they advised patients to use condoms, only 51% were observed to do so.

In summary, assessing quality of care requires that one look at structural issues, the process of care-giving and the outcomes. In addition, there is a need to move away from focusing exclusively on quantitative measures of the clinical aspects and to include qualitative assessment of the interpersonal aspect. Because of these challenges, investigations of quality of care need to employ triangulation in both methodology and participant selection.

MOTIVATION FOR THE STUDY

While it is too early to assess fully the impact of the syndromic approach on the control of STIs and HIV infections in South Africa, it is important to investigate whether the approach is being implemented as recommended and also to explore for areas of weakness in the approach. The quality of care in the management of STIs is important both in influencing decisions by infected persons to seek health care and in the provision of effective treatment against such infections. The vast majority of South African studies conducted on the management of STIs have been done in one area, often in one clinic only. While the value of these studies is indisputable, very little research has been done at a national level, with the result that information regarding the overall picture of STI management in South Africa is scant. All these factors have been taken into account in the design and implementation of the present study. An accurate assessment of services will enable the South African government to formulate and implement policies which target those areas of service provision that have been correctly identified as deficient. In addition, it will highlight what health workers need in order to provide quality services for clinic users as well as what the needs of STI patients are with respect to adequate care.

This study aims to provide an overview of the quality of care for STIs in primary health care centres by looking at the structure, process and outcomes of service delivery. In assessing the process and outcome, the views of health providers and patients will be elicited through various methods, which are described in the next chapter.

CHAPTER SUMMARY

This chapter looked at the management of STIs within the public health sector, focusing particularly on primary health care clinics. Following a brief description of the two main modes of service delivery, the main elements of the syndromic approach were discussed, highlighting issues that research has shown to be important in each of these. More importantly, the literature suggests that the interpersonal aspect of management is crucial for the successful implementation of the other, more clinical aspects. However, counselling and education are the least clearly defined dimensions of the syndromic approach, while they are both essential for ensuring the patient's compliance with the drug regime, partner notification and condom use. The last section involved a discussion on the concept of quality of care, highlighting the different elements involved in delivering good quality care for patients with STIs. While structural provisioning is essential, it is clear that effective management and desirable outcomes are heavily influenced by the process of service delivery, of which interpersonal relations between health providers and patients are crucial. The next chapter will present the methodology through which the quality of care for persons with STIs in South African PHCs was evaluated. The implementation of the syndromic approach in various PHCs was used as the standard against which to measure the quality of care in these centres.

CHAPTER FOUR

METHODOLOGY

INTRODUCTION

This chapter aims to describe the methodology used in the collection and analysis of data for this project. The first section will consider methodological issues in quality of care research, focusing on the process of triangulation and how it was employed in the study. The use of both quantitative and qualitative methods for methodological triangulation as well participant triangulation, including participant observation, will be explained. The next part will describe the sites, participants and instruments used and end with a description of how the data was analysed.

The primary aim of this study was to investigate the quality of care received by persons suffering from STIs by examining the extent to which the syndromic case management approach is being correctly applied in primary health care centres in South Africa. The study was undertaken in conjunction with a bigger research project into health-seeking behaviours of people with an STI, as well as patients' beliefs and knowledge of STIs, which was commissioned by the National Department of Health and administered by the Medical Research Council (MRC).

METHODOLOGICAL CONSIDERATIONS

Investigations of the quality of health care are generally difficult because of the many components that are contained in the concept of quality of care, including availability and accessibility of services and resources, as well as the actual encounter between provider and patient. Franco and colleagues (1997) indicate, for example, that there are many untested assumptions about the validity of direct observations and that there is no published data on comparisons of the reliability and validity of data collection methods between developed and developing countries. For this and other similar reasons, this study involved triangulation at different levels.

The use of triangulation is seen as a means of capturing slightly differing facets of the same symbolic reality as well as assuring the validity of observed phenomena and minimising researcher bias. According to Berg (1995) the term triangulation was first used in the social sciences as a form of convergent validation in which different data collection techniques were used to measure a single construct or concept. The use has been expanded to include what Denzin (1978) refers to as lines of action. For him, triangulation may involve the use of multiple theories, researchers, methodologies and techniques of data collection or any combination of these four areas of the research process. He outlines these as data triangulation, which he describes as having three subtypes (time, space and person); investigator triangulation, which involves more than one observer for the same reality; theory triangulation, consisting of the use of multiple rather than one perspective when looking at the same phenomena; and methodological triangulation, which may include within-method and between-method triangulation. For the purpose of this study methodological and participant triangulation were employed.

Methodological triangulation

A combination of qualitative and quantitative methodologies was used to enhance the results as it was felt that they complemented each other in providing a more robust picture of the quality of care at the centres. The two methodologies are based on different paradigms, each of which has its own ontological and epistemological assumptions that impact on research methods and techniques. While there have been debates about the compatibility of the two, Mouton (1996) argues that there are limitations to whichever methodology one uses and that the choice of one does not necessarily mean one is accepting all the assumptions about human beings inherent in the particular methodology. He also cautions against what he calls the 'philosopher's fallacy' (Mouton, 1996, p. 39) with respect to the incompatibility of epistemological and ontological assumptions. He argues that some of the issues they raise are critical only in relation to metascience and that, while this attitude may not necessarily be right in all cases, it is possible to reconcile different approaches for different studies. Other researchers have argued that the two are not mutually exclusive and can even enhance the findings (May, 1993; Neuman, 2000; Rosnow & Rosenthal, 2002).

Quantitative methods

The long-standing dominance of quantitative research in the social sciences derived mostly from its adherence to stringent scientific criteria that require that all aspects of the research process be clearly and explicitly defined and declared. The quantitative approach in the social sciences is often associated with positivism, a term used to characterise a number of historical positions within the domain of science (Mouton, 1996). Within this paradigm, scientific research is understood as an objective, logical and empirical activity that requires the researcher to adhere to procedures based on a hypothetico-deductive model that begins with a theory from which a hypothesis is developed, observations made and interpretations derived which either prove or disprove the theory (Terre Blanche & Durrheim, 1999). The ontology of positivist science, which views that which is to be studied as stable external reality, allows one to adopt an objective stance of being a detached observer and to employ, among others, a quantitative approach to the process of data collection and analysis (Hayes, 2000; Terre Blanche & Durrheim, 1999).

One of the basic requirements of the underlying `scientific' method of social enquiry is that the concept being studied needs to be unpacked, since concepts, as abstract ideas, need to be translated into observable and measurable items. This is particularly useful in the social sciences where meanings are not fixed but derive from the context in which they are used. Bruce (1990) indicates that confusion about the meaning of quality, for example, may have contributed to problems about drawing parameters around the phrase 'quality of care', which has been used to refer to various aspects and processes of health service delivery. While there are aspects which may be common to all health services, such as availability of resources, accessibility of the service to consumers, consumer participation and effectiveness of the service, there may also be variations deriving from issues that are pertinent to the particular service that is being offered (Haddad *et al.*, 1998; Ndulo *et al.*, 1995). Evaluations of family planning services, for example, will place greater value on acceptance and continued use of a particular method of contraception, whereas in STI care there is greater emphasis on completing the treatment even when symptoms have abated (Bruce, 1990; Mathews *et al.*, 1998). The process of developing operational definitions and indicators thus makes explicit from the outset what it is that is being measured and how it will be done.

A further advantage of quantitative measures is the minimisation of researcher bias through strict adherence to standardized administration of standardized instruments. In addition to clear statements and articulation of operational definitions, research instruments are required to adhere to stringent criteria of reliability and varying types of validity, and a great deal of care needs to be put into the selection and/or creation of the research instrument, administration and analysis of the data (Najman, Morrison, Williams & Andersen, 1992). Because of the evaluative nature of the study, and the possible biases that may derive from this, as well as the sensitivity of the issues on sexuality and STIs, the use of standardized instruments and procedures in collecting the data was judged to be particularly useful for ensuring that the epistemological objectivity that underpins positivist research was maintained, thus eliminating, or at least minimizing, researcher bias (Terre Blanche & Durrheim, 1999).

The standardization inherent in the quantitative part of this study allowed the researcher to replicate the process as similarly as possible in the different regions and settings. In addition, Terre Blanche and Durrheim (1999) argue that while quantitative approaches may have an inherent danger of being bound to the theory from which they derive and thus represent only one of many possible perspectives on the event, they do work to produce closer and closer approximations to a true account of an event. For this study, the quantitative part of the research, particularly through the use of structured questionnaires, was expected to yield data that is as broad and inclusive as possible (Mouton & Marais, 1990). In addition, the quantitative measures were useful for providing descriptive baseline and discrete information about certain variables, for example the type and quantity of drugs, which could be compared with standards stated in policy documents. This part of the study was thus expected to give an overall view of quality of care while qualitative interviews would provide a deeper and nuanced view of the process of health care-giving.

Despite their many advantages, quantitative approaches in the social sciences have been attacked for their uncritical adoption of methods deriving from and more suited to the natural sciences, including rigid definition of what counts as valid scientific knowledge as well as appropriate methods of knowledge-production. The narrow definition and methods of natural science, while being appropriate for inanimate matter, were judged to be insufficient to account for human behaviour which is impacted upon by thoughts, ideas and social, cultural and political factors (Hayes, 2000; Mouton & Marais, 1990; Terre Blanche & Durrheim, 1999). As indicated above, while they can give a broad picture, quantitative measures are unable to provide a deeper understanding of the nature of the social phenomenon of interest, what Mouton and Marais (1990) refer to as the depth dimension to research, and are insufficient for describing the interpersonal and dynamic aspects of the process of service delivery. Berg (1995, p. 7) cautions that if human beings and their experiences are studied in a 'symbolically reduced, statistically aggregate' manner, the conclusions that one reaches may not fit the reality of the situation and argues that qualitative methods provide richer data since they examine the various settings people inhabit and how they arrange themselves and their settings in making sense of their experiences.

Qualitative methods

Since not all aspects of the service delivery can be adequately described through what is `elementally the amount of something' (Berg, 1995, p. 2), qualitative methods, which yield information on the depth, essence and ambience of the process, were also employed. Qualitative methods, which arose out of the social sciences' discontent with the hegemony of empiricist, positivist approaches to scientific enquiry, as well as what was perceived as reductionist methods of understanding human behaviour, are particularly useful when dealing with sensitive issues that are personal, private and sometimes illicit, such as sexuality (Hollway, 1989; Power, 2002; Strebel, 1995). Thus, they were judged to be appropriate for supplementing/complementing data derived from the questionnaires.

The qualitative research paradigm includes a number of different methods of doing social research but which have in common an overriding interest in understanding human behaviour within its context. According to Berg (1995) human beings make sense of their environment through symbolic interaction, thus meaning is derived from the social processes of people or groups interacting. Subjective meanings allow humans to produce different realities that constitute the sensory world and it is on the basis of these meanings that people function and experience the 'real' world. Terre Blanche and

Durrheim (1999) outline two broad approaches within the realm of qualitative social research that are differentiated by their ontological assumptions, the interpretive and the constructionist approaches. The interpretive approach assumes that people's subjective experiences are real and can be best understood by interacting and listening to them. Constructionist approaches move beyond the individual and look at the social context within which such meanings are made and which in fact contribute in a less obvious manner to the ways in which people make sense of their experiences, such as cultural and political factors (Terre Blanche & Durrheim, 1999; Terre Blanche & Kelly, 1999).

Interpretive research, which is based on first-hand accounts of the phenomenon from the subject, as well as an understanding of the phenomelogical context in which it occurs, was employed in this study for capturing the meanings that STI patients gave to their experiences in relation to the services provided at PHCs, especially because of the stigma attached to the illnesses and the feelings that accompany them. This is useful in social science research because the participant is viewed as an active processor of information whose view of the situation is determined by a number of intra- and interpersonal factors, and the reality which counts is that perceived by the subject (Berg, 1995; Hayes, 2000). This may, to some extent, account for the fact that studies evaluating the quality of service provision have often found discrepancies between objective measurements and perceptions of both clients and service provider (Franco *et al.*, 1997). Qualitative methods in this study included in-depth interviews with STI patients and focus group discussions with various community groups.

A further consideration, within the interpretive approach, is that the process of collecting data needs to be done in context (Terre Blanche & Kelly, 1999) and for this project this meant that a substantial amount of data collection had to be done in the clinics. Thus, while acknowledging that using the health care centres may have created problems in that patients may have felt uncomfortable about the unclear role of researchers and their relationship to the setting, as well as the researcher's discomfort about the effect of the dominant biomedical approach in PHCs, the purpose of the study was evaluation of the care in the clinics and it seemed best to be located there. In addition, the PHCs were a convenient place in which to access people who had just received the service that was being studied. In order to counter some of the difficulties that may have risen from being based at the clinics, participant observation was used to allow for a more objective view of the services.

Thus, the first section of this study, which aimed at investigating the availability of resources, was quantitative in nature and involved the use of indicators of quality of care, including those identified in the literature such as distance travelled to the clinic, time spent in consultation with health workers, the availability of resources and others. The second part, which focussed on the process of care and management of STI patients, entailed the use of a combination of quantitative and qualitative methods, using semi-structured interviews with service providers and patients in order to assess the quality of the consultation from the perspective of both health workers and patients. In-depth qualitative interviews were also conducted with a sub-sample of the patients. Participant observation, using trained researchers who presented as simulated patients, was also used in this process of triangulation to provide a comprehensive picture through different perspectives. In addition, qualitative focus group discussions were conducted with various community groupings.

Participant triangulation

This study sought to understand both the technical and the interpersonal aspects of service provision by using a combination of quantitative and qualitative measures, as outlined above. The interpersonal aspect is particularly difficult to assess because it is a dyadic interaction that can only be observed by the two parties involved. The WHO has provided guidance through the development of facility-based quality assessment protocols for STI management that, in addition to inventories of the facility, include provider and patient interviews as well as observations done by simulated patients (Franco *et al.,* 1997). Elements of this protocol have been used in a number of studies, with the majority of studies using at least one of four possible ways of observing and appraising the service delivery process. One has been the use of STI patient appraisals of the service they receive (e.g. Mathews *et al.*, 1998; Ndulo *et al.*, 1995). Second has been the use of direct observers, namely, researchers who sit in on consultations with STI patients (e.g. Boonstra *et al.* 2003; Bryce *et al.*, 1994). Third has been the use of participant observation, whereby 'simulated patients' present at a health service as STI patients for the express purpose of assessing the service (e.g. Harrison *et al.*, 1998). Fourthly, interviews have been conducted with service providers (e.g. Mofokeng *et al.*, Oskowitz, Schneider & Hlatshwayo, 1997).

Although assessments of care-giving have often been done through direct or indirect observations, both types have inherent problems. For example, clinical records may be used to investigate the number of patients seen and medications dispensed to patients as an indirect method but this does not give one any indication of the quality of the interaction. Direct observations are equally problematic because the presence of an observer and/or knowledge that one is being observed often introduce bias (Franco *et al.*, 1997; Rethans, Westin & Hays, 1996). Thus, the data for this study was collected from four sets of samples, namely health providers, STI patients, simulated patients and community focus groups.

Health providers

Assessments of health service provision, using a combination of qualitative and quantitative methods, have often been done by interviewing health providers (e.g. Coetzee & Magwaza, 1997; Mofokeng, Bachman, Cooper & Coetzee, 1996; Oskowitz, Schneider & Hlatshwayo, 1997). As the people required to provide the quality service and whose behaviour is often the subject of study, the reports of health providers are useful for gaining an understanding of providers' perspectives of their own functioning. For the purpose of this project, health providers were required to report on the resources available to them as well as their overall functioning in relation to STI patients.

It has been shown that self-report measures are problematic in that they rely on recall and are susceptible to observation bias, in which subjects are likely to present a favourable, socially desirable account of their behaviours or, in health care, their competence and performance (Madden, Quick, Ross-Degan & Kafle, 1997; Rethans *et al.*, 1996). Franco *et al.* (1997) argue that while such interviews are useful for assessing the knowledge about the related field, they may not necessarily tell us about the actual practices. There is evidence to suggest that what health providers say they do does not necessarily correspond with what they do in real-life situations (Madden *et al.,* 1997; Rethans *et al.*, 1996). Some researchers have attempted to circumvent this problem through direct observation of the actual encounter between patient and provider. However, such observation cannot be seen as a sample of providers' day to day functioning with respect to the process of care since the presence of the observer is likely to influence the provider's behaviour one way or the other. In addition, it is argued that providers may have difficulty visualizing, abstractly, an actual encounter with a patient and thus the information given may be incomplete (Franco *et al.*, 1997. In order to address some of the above issues, interviews with health providers were complemented by interviews with STI and simulated patients.

STI patients

Assessing the quality of the service from patients' perspectives has been used successfully to investigate various health-related activities, such as drug treatment in Nigeria and dispensing practices in Kenya (Igun, 1987; Kloos, Chama, Abemo, Tsadik & Belay, 1986, both cited in Madden *et al.*, 1997) and for evaluating STI services (Mathews *et al.*, 1998; Ndulo *et al.*, 1995). Patients' perceptions of the quality of care have been found to influence health-seeking behaviours and compliance with various aspects of the treatment regimen (Darrow & Siegel, 1990; Haddad *et al.*, 1990; Ley, 1988, cited in Bennett, 2000).

However, a number of problems have been identified with the process of assessing quality from patients' perspectives, including logistical ones where patients may not be willing to participate, as well as difficulty comparing different patients' experiences as these may be influenced by other factors, such as social class. Furthermore, what these interviews yield is second-hand information from people who had not been prepared regarding what they should look for and their recall of the encounter may therefore not be complete (Madden *et al.*, 1997). Thus, while useful with respect to patients' perception of the quality of the service, they may not yield information that is as reliable as that received from trained observers.

Simulated patients as participant observers

Participant observation, described by Taylor and Bogden (1984, p. 15) as 'research that involves social interaction between the researcher and participants in the milieu of the latter, during which data are systematically and unobtrusively gathered', is a method of social enquiry that seeks to understand phenomena as they occur in natural settings. These authors further indicate that while the researcher may have some general area of interest, the specifics of the process emerge and are informed by the characteristics of the setting and interactions with participants. Thus, while the researchers who adopted the roles of simulated patients in this project were trained on what aspects of care-giving they had to observe and had access to the questionnaire that they had to complete after their sessions, they simply presented at the various PHCs as STI patients and let their investigation be guided by what transpired during their consultation with health providers. In addition, they were able to interact with real STI patients while waiting for service. As indicated by May (1993), social life is dynamic and can be better understood by immersing oneself in it, and the simulated patients were able to access socially-constructed meanings around STIs as well as more uncensored perceptions of the quality of care. Another advantage of this method of collecting data is that it reduces the possibility of the researcher imposing his/her own reality on the situation under study and misunderstanding the cultural context in which the interactions occur.

In order to experience fully the nature of STI care-giving for this study, the simulated patients did not disclose their roles as members of the research team. The use of such covert research techniques in health services has grown since the seminal study by Rosenham (1973) in which pseudo-patients presented with hallucinations in order to gain entry into a psychiatric hospital and to observe the process of care from within the institution. Since then, the technique has gained popularity as a substitute for or complementary method to direct observation and health provider report, and has been used extensively in developing countries where it is seen as a practical, adaptable and relatively inexpensive method of assessment (Madden *et al.*, 1997; Rethans *et al.*, 1996).

Engaging in the process requires the researcher to adopt either a pre-existent or created role, the level of whose engagement will be determined by the event under study (Neuman, 2000). May (1984) outlines four ways in which this can be done. Firstly, there is the role of complete observer, who does not participate in the social interactions of the setting; secondly, the observer as participant, in which the observer keeps his/her interactions with the participants limited as well as brief and formal;

thirdly the participant as observer, a role in which the researcher can act as both respondent and informant; and lastly, the complete participant who attempts to engage as fully as possible in the activities of the setting. For the purpose of this study, researchers assumed the role of observer as participant by posing as STI patients for the limited duration of the study (Taylor & Bogdan, 1984).

Such covert techniques have been criticised for being biased and issues of ethics have been raised. However, a number of researchers feel that the latter concerns are sufficiently addressed by informing the research providers in the selected sites about the imminent visits by simulated patients without disclosing the specific time of the visit (Franco *et al.*, 1997; Madden *et al.*, 1997). Since health providers are frequently unaware that the client being attended to is part of a research process, this technique affords investigators a good opportunity to observe providers carrying out their functions in the 'normal' way and yields unique data that would be impossible to get in any other way.

Community focus groups

Focus groups are defined by Berg (1995) as a style of interviewing small groups in order to learn about psychological and sociological characteristics and processes through guided or unguided discussions about the issue of interest to either the group or the researcher. By providing a 'supportive environment for exploration of meanings' (Strebel, 1995, p.60) focus groups yield an enhanced phenomenological view because the researcher is able to observe and record how meanings of particular experiences emerge and are understood in a socially-mediated way. In addition, focus groups, particularly if involving the use of vignettes, have been found to be useful in exploring sensitive issues, such as sexuality and STIs, because in talking about the hypothetical case, participants are able to consciously distance themselves from personal experiences with STIs, (e.g. Mkhonza, 1998; Strebel, 1993). In addition, focus groups provide insights that enhance the researcher's understanding of the issue of interest because participants also bring the personal into the discussion. In doing this, participants give the researcher a glimpse into how meanings about the particular event are socially mediated and constructed (Berg, 1995; Power, 2002).

The bracketing of discussion topics in focus groups shifts emphasis from the individual and, using the dynamics of the group, allows the phenomenon under discussion to be distanced from the participants because it is discussed away from the natural world where it occurs (Berg, 1995; Powers, 2002). This was particularly important for this study, where the use of PHCs as research sites may have limited STI patients' expression of their perceptions of quality of care. In addition, the vignette used to bracket discussions focused on health-seeking behaviours for STIs and allowed perceptions about quality of care to emerge in response to this. These relatively unsolicited responses thus gave an interesting view of how community members evaluated the quality of care at PHC centres.

RESEARCH SITES

Identifying and accessing sites

A total of 24 research sites located in the Western Cape, Eastern Cape, Mpumalanga and North West provinces were selected for the study. The first two regions were selected because at the time they were thought to have amongst the lowest rates of reported STIs, while the latter two were perceived to have among the highest rates of reported STIs. The STI rates were extrapolated from HIV surveillance data from the Seventh National HIV Survey (Department of Health, 1999). Although KwaZulu-Natal had the highest rate of HIV it was excluded because of a project involving the training of health workers in the implementation of the syndromic approach that was happening in that province at the time. Six of these centres were chosen in each province, in consultation with provincial, regional and/or district health structures. The process of deciding upon and getting access to health centres was thus complicated by having to go through a number of gate-keepers (Terre Blanche & Durrheim, 1999).

The first step involved informing all provincial directors of HIV/AIDS and STIs programmes of the project. These provincial health administrators assisted with the initial choosing of the six health centres. In order to get access to the actual health centres, however, it was necessary to approach the district administration, usually through the Communicable Disease Co-ordinators, who were more actively involved with the relevant health centres. Negotiating access through the various stakeholders was problematic. For example, some district administrators were unwilling to grant access to the clinics without permission from their regional directors, who then had to be apprised of the project. Some of the clinics themselves were reluctant to participate, either because they were wary of the district authority (having previously been local authority clinics) or because of the inevitable disruption of services that occurs when researchers make requests of clinic staff. Additional complications arose when it was realised that a particular clinic was simply unsuitable for the research (e.g. it had almost no STI cases) and the process had to begin again. According to the estimations of senior clinic staff, the number of STI patients in the PHCs that were eventually selected ranged from approximately 2 per week to approximately 200 per week.

Several factors were involved in the final choice of clinics. First, because of time constraints and the fact that the study design was largely based on interviews with STI patients, it was necessary to make use of clinics with a relatively large STI patient load. Second, the Department of Health structures were likely to have their own criteria for deciding which clinics could accommodate the researchers. In the end three rural and three urban PHCs in each region, identified by and selected in consultation with the appropriate regional and district health departments, were used as research sites and access to them negotiated with these structures. It is acknowledged that the involvement of the Department of Health structures may have introduced a selection bias in the choice of centres to be used for the study.

Description of the sites and their settings

Half of the 24 clinics selected were defined as urban and half rural. However this urban-rural divide needs to be treated with caution, as within each category the clinics, and the nature of the populations they served, varied enormously. Some were placed in urban townships, others in small rural villages and some in large rural townships. Several were in small towns, providing services both to inhabitants of the towns and to rural communities in the surrounding areas.

INSTRUMENTS

Four semi-structured interview schedules for the different groups of participants were developed over a three-month period in consultation with other researchers working in the field of STIs, drawing on questionnaires used in previous studies and information derived from literature searches done through the MRC. Each of the schedules was designed to capture information on the implementation of the syndromic management approach. For the purpose of validation, the instruments were sent for feedback to professionals who are involved in doing research in this area and whose works have been cited extensively in the text. The interview schedule for STI patients was translated into Xhosa, Zulu, Afrikaans and seTswana and then back-translated to English to check for reliability of the instrument. A pilot study was conducted in the Western Cape to check for problems in comprehensibility, language and content. The data from the pilot study was analysed and minor adjustments were made to the instrument before the national study was undertaken.

The questionnaires were constructed to capture both quantitative and qualitative aspects, using open-ended questionnaires for the latter. For the in-depth interviews with patients, which were expected to yield the bulk of the qualitative information, interview guidelines were developed in order to ensure that the area of interest was covered. Within the domain of qualitative research, interviews can range between two extremes of totally unstructured and structured, and the decision on how to proceed is informed by the research question (Berg, 1996; Hayes, 2000). Terre Blanche and Kelly (1999) indicate that while an unstructured interview is the best tool for collecting data, in context and within the interpretive framework, it is permissible to use a semi-structured instrument designed to focus the participants' responses towards the issue under investigation.

The first semi-structured interview schedule, which was an audit of the facility administered to managers of each PHCs, centred around the organisation and availability of physical, financial and human resources for the syndromic management of STIs. The first part looked at the infrastructure, focusing on issues like the accessibility of the PHC to patients, the availability of space as well as the staff responsible for the treatment of STD patients. The second section focused on the availability of essential drugs and equipment required for the correct diagnosis and treatment of patients. In addition to reporting on what was normally available, the instrument looked specifically at what was available on the day the investigation was carried out. The third section investigated the resources that the clinic had for implementing the non-clinical aspects of the syndromic approach, such as availability and distribution of condoms, practices around partner notification as well as education and counselling. The instrument was primarily designed to capture objective data through the use of close-ended questions, with a few open-ended ones aimed at eliciting the perceptions of clinic managers on problems experienced in providing quality care to STI patients and how these could be resolved (See Appendix A).

The second semi-structured interview schedule, which was designed to capture the actual process of service delivery from the health providers' perspective, focused on the practices that health providers engage in during consultations with STI patients. The schedule looked at the availability of the treatment protocols as well as their implementation, and covered the diagnostic and treatment processes, practices around contact tracing, condom promotion, education and counselling. The first section required health providers to report on how the process of diagnosis was done. The questions asked were based on the recommended procedure as outlined in the syndromic approach, including physical examination and referrals to secondary services in complicated or problematic cases. The second section looked at treatment and asked health providers to report on the drugs they prescribed for some of the common syndromes, such as genital ulcers, vaginal discharges and syphilis. In addition, health providers were asked to report on what they did if the recommended drugs were not available. The third section focused on education and counselling, with questions around what issues are routinely addressed in educating patients about STIs. The fourth part enquired about partner notification practices as well as health providers' perceptions of the response to this aspect of management. The fifth section looked at health providers' practices around condom promotion and the last section focused on the training needs of health providers with respect to managing STIs, as well as their views on problems with service provision and how these could be addressed (See Appendix B).

The third instrument consisted of a semi-structured interview schedule for STI patients, in which they were required to report on the care that they had just received. The first section aimed to capture demographic details of patients presenting at PHCs and included questions on age, schooling and employment status. The next section looked at the process of care received by clients, asking about history-taking, examination as well as instructions about completion of treatment, treatment of sexual partners and condom promotion. The last section attempted to elicit patients' evaluation of the quality of the care they had received and enquired about accessibility of the service, their interactions with service providers and their overall perceptions about areas that may need to be improved (See Appendix C). All interviews with the patients were conducted at the end of their consultation with health workers (exit interviews). In addition, unstructured depth interviews, covering the same areas of interest, were conducted with three STI patients at each urban PHC around their perceptions of the services. The use of only urban PHCs for the latter was largely pragmatic as these centres tended to see more patients than their rural counterparts.

The fourth instrument was a semi-structured interview schedule designed for completion by the simulated patients at the end of their consultations. Because they were trained in the research methodology and thus knew what to look for, the questionnaire asked specific questions that elicited details of the history-taking process, diagnosis and the treatment received. The sections dealing with condom promotion, contact tracing and education and counselling also required them to give details of the content of their interactions with health providers (see Appendix D). In addition to the overall quantitative ratings in the questionnaire, simulated patients were also required to keep journals and field notes in order to capture their observations of each setting and possibly provide information that was not covered in the instrument

The last instrument was a short vignette used to guide focus group discussions. The basic content of the story consisted of an individual who is presenting with symptoms of STI and the groups were asked what the individual should do (see Appendix E). The demographics of the case were altered to fit the profile of the different groups, for example with sex-workers' groups the person was a sex-worker and with a group of male mine workers he was a male miner.

PARTICIPANTS

Health providers

Two categories of interviews were done with health providers. For the facility audit, 30-40 minute interviews were conducted with the managers of each of the 24 PHCs at pre-arranged times, using the first interview schedule. Then three health providers at 23 sites and two at the last one (total = 71) were interviewed individually, using the second schedule concerning both the availability of resources and their practices in the diagnosis and management of patients with STIs. The aspect focussing on practice essentially required health providers to give self-report accounts of their actual encounters with patients. The total number of health providers interviewed came to 95.

STI patients

A convenience sample (Baker, 1999) of six patients with STIs who had just received treatment during the one week of data collection that was spent at each PHC, were interviewed at the end of their consultations with health providers, using the third semi-structured interview schedule. The STI patients were identified and referred to the researcher by the health providers, thus representing a possible selection bias. Qualitative depth interviews were also conducted with three other STI patients, accessed in a similar way, at each urban centre. The final sample consisted of 126 patients with STIs, and Table 1 presents a biographical description of this group of participants.

Table 1: Demographic characteristics of STD patients

Demographics	n	%
Gender:		
Male	45	36
Female	81	64
Age:		
Under 15 yrs	1	1
16-25 yrs	61	48
26-40 yrs	58	46
41- 60 yrs	6	5
Race:		
African	117	93
Coloured/Indian	9	7
Work:		
Employed	46	37
Unemployed	80	64
Marital Status:		
Married	26	21
Cohabiting	25	20
Separated	4	3
Divorced	1	1
Single	68	55

Simulated patients

Four research assistants, two males and two females, presented as STI patients at each centre during the same week of data collection. It was crucial for the simulated patients to present with realistic problems that were appropriate for the setting and the service being evaluated. According to Madden *et al.* (1997), the first step in using this technique is to construct a set of appropriate detail and personal information and to decide how this will be presented to the health worker. Furthermore, having the simulated patients present with the same set of symptoms or problem ensured that they are 'standardized' (Rethans *et al.,* 1996), thus addressing some problems with validity and providing for comparability of the results.

For the purpose of this study, and in order to minimise potentially invasive interventions and the risk of being `found out' during an examination, the male simulated patients presented with symptoms of burning urine and itchy genitals, and female simulated patients as an asymptomatic contact of a partner whom they suspected of having an STI. After their consultation they completed a questionnaire measuring the quality of care received. Although the clinics were informed about the fact that at some point over a three-month period there would be researchers visiting the clinic 'acting' as STI patients, the health providers remained unaware of the fact that these specific 'patients' were in fact members of the research team. At one of the clinics, both simulated patients were not treated at all and therefore unable to complete the questionnaire. Results from the simulated patients are therefore based on 38 (20 male, 18 female) simulated patient visits to 20 clinics.

In addition to providing quantitative data on aspects of the consultation with health providers, they were also required to keep field notes in which they commented on their observations of the physical setting and their interactions with STI patients with whom they developed relationships. The participant observers were thus able, by presenting as simulated patients, to gather data from real STI patients while waiting to be seen by health providers that provided insight into how real STI patients understood and dealt with issues around STIs. This covert aspect of the study yielded data about the quality of care at the PHCs from multiple sources who were not aware of being observed.

Focus groups

Ten focus group discussions were conducted with different community groupings in the four provinces. The constitution of the groups differed in various ways, with some consisting of male or female participants only, while others were mixed. Other demographic characteristics varied as well, as described in Appendix F. Each group was given a scenario of someone who had STI symptoms as a point from which to discuss their perceptions of STIs and of health-seeking behaviour in the community. The demographics of the hypothetical case were altered to fit the general profile of the group in order to facilitate identification with him/her. Although the stated goal of the discussions was related to health-seeking behaviours, perceptions of the quality of STI care were also elicited in these discussions

PROCEDURE

Research team

The research team consisted of a combination of experienced researchers, including the writer of this thesis, from the Psychology Department of the University of the Western Cape (UWC), a full-time research co-ordinator, and several research assistants who were post-graduate students undergoing training in research methods. A number of the students outlined smaller studies within the larger project, which they explored as part of their degree requirements. Within the research team there was the necessary spread of languages for interviewing in the four provinces.

Preparing researchers for the project

Oskowitz and Meulenberg-Buskens (1997), in a discussion on researcher preparation for qualitative research interviews with STI patients, noted how researchers themselves grappled with preconceived ideas and unresolved issues around sex, sexuality and people who have STIs. Because of the degree to which such preconceived ideas are likely to be entrenched, the primary researchers found that a pre-fieldwork procedure was necessary - the researchers were provided with a safe environment in which they could become aware of their ideas and prejudices by reflecting on their own feelings, before facing STI patient respondents with empathy. In this study, to familiarise researchers with issues around STIs, a professional nurse from the UWC Health Centre who had extensive experience in dealing with STIs gave the team a talk on the infections as well as other problems and issues confronted by patients who have contracted one. Furthermore, research assistants were trained in interviewing skills, covering the areas outlined by Seidman (1991, cited in Terre Blanche & Kelly, 1999) which include: listening more and talking less, following up participants' responses, exploring and not probing, asking open-ended questions that do not presume an answer, keeping the participant focused and tolerating silences in order to allow interviewees to be thoughtful.

Data collection

The process of data collection was done one province at a time, in the following order: Western Cape, North West, Mpumalanga, Eastern Cape. The Western Cape was done first as it was the most accessible to the research team, and experiences here were helpful in the logistical planning of the fieldwork in the more distant provinces. While it was relatively easy to plan the interviews of the health-providers, the STI patient interviews were dependent on the presentation of STI patients at the clinics. The time factor of waiting for STI patients greatly influenced the planning and nature of the fieldwork. In the clinics visited in the Western Cape, where it was expected that at least eight STI patient interviews could be done in a week, interviewers sometimes struggled to complete more than two, especially at the more rural clinics. This informed, in part, the final selection of clinics in the other provinces as already mentioned above. Even with this selection criterion being used, it often seemed that the reported STI statistics did not reflect the actual number of STI patients visiting the PHCs, at least during the one week allocated for each province. It was thus decided to interview as many STI patients as possible at each clinic within the space of a week.

For each province (apart from the Western Cape, which was more accessible), two teams of approximately seven researchers each were sent for a week of fieldwork, each team being responsible for three clinics. Two or three interviewers were based at each clinic, depending on its size. There were also two simulated patients in each team (one male, one female) and one co-ordinator who was responsible for overseeing the interviews being conducted at the clinics.

All the individual interviews were conducted at the clinic. On the first day at each site, the two simulated patients were dropped off a short distance from the PHCs and walked the rest of the way to join other patients waiting for service at the clinic. The rest of the team proceeded to the clinic, where they were introduced to the staff. Following a brief explanation about the study, arrangements were made with the health providers to send every patient with STI to members of the research team. Arrangements were also made for the interviewing of the manager and the health providers who consulted STI patients.

One researcher interviewed the manager and the staff, while the other/s worked with the patients. The author of this documented, who generally stayed with one team but sometimes moved to the other team for the purpose of accessing more patients, conducted a large number of the patient and health provider interviews. The STI patients were interviewed at the end of the treatment process, including receiving of the prescribed drugs. The interviewers would then explain the purpose and nature of the task and get the patient's permission for the interview. For the depth interviews patients' permission was also asked with respect to tape recording the interview. For the most part it was possible to conduct the interviews in a private room. However, there were times when the staff came in and out of the room, or even sat and worked in the room for a period of time. At one clinic the author eventually continued the interviews outside in order to protect the patients' privacy. Each interview took between 45 and 90 minutes to complete.

The focus group discussions were conducted outside the PHCs. The groups were organized through contacts of various members of the research team. Because some of the participants were employed, some of the focus group discussions were done after-hours at pre-arranged venues. The focus groups were facilitated by teams consisting of senior and junior researchers, including the writer of this document. After the introductions were done, the facilitator explained the purpose of the session and the task they were required to perform. Permission was sought for audio-recording the discussions. The co-facilitator in each group took notes during proceedings. The duration of the discussions varied from one and half to two hours.

At the end of interviews with STI patients and focus group discussions, the participants were each given R40.00 as a token of appreciation for their time and their contribution. Similarly, at the end of the week of fieldwork, each PHC was given R250.00 to use in whatever way they felt would most benefit the clinic.

DATA ANALYSIS

Data capturing

Before capturing the quantitative data for analysis, it was necessary to develop a code-book for each of the semi-structured interviews. Where the questions were open-ended, coding categories were constructed so that almost all of the questions from these interviews could be captured and used for statistical analysis. The majority of open-ended questions were also captured verbatim in order to maintain the substance of the responses and for the purpose of analysing them qualitatively. There were four sets of semi-structured interviews or questionnaires: the clinic profile, the interviews with health providers and STI patients as well as the simulated patient questionnaire. Each of these was then coded and captured separately. The statistical package used for the quantitative data was SPSS version 8.0.

Analysis

Since all the questionnaires contained both open and closed-ended questions, qualitative and quantitative analysis was used. The closed-ended items were analysed quantitatively by drawing on a number of statistical analysis techniques. Descriptive statistics such as frequencies of occurrences and means were computed in order to describe patterns and trends in the data. In addition, a number of techniques were used for comparative purposes. Firstly, cross tabulations were conducted to ascertain whether there were any gender, provincial (divided into high and low-risk provinces) and urban-rural differences and the Pearson Chi-square was computed to test for the significance, with alpha set at 0.05. Secondly, composite scores were computed for the purposes of comparing the groups on their perceptions of service.

A composite score for 'quality of STI care' was constructed for health providers, simulated and STI patients. Twelve items from the responses of all three groups, each of which measured an aspect of the quality of STI care, were extracted and used to compute the composite scores. The items differed slightly for each of the participant groups (see Appendix G for items). Thus, each health provider, simulated patient and STI patient received a quality of care score out of 12, the minimum score being 0 and the maximum being 12. These scores were also grouped into three to form a three-point scale. A score of 0-4 indicated 'poor' quality of care; a score of 5-8 indicated 'average' quality of care; and a score of 9-12 indicated 'good' quality of care.

Using the composite scores, the derived quality of care scores were used to compare health provider reports of their routine practices in the management of STI patients with those of simulated and STI patients. These computed scores were also used to assess whether quality of care differed according to gender, high/low-risk provinces and urban/rural background using the 95% confidence interval.

All the qualitative data from the audio-taped depth interviews with STI patients and focus group discussions, as well as simulated patients' field notes were transcribed verbatim according to standardised transcription conventions (see Appendix H). All transcripts in Afrikaans and African-languages were translated into English. Thematic analysis of the open-ended questions and the translated texts was done, drawing on the dominant themes that emerged out of each of these sources. The process of thematic analysis, which is one way of doing interpretive analysis, was done in accordance with the steps outlined by qualitative researchers (e.g. Berg, 1996; Hayes, 2000: Terre Blanche & Kelly, 1999). While they are described separately, these processes were not discrete and overlapped with each other.

The first part consisted of immersing the researcher in the data by reading and re-reading the transcripts as well as the field notes from the simulated patients. The second part involved inducing themes from the data and, while the researcher tried to stay as close to the data as possible, there was also a focus on processes, functions, tensions and contradictions within the data (Terre Blanche & Kelly, 1999). This was done essentially to prevent this part of the process from becoming a mere descriptive summary of the data. During the third phase, sections of the transcripts were cut into pieces, organised according to themes and given labels. A number of themes relating to the quality of care were extracted. The fourth aspect involved elaboration, aimed at exploring the derived themes and identifying nuances, tensions and contradictions in the data. The last aspect consisted of interpretation of the data and selecting sections for inclusion into this report. As indicated above, the process was not as linear as suggested by this outline but it involved a lot of going back and forth between these steps as the analysis proceeded.

The results of the qualitative analysis were then triangulated with those from the quantitative sections of the study.

ETHICAL CONSIDERATIONS

Formal application for ethical clearance to conduct the project was obtained from the University of the Western Cape's Senate Research Committee prior to commencing data collection. All the data were collected anonymously, and confidentiality was maintained for all participants. Informed consent was sought from all participants, including patients, health providers and PHC managers, before their participation. The names of the 24 PHC centres chosen as research sites have been kept confidential in this report, and will remain confidential in all publications emerging from this research project. Finally, in order for simulation of STI patients to work effectively during participant observation, some deception of health providers was essential. However, prior to the fieldwork, the main contact person for each clinic was informed that simulated patients would be visiting their clinic at some point during a three-month period. In this way, informed consent was obtained without a high risk of health provider services being affected.

CHAPTER SUMMARY

This chapter described the methodology employed in the study, which involved the use of a combination of quantitative and qualitative methods of collecting and analysing the data. The process of participant and methodological triangulation that was employed to enhance the findings and attempts made to overcome some of the difficulties inherent in investigating the process of care-giving were highlighted. The chapter ended with a description of the research sites, research instruments and participants, as well as the procedures that were involved in the collection and analysis of data.

CHAPTER FIVE

QUANTITATIVE RESULTS - QUALITY OF CARE

INTRODUCTION

This chapter will present the quantitative findings of the study, which evaluated the quality of care from two broad perspectives. The first one looked at structural aspects of the PHCs, including the availability of resources, accessibility of the clinics as well as perceptions of health providers about these issues. This was done through interviews with managers of each of the health care centres and health providers responsible for the actual management of patients with STIs. The second broad strand focused on the actual service delivery and was assessed from the perspectives of both health providers and consumers of their services.

The first section of this chapter will report on the profile of the clinics with respect to available resources, beginning with personnel-related issues and proceeding with physical resources such as space, equipment, drugs, condoms and the accessibility of the clinics to clinic users. The next section will present findings related to the process of service delivery, starting with the time patients had to wait for consultations, issues of privacy and amount of time that providers spent in consultation with patients. Findings relating to the diagnostic process will be presented next, followed by management issues, such as informing clients of diagnosis, medication, condom promotion, partner notification and health education. This section will integrate findings from health providers, STI and simulated patients, with comparisons being made where pertinent. The last section will consist of overall ratings of the quality of care, beginning with findings derived from the composite scores compiled for health providers, STI and simulated patients. This will be followed by health providers' perceptions of the quality of care and problems identified as barriers to providing good quality care.

PROFILE OF PHC CENTRES: AVAILABLE RESOURCES FOR STI MANAGEMENT

Human resources

Staff profile

The 24 clinics varied considerably with respect to size. The staff numbers, which includes doctors, professional nurses, staff nurses, assistant nurses and part-time support staff such as counsellors and volunteer workers, ranged from three to 157, with the average being 19. The majority were full-time professional nurses, followed by full-time staff nurses and full-time nursing assistants. Only two PHC centres (8%) had full-time doctors on their establishment - one with seven and the other five. The majority (71%; n=17) of the PHC centres only had one part-time doctor each, one (4%) had two and one (4%) had four part-time doctors, while five (21%) had no doctors at all. At 23 centres (96%), the majority of STI patients who participated in the study were treated by professional nurses (83%; n=105), with only six (5%) being seen by doctors. Most of the health providers were female (83%; n=105).

Staff training

Managers at 20 (83%) of the PHC centres reported that their staff had to undergo special training in order for them to work with STI patients while the remaining four indicated that such training was not required. Results from health provider interviews indicated that in fact formal training on managing STIs had been received by 71% (n=50) of health providers during the past two years, most of which (80%; n=57) involved external trainers from the Department of Health. However, it appeared that there was a relatively high amount of informal training taking place, as 70% (n=50) of the health providers reporting that they had taught another health provider about managing STIs.

Regarding counselling, a majority (67%; n=16) of the PHC centres indicated that their staff were trained to counsel STI patients while seven (29%) of them revealed that their staff were not trained to do so. 58% (n=41) of health providers reported to have guidelines available on counselling STI patients. Of the 42% (n=30) who did not have guidelines, almost all (96%; n=29) felt that counselling guidelines would be useful.

Physical resources

Availability of space

The majority of PHC centres had both consulting rooms, which health providers use to take a history (92%; n=22), and a private room or compartment (n=23; 96%) for examining patients. Eighteen of the managers (75%) felt that they had sufficient space in their centres while the remaining six (25%) did not.

Availability of syndromic guidelines

Results showed the availability of the relevant treatment protocol to be good, with managers at all the 24 sites reporting that they had written syndromic guidelines for treatment of STIs. 50% of the PHC centres (n=12) had guidelines from the National Department of Health (DoH), while 21% (n=5) had those from provincial health departments and 17% (n=4) had both. The remaining three (12,5%) centres reported to have guidelines but did not indicate the origins. The good access to treatment protocols was confirmed by the findings from health providers, 99% (n=70) of whom reported that they had access to a standard treatment protocol.

Availability of STI drugs

Twenty-one (88%) of the managers reported that the necessary drugs required for treatment of STIs were always available while the remaining three (13%) indicated that the drugs were not always available. In slight contradiction to the above, however, as many as 38% (n=9) of the managers reported that they did experience some problems with the supply of drugs, with most of the problems relating to running out of drugs and/or late delivery of supplies. Similarly, 40% (n=28) of health providers reported that the drugs used to treat STIs were not always available and 11% (n=8) indicated that they frequently ran out of required essential drugs. No significant differences between urban and rural PHC centres or high risk and low risk provinces were found ($p < 0.05$).

With the exception of Imidazole (pessary), most PHC centres were reported by their managers to have most of the essential drugs used for the syndromic treatment of

STIs. Table 2 shows that indeed the majority of the centres had most of these drugs on site on the day of the visit.

Table 2: Availability of drugs on the day of the visit

Drugs	No of PHCs	%
Benzathin Penicillin	24	100
Erythromycin	20	83
Ciprofloxacin	22	92
Doxycycline	23	96
Flagyl	22	92
Imidazole	15	63

When asked what they do if the drugs are unavailable, 41% (n=29) of health provider indicated that they gave patients substitute antibiotics, while 32% (n=23) reported informing patients where else to get the medication and 14% (n=10) said that they would ask the patient to come back when the medication became available.

Availability of medical equipment

Nearly all of the PHC centres reported that they had sufficient stock of medical equipment needed to treat patients with STIs, namely gloves, light, specula and examination tables (see Table 3).

Table 3: Availability of equipment

Medical equipment	No of PHCs	%
Gloves	24	100
Light	21	88
Specula	23	96
Examination tables	23	96

Availability and distribution of condoms

The majority of health providers (99%; n=70) reported that there were condoms available for STI patients at the clinics. Most of the PHC centres (54%; n=13) obtained their supply of condoms from the national, provincial and/or district Department of Health authorities. Some came from local hospitals (25%; n=6) and 21% (n=5) got them from Aids Training, Information and Counselling Centres (ATICC). Only a minority of sites (29%; n=7) indicated that they experienced some problems maintaining the supply of condoms while the majority (67%; n=16) claimed that they did not experience any problems in this regard. There were no significant provincial or urban-rural differences found in availability of condoms ($p < 0.05$).

About half the centres (54%; n=13) reported to distribute condoms both during private consultation and in public (e.g. from a box in the waiting room). Twenty-five percent (n=6) of the centres indicated that they dispensed condoms during private consultation only, while 17% (n=4) did so in public only. Altogether, the centres reported to distribute an average of 3,395 (range 100 - 20,000) condoms each month.

Partner notification system

Nineteen of the PHC centres (79%) reported that they had a partner notification card system while the remaining five (21%) did not. All the five centres that did not use the card system relied upon verbally telling the patients to inform their partners to come for treatment. Two thirds of the PHC centres (67%; n=16) reported that they kept records of partners who did come for treatment. Of these, 44% (n=7) reported that they did so by collecting the partner notification cards, and another 25% (n=4) by asking each patient if s/he was a partner. The other eight PHC centres (33%) were vague about their methods of keeping records of partners, with many saying that they simply wrote it in the patient's file.

Availability and distribution of educational materials

While most of the PHC centres (96%; n=23) reported to have posters displayed on the walls and/or pamphlets available about HIV/AIDS, only 50% (n=12) also had posters and/or pamphlets about STIs other than HIV/AIDS. The posters about STIs mostly addressed transmission, causes and prevention. The majority of centres (67%; n=16) indicated that they received their educational material from national, provincial and/or district health departments. Of the remaining ones, four (17%) accessed these from ATICC and four (17%) from local hospitals. The dominant language of such educational material was English and the use of the other national languages was extremely low (see Table 4).

Table 4: Languages of educational materials

Language	No of PHCs	%
English	21	88
IsiXhosa	6	25
Afrikaans	3	13
IsiZulu	2	8
SeTswana	2	8
North/South seSotho	1	4
TOTAL	35*	

*Total exceeds 24 due to multiple responses.

In comparison to clinic reports on the availability of educational material, 51% (n=64) of STI patients reported that there was information about STIs to read. With regard to what was available, 49% (n=62) mentioned posters, 1% (n=1) reported there were pamphlets and 2% (n=3) mentioned comic books. With respect to health education, 92% (n=22) of the centres indicated that they provided health talks to patients about STIs. Half of the PHC centres (n =12) also reported that they used other media (e.g. videos) to teach patients about STIs while 11 (46%) of them did not do so.

Accessibility of services

Distance

The majority of both patients and PHC centre managers indicated that the PHC centres were easily accessible, with 75% (n=18) of the latter estimating that these were located within 5km for most users (see Table 5). In support of this, most of the STI patients reported that they lived near the clinics and this was confirmed when examining the amount of time patients had to travel to get to the clinic. 74% (n=93) of the patients said that it took them less than 30 minutes to reach the clinic, and altogether 96% (n=121) took under an hour. Only 4% (n=5) took more than an hour to get to the centres. No significant differences were found between urban and rural centres ($p < 0.05$) with respect to the time it took patients to travel to PHC centres. Regarding the means of getting to the centres/ transport, the majority of STI patients (71%; n=89) walked to the clinics, 20% (n=25) travelled by taxi, 5% (n=6) by car, 1% (n=1) by bicycle or cart and 2% (n=3) by train or bus.

Table 5: Managers' estimation of distances travelled by PHC users

Distance	No of PHCs	%
Within 1 km	4	17
1 - 2 km	8	33
3 - 5 km	6	25
More than 5 km	5	21
Unspecified	1	4
Total	24	100

Clinic operating times

The majority of the clinics were open for most of the day. All but one of the 24 PHC centres (96%) saw patients, including STI patients, everyday all day during working hours, with three (13%) remaining open for 24 hours. One centre (4%) saw STI patients on certain days only. Only two of the managers reported any problems with people coming at the wrong times. When patients were questioned about the clinic times 93% (n=117) of STI patients said they found the times convenient.

THE MANAGEMENT AND TREATMENT OF STI PATIENTS

Waiting for service

The amount of time patients had to wait at the PHC centres before being attended to ranged from less than 30 minutes to over 8 hours. Table 6 provides a breakdown of the time both STI and simulated patients had to wait to see a health provider.

Table 6: Time spent waiting for consultation

	STI patients		Simulated patients	
TIME	n	%	n	%
Less than 30 minutes	59	55	7	18
31 – 60 minutes	19	18	7	18
61 min – 2 hours	17	16	11	30
121 min – 4 hours	7	7	9	24
Over 4 hours	6	6	4	11
	108		38	

Privacy

According to reports from the managers the majority of the centres (96%; n=23) had a private room in which to consult and examine patients. In order to assess the degree of privacy of the actual consultations, all patients were asked whether they were consulted privately. 74% (n=93) of the patients reported that they were able to speak privately to the health providers. When asked to explain, it emerged that 56% (n=71) were alone in the room with the health worker during consultation, while 10% (n=13) said they spoke to health workers in the presence of other nurses and 6% (n=8) reported the presence of other unspecified people. On the other hand, 89% (n=34) of simulated patients reported to have been consulted privately, while the rest were seen in the presence of other health workers.

Time spent in consultation

Health providers were asked how long they generally spent on a consultation with an STI patient. Their reports were compared with those of STI and simulated patients, both of whom were asked to indicate how much time they had spent in the consultations with the health workers. 20% (n=14) of health providers reported to spend less than 5 minutes with STI patients and for about a third of simulated patients the consultation indeed lasted less than 5 minutes. From the health providers' perspective, most (69%; n=49) felt that they did not have enough time to spend with each STI patient. (See Table 7)

Table 7: Time spent in consultation with health provider

Time	Health provider		STI patients		Simulated Patients	
	n	%	n	%	n	%
Up to 15 min	57	80	90	71	27	71
16 – 30 min	13	18	34	27	9	24
Over 30 min	1	1	1	1	2	5
Total	71		125		38	

Diagnostic Procedures

A list of possible diagnostic procedures was presented to health providers, who were then asked to report whether they carried out these procedures 'always', 'sometimes' or 'never'. Most health providers reported that they always took a full history from patients and used the syndromic guidelines. Table 8 gives a breakdown of diagnostic procedures and the health providers' responses.

Table 8: Frequency of diagnostic procedures performed by providers

Diagnostic procedure	Always		Sometimes		Never	
	n	%	n	%	n	%
Using syndromic guidelines	62	88	9	12	0	0
Taking a full history	63	89	7	10	1	1
Asking about previous episodes	65	92	5	7	1	1
Treatment for previous episode	56	79	14	19	1	2
Doing a physical examination	43	61	28	39	0	0
Taking blood	22	31	44	62	5	7
Taking urine	14	19	38	54	3	4

Findings from the health provider reports on the history taking aspect of the diagnostic process were compared with simulated patients' reports on the diagnostic questions that they were asked. Contrary to most health providers' indication that they always took a full history from patients, including asking about previous episodes of STIs and treatment received for them, findings from the simulated patients indicate that this was not done as frequently as suggested in the previous section (see Table 9).

Table 9: Diagnostic questions asked from simulated patients

Questions asked	Females %	Males %
Pain during sex	6	
Heavy period bleeding	0	
Irregular period	6	
Date of last period	11	
Bleeding after sex	6	
Type of vaginal discharge	53	
Lower abdominal pain	29	
Genital sores	41	75
Duration of symptoms	59	68
Previous STIs within last 3 months	53	37
Previous treatment	35	24
Number of recent partners	47	32
Last sexual intercourse	41	16
Contraceptive use	12	33
Urethral discharge		90
Pain when urinating		90

Examination and blood-testing

In response to questions about performing vaginal and genital examination of female and male patients respectively, 61% (n=43) of health providers reported that they always examined all patients, while 39% (n=28) indicated that they only did this sometimes. Those who did not always examine patients indicated that the choice of who to examine among both male and female patients was largely dependant on the patient's history and symptoms. For female patients, the most common symptoms to warrant an examination were abdominal pain (24%) and abnormal discharge (18%). Further symptoms that prompted health providers to examine were genital sores and abnormal bleeding. Other responses to the question of who was examined included teenagers (12%) and non-pregnant women (12%). For male patients the most common symptoms that prompted health providers to perform an examination were penile sores (32%), penile discharge (26%) and swollen testes (18%). 8% of responses to this question mentioned examining only those men who did not mind being examined by a woman.

The findings from health providers on examination of STI patients were more or less congruent with STI patient reports, 60% (n=76) of whom reported that they were examined. Of those who were examined, 85% (n=65) said that they had consented to the examination, while 15% (n=11) reported that their permission was not obtained. More women (64%; n=52) were examined than men (53%; n=24) although the differences were not statistically significant ($p< 0.05$). Only 32 STI patients (25%) had blood taken for testing.

Diagnosis

STI patients were asked if they had been informed by health providers what the problem was and 55% (n=69) indicated that they had been told, while 33% (n=42) responded negatively. Patients' responses to an open-ended question about exactly what they had been told were coded and Table 10 gives a breakdown of the frequency of these responses. A similar proportion of patients were given either an inadequate explanation or none, while most were provided with an explicit STI label.

Table 10: Explanation of problem received from health providers

Explanation given	n	%
None given	28	22
Explicit STI labelling/explanation	45	36
Inadequate response	27	21
Inappropriate response	4	3
Don't remember	2	2
Total	106	84

Simulated patients were required to note the exact diagnostic label given. Most of them were not given any diagnosis or name for their 'illness' while others were told that it was *possible* they had an STI. Table 11 gives a breakdown of the diagnoses given to male and female simulated patients.

Table 11: Diagnosis given to simulated patients

Diagnosis given	Males		Females	
	n	%	n	%
Gonorrhoea	6	30	1	6
Vaginal discharge			1	6
Lay STI label (eg drop)	3	17	3	17
Possibility of STI	1	5	2	11
Diagnosis other than STI	5	25	1	6
No diagnosis	4	21	11	56
Total	19		19	

Treatment

As reported earlier, the majority of health providers indicated that they had access to a standard treatment protocol. They were asked about what medication they would routinely prescribe for five specific STIs and their answers were compared against relatively strict syndromic guidelines. The results indicated that the majority of health providers were not treating these according to the syndromic guidelines (as described in the treatment protocols). Adherence to the syndromic guidelines was highest for syphilis, followed by male urethral discharge. Table 12 indicates the number adhering to the syndromic guidelines.

Table 12: Health providers who were treating syndromically

Treated syndromically	Yes		No	
	n	%	n	%
Male genital ulcer	23	34	44	66
Female genital ulcer	20	30	45	69
Abnormal vaginal discharge	20	29	48	78
Urethral discharge	39	58	28	42
Syphilis	43	64	24	36

Apart from the one clinic that turned away the simulated patients, there were three encounters (one male, two female) in which simulated patients were given no medication. In the case of the male he was told that he had a 'normal rash'. The female was told in both cases that she would not be treated unless she returned with her partner. The majority of both male (85%; n=17) and female (72%; n=13) simulated patients were not treated according to the syndromic guidelines.

Instructions for treatment compliance

A comparison was made of health provider reports of what they emphasised to patients regarding treatment, and treatment instructions given to both STI and simulated patients. While 96% (n=68) of health providers reported to emphasise the importance of completing the medication, only 85% (n=107) of STI patients and 67% (n=26) of simulated patients reported that they were told to complete the full course of medication even if they felt better. Similarly, although 86% (n=61) of health providers said that they encouraged abstinence from sex or safe sex until the patient was completely healed, only 43% (n=16) of simulated patients were in fact told to abstain from or practise safe sex during treatment. Only 60% (n=23) of simulated patients felt that the treatment was clearly explained. Table 13 presents simulated patients' reports on treatment instructions.

Table 13: Treatment instructions to simulated patients

Instruction given	n	%
Complete full course even if feeling better	24	67
Practice safe sex or abstain from sex during treatment	15	43
Treatment was clearly explained	22	60
Return for follow-up consultation	17	45

Referral of STI patients elsewhere

While the majority of STI patients presenting at the PHC centres were treated there, 70% (n=50) of the health providers stated that they sometimes referred patients elsewhere. The kinds of patients who were referred elsewhere were mostly those with severe symptoms (42%), recurring STIs or STIs that were not responding to treatment (32%). Other patients who were referred included those with complications and those suspected of having HIV or another disease. Most health providers (69%; n=50) mentioned a general hospital as a place for referring such patients, but general practitioners (19%; n=14) and traditional healers (2%; n=1) were also mentioned.

Follow-up

A majority of health providers (61%; n=43) reported that they asked all STI patients to return for follow-up, 37% (n=26) reported asking some of them to return while 1 (1%) reported not asking anyone to return. The patients most commonly asked to return for follow-up were those presenting with severe symptoms or complications, those with symptoms that did not abate, those who had had blood taken, as well as those being treated for syphilis, which involves a series of weekly injections. Follow up attendance was reported to be very poor by most of the health providers, with nearly 40% (n=28) of health providers estimating that less than 10% of patients returned for follow-up, and 74% (n=53) estimating that less than 50% return.

However, contrary to health provider claims, only 46% (n=58) of STI patients and 45% (n=17) of simulated patients were actually asked to return for follow up treatment. Of the simulated patients who were given instructions to return, 79% (n=13) were asked to return within one week and 21% (n=4) within one month.

Partner notification

The vast majority of health providers (97%; n=69) reported that they stressed the importance of treating sexual partners as part of their management of STI patients.

As regards the mechanisms used for tracing partners, although more than half the clinic managers (79%; n=19) reported to have partner notification cards, a smaller proportion (68%; n=48) of health providers reported that they actually used partner notification cards. For the most part, whether partner notification cards were used or not, patients were asked to contact their partners, while 6% (n=4) said that clinics contacted the partners. One health provider (1%) reported to do home visits to contact partners.

Once again, health providers' reports were not consistent with STI and simulated patient reports about the emphasis on partner notification. Table 14 gives a breakdown of these patients' experiences.

Table 14: Partner notification

	STI patients		Simulated patients		
	n	%	n	%	
Need for partner to be treated mentioned	69	55	21	55	
Asked to tell partner to come for treatment	21	55			
Given partner notification/contact tracing slip	4	11			35

The rate of successful notification of partners was perceived by the health providers to be very low, with 39% (n=28) of health providers estimating that less than 10% of partners actually come to the clinic for treatment, and 83% (n=59) of them estimating that less than 50% of partners come. When talking to patients about the importance of telling partners, 39% (n=28) of health providers said that they would approach men and women differently.

Education by health providers

Explanation about nature and cause of STIs

All health providers claimed to talk routinely to patients about the causes and ways of spreading STIs. However, only 63% (n=79) of STI patients said that they were told what was wrong with them. Their responses, when asked what exactly they were told by health providers with respect to the cause of their illness, were coded and are presented together with simulated patients' responses in Table 15. The responses ranged from accurate explanations to no explanation at all, with a high percentage of both groups receiving no explanation (see Table 15).

Table 15: STI and simulated patients' reports of explanations for the cause of their illness

Explanation given	STI patients		Simulated patients	
	n	%	n	%
Sexual transmission mentioned	52	41	14	37
Inadequate explanation	10	8	4	11
Inappropriate/wrong explanation	6	5	4	11
No explanation given	54	43	16	42
Don't remember	3	4		

Health risks

An overwhelming majority of health providers reported to educate STI patients routinely about the possible complications of STIs, such as the increased risk of contracting HIV, the increased risk of infertility, spontaneous abortions and congenital syphilis. 85% (n=60) of health providers reported to talk to patients about the fact that STIs can be asymptomatic. However, less than half the simulated patients were told any of these things. Table 16 provides a breakdown of the health risks discussed with simulated patients.

Table 16: Health risks discussed with simulated patients

Health risks discussed	n	%
STIs increase risk of getting HIV/AIDS	15	40
STIs increase risk of infertility	3	8
STIs increase risk of congenital syphilis	9	24
STIs increase risk of spontaneous abortion	1	3
STIs may be asymptomatic	10	25

Condom promotion

The majority of health providers reported that they actively promoted condom use as part of their management. However a comparison of their responses with those of simulated patients showed that condoms were spoken about with only 58% (n=22) of these patients, with fewer still being shown how to use a condom. Table

17 below gives an indication of the discrepancy between reports by health providers of active condom promotion, and experiences of both simulated and STI patients.

Table 17: Condom promotion: health provider and patient reports

	Health provider		Simulated patients		STI patients	
	n	%	n	%	n	%
Use of condoms encouraged	71	100	22	58	-	
Condoms offered	69	97	13	34	50	40
Demonstration of use given	40	56	2	5	-	

Interestingly, among the STI patients, significantly more males (60%; n=27) than females (29%; n=24) were offered condoms during their visit to the clinic ($p > 0.05$).

Attitudes of health providers

The attitudes of health providers are obviously an important aspect of counselling patients around STIs, as well as of the quality of care more generally. STI and simulated patients were asked to indicate whether they had found the health providers 'helpful', 'respectful' and 'informative'. Simulated patients were somewhat more critical than STI patients of health provider attitudes, as can be seen from Table 18.

Table 18: Health provider attitudes

Attitude	STI patients		Simulated patients	
	n	%	n	%
Helpful	121	96	23	61
Respectful	117	93	33	87
Informative	111	88	19	50

OVERALL QUALITY OF STI CARE

As described in the previous chapter, composite scores to measure the overall quality of care were computed for health providers, STI and simulated patients. Each health provider, simulated patient and STI patient therefore received a Quality of Care score out of 12. Scores ranging from 9 – 12 were classified as good, while those from 4 – 8 were average and those from 0 – 3 were categorised as indicative of poor quality of care. The results are presented in Table 19, which is a summary of the composite scores for all three groups.

Table 19: Overall quality of care ratings

Composite rating	Health providers		STI patients		Simulated patients	
	n	%	n	%	n	%
Good	56	79	25	20	6	16
Average	15	21	96	76	18	47
Poor	0	0	6	5	14	37

The positive reporting by health providers with respect to the quality of STI care was shown to be inflated by the reports by both the simulated patients and STI patients. Health provider reports were therefore felt to be the least accurate reflection on the quality of care. Further analysis of STI and simulated patients' results showed no significant differences between urban and rural PHCs in quality of care. Regarding gender, more males received good `quality of care' among STI patients and more females received this among simulated patients but the differences were not significant ($p< 0.05$).

Health provider evaluations of the quality of care

Health providers were asked to give an overall rating of the STI treatment at their clinic on a 5-point scale ranging from very good to very poor. 38% (n=27) rated the overall treatment at their clinic as 'very good', 41% (n=29) rated it 'good' and 20% (n=14) rated it 'average'. None of the health providers rated their clinic as poor or very poor. These were similar to the composite score ratings.

Open ended questions were asked to elicit health providers' perceptions about what worked well at their clinics and what they felt the main problems were regarding STI treatment, as well as how they thought STI services could be improved. Responses were categorised and coded, but also analysed qualitatively. With respect to what worked well at the clinics, the most common response (36%) was that the drug treatment worked well. Health education was mentioned in 22% of responses. Other responses included counselling, condom promotion and contact tracing. However, 3% of responses indicated that nothing worked well with respect to STI treatment.

A wide variety of problems were mentioned, the most common being partner notification, staff shortages and the fact that treatment was not always available. Table 20 gives an indication of the wide range of problems that were mentioned.

Table 20: Problems reported by health providers

Problem identified	Frequency of responses	
	n	%
Partner notification	17	14
Staff shortage	16	13
Drugs not always available	15	12
Patients not returning for follow-up	10	8
Patients not complying with medication	6	5
Community reluctance to talk about sex	6	5
Stigma associated with STIs	6	5
No resources for home visits	5	4
Patients' resistance to STI diagnosis	5	4
Problematic staff attitudes	4	3
Staff not maintaining confidentiality	4	3
Language barriers	4	3
Insufficient health education for patients	4	3
Condoms not always available	2	2

Ideas on how STI services could be improved were as wide-ranging as the perceptions of the problems. However, 32% (n=23) of responses represented a strong feeling that more education was needed, with 16% (n=11) emphasising health education for patients, and 16% (n=11) emphasising health education in the general community. The need for more staff training made up 10% (n=7) of responses, as did the need for more human resources. A further 48% (n=34) of responses were made up of a number of more specific suggestions including: the provision of adequate drugs (8%; n=6); the provision of adequate equipment (8%; n=6); the provision of a dedicated STI clinic (5%; n=4); and the provision of money / transport for home visits (5%; n=4).

Health providers were also asked specifically how they thought clinics could improve partner notification and the use of condoms. With respect to partner notification, once again health providers gave a wide range of responses. Among the more common were the need for home visits (19%; n=14) and further health education (18%; n=13). Another 18% (n=13) of responses reflected that contact tracing was indeed a large problem, but that they were at a loss as to how to improve it. The most common response to the question of how the clinics could improve condom use was that education about condoms, STIs and/or AIDS needed to increase (56%; n=40). A few health providers (17%; n=12) felt that the clinics had done their best already and 12% (n=9) mentioned a need to distribute condoms in the community. Other, less common suggestions included: further education for health providers;

employing a full time person for the purpose of promoting condoms; and further research on if and how condoms are used.

CHAPTER SUMMARY

This chapter presented the quantitative results on quality of care, assessed from health provider, STI and simulated patient reports. The results showed that the majority of clinics were well-resourced regarding the availability of treatment guidelines, drugs, space, equipment and condoms needed for the syndromic management of STIs. Furthermore, most of the clinics indicated that health providers who managed STI patients were trained in the syndromic approach. Most of the training involved external trainers but informal training occurred between health providers themselves. Most of the clinics were reported to be accessible by both service providers and patients. However, resources were lacking in some areas. Although there was a good supply of educational material about HIV/AIDS at most of the clinics, there was a distinct lack of material about other STIs. In addition, almost all the educational material available was in English, with very few African languages being represented. The need for guidelines and training on counselling STI patients was also apparent, as few health providers were trained in this aspect of management and many felt that counselling guidelines would be useful.

With respect to the actual management of patients, there were indications that most health providers were not managing patients according to the syndromic guidelines. While most health providers reported following the recommended diagnostic and management guidelines, reports from STI and simulated patients indicated otherwise. Some of the contradictory findings will be picked up again in the next chapter, which will present a discussion of the results. The discussion chapter will also integrate the qualitative findings from depth interviews and focus group discussions.

CHAPTER SIX

ELABORATION AND DISCUSSION OF RESULTS

INTRODUCTION

This chapter aims to discuss the findings of the study in relation to the quality of care for patients with STIs. Overall, there are both similarities and differences between South Africa and other developing settings with regard to STI management. In the context of a country that has a long history of institutionalised racism, resulting in racially skewed service delivery, such a complex picture as emerged in this study is to be expected. The first section will focus on findings related to structural issues, such as personnel and other resources. The second section on the process of service delivery will incorporate findings from depth interviews with patients and focus groups to highlight similarities and/or contradictions in the findings. The last section will focus on overall ratings, again including qualitative data to enrich the discussion.

PROFILE OF PRIMARY HEALTH CARE CLINICS IN SA

Personnel

The majority of health workers who manage STIs were professional nurses and most had been trained in the syndromic management approach. Few of the clinics had doctors working full-time at the site. As shown by the racial profile of the patients, the PHCs in this study serviced mainly disadvantaged communities that, in line with Sanders and Carver's (1985) argument, are least likely to be treated by doctors. The syndromic approach was designed to cater for such structural deficiencies, with the management guidelines clearly described to enable the treatment of all possible causes of each syndrome without the benefit of laboratory confirmation (Ballard *et al.*, 2000; Harrison *et al.,* 1998).

STI services in most of the developed world are rendered by multidisciplinary teams, consisting of medical doctors who are specialists in the STI field as well as other categories of personnel (Hart *et al.*, 1990), all of whom are equipped with both the clinical and interpersonal skills required when dealing with a stigmatised illness like STIs. In line with World Bank recommendations (World Development Report, 1993), the South African government is currently working on mechanisms to ensure that newly qualified health professionals repay the public investment in their education by doing a stipulated amount of community service. This is likely to provide PHCs with various other categories of health workers, so that nurses are not compelled to perform tasks for which they are not trained. The training of nurses in South Africa has been essentially hospital-based care located within the biomedical model (Denill, 1999) and thus may not have prepared them adequately for the multiple roles they now have to play in primary health care centres, such as counselling patients with STIs.

With respect to training in the syndromic approach, the majority of health providers had been trained to manage STIs syndromically. This is in accord with the Alma Ata definition of primary health care (Denill, 1999) as well as the WHO/UNAIDS (undated) guidelines for prevention and care of STIs, which indicate that this first level of care should be based on practical, scientifically sound and socially acceptable methods and technology in order to provide essential health care. As already mentioned, it was largely in response to the shortage of clinical skills and resources that WHO (1998) developed the syndromic guidelines, so that treatment could be based on clearly defined decision trees that could be implemented without the specialist knowledge required for aetiological diagnosis and management (Adler, 1996; Ballard *et al.*, 2000; Harrison *et al.*, 1998).

The syndromic guidelines and national norms and standards (DoH,1997, 2001) require health providers to provide counselling and education to STI patients, with the WHO/UNAIDS (undated) suggesting that patients may be more receptive because of the vulnerability induced by the current illness. While most of the PHC managers reported that their staff had been trained to counsel STI patients, only slightly more than half of health providers reported having guidelines to help them to do this. Furthermore, most of the health providers indicated a need for more training in counselling skills, which is expected given that the bulk of the syndromic training focuses on the implementation of diagnostic and treatment algorithms (Grosskurth *et al.,* 2002; Harrison *et al.,* 1998; J.A. Rakosa, personal communication, 25 January 2003).

While both the WHO (1998; WHO/UNAIDS, undated) and DoH documents provide counselling guidelines, these are not adequate because they do not offer guidance towards developing theory-based and research-proven counselling skills in health providers. Although research has identified a number of psychological constructs that influence sexual health and illness behaviour, none of these are integrated into the guidelines, nor is any guidance given on how to engage with clients' beliefs and values, both of which have been shown by various studies to be crucial areas when dealing with such emotionally charged subjects as sexuality and STIs (Beaman & Strader, 1989; Beck *et al.*, 2003; Crossley, 2000; Fortenberry *et al.*, 2002; O'Farrell, 2002; Redfern & Hutchinson, 1994).

It would thus be more useful to provide health providers with theoretically-sound and research-proven skills, such as that provided by the IMB model of risk reduction used by Belcher and colleagues (1998). An advantage of this model is that it is brief and thus suitable for use in PHCs settings where there are limited opportunities for using interventions that need a number of sessions in order to produce change. In addition, it integrates knowledge with intrapersonal factors that influence motivation and also focuses on equipping clients with the behavioural skills needed to implement safer sexual practices. Given the urgency around controlling STIs and stopping the spread of HIV in the country, this is an area of management that seems to merit the most attention. Consultations with STI patients provide the space to deal with issues of safer sexual behaviours in a more personal manner than can be done through public health education campaigns. Thus, although the basic Rogerian processes outlined in the guiding documents can be utilised to understand and work with patients' subjective experiences and understandings of their illness, this would require more psychological training in the use of these theoretical formulations so that counselling is not reduced to merely informing patients about the causes or consequences of STIs, for example.

Furthermore, it is doubtful that the training of health providers engages them on their own attitudes, beliefs and values in relation to these topics, and this is likely to contaminate their encounters with patients. In this study, simulated patients came out of some consultations with perceptions that health providers were uncomfortable with discussions of sexual issues and that the discomfort did influence the quality of aspects of management, as shown in the following example:

> What I noticed is that even the nurse was not free to talk about STIs. She did not have any information and kept on saying that this is a sensitive illness. I had to prompt for information and really the lady was in trouble because she did not want to discuss anything about STIs. (Fsp)[2].

The problematic attitudes of health workers reported in various other South African studies (Hanson *et al.*, 1997; Harrison *et al.*, 1998; Mofokeng *et al.*1996) suggest that health providers have not internalised the basic precept of counselling, which is non-judgementalism and having an approach that is accepting and understanding of patients' subjectivities as constructed and given meaning in particular socio-cultural contexts (Crossley, 2000; Shefer, 1999). The need to engage the health providers as learners and potential trainers of others is pertinent in relation to STIs because

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[2] See Appendix F for participant codes and Appendix H for coding conventions used in the study.

health providers need to confront and deal with their own prejudices if they are to be accepting and helpful to patients confronted with the illness.

The over-emphasis of clinical aspects in training health providers for syndromic management therefore appears to be unwarranted since this is an area that probably requires less input than counselling and education, given that nurses' training is largely medically oriented (Denill, 1999). In addition, there is a need to examine the methodology of the training, in line with Abatt's recommendation (1990) that, rather than involving only the transmission of knowledge, training has to stimulate the learner to process or respond to the material. The training should enable health providers to develop a more critical awareness of the context within which they function, especially in relation to socio-economic and psychosocial determinants of health and illness. Such a shift obviously requires a more interdisciplinary and comprehensive approach in training to enable the conceptual leap from a biomedical to a biopsychosocial approach (Abatt, 1990; Sanders, 2001).

Equipment and other resources

The majority of clinics had most of the drugs and equipment required for the management of STIs. Similar to other studies that have found only minor deficiencies in some provinces (Harrison *et al.*, 1998; Magwaza & Shongwe, 2000, cited in Magwaza *et al.*, 2002), only a few of the PHCs reported problems with respect to specific items. Almost all the clinics had adequate supplies of medical equipment and drugs on the day of assessment and, furthermore, most reported no problem with getting supplies. Regarding condom supplies, most of the clinics had adequate supplies as well as good access to these if they ran out. Notably, a few clinics were supported by ATICC, an NGO, indicating a welcome involvement of civil society. There is adequate evidence showing that STI services are strengthened by the participation of non-governmental and other government subsidized bodies (e.g. Behets *et al.,* 1998; Hart *et al.*, 1990). About four-fifths of the PHCs also reported that they have partner notification cards available, a resource that if correctly used could contribute to the treatment of people who would otherwise not present themselves for treatment (Ballard *et al.*, 2000; Coetzee, Mathews & McCoy, 1996).

In addition to having adequate resources, the findings from both health providers and STI patients showed that health services at PHC centres were available and easily accessible. Most patients reported that they walked no more that 5km to reach the clinics, which is less than the 10km recommended by WHO (Denill, 1999). Furthermore, most of the clinic operating times were reported to be convenient, with most PHCs reporting that they saw patients with STIs everyday. Therefore, in terms of structural provisioning, most of the areas identified as essential indicators by Bryce *et al.* (1994), including the availability of equipment, syndromic treatment guidelines at most PHCs, as well as training for health providers, indicate that one of the major challenges of the current government, namely the provision of basic health care in relation to STIs, is being met. The lack of resources is identified in the literature as a crucial determinant of the quality of STI care in most developing countries (Bryce *et al.*, 1994; Gilson *et al.*, 1995).

It is clear that significant inroads have been made towards providing access to basic health care for previously disadvantaged communities. One reason for the South African government's ability to provide basic health care may be related to the fact that the country has generally had a more robust economy and sound infrastructure than other third world settings. Historically, the country's racially unequal development provided first world services for whites and inferior ones for marginalized groups, leading to it being characterised as having elements of both developed and developing countries (Van Rensburg *et al.*, 1992). The task of the new government was thus to extend an existing infrastructure.

One area of concern with respect to resources was the unavailability of educational material on STIs. Simulated and STI patients' findings indicate that there was less educational information on STIs than what was reported by health providers and most of the available material was not in local languages. Generally, there was more information about HIV/AIDS than other STIs, a finding that highlights how HIV is given more prominence than other STIs. While HIV/AIDS is without doubt a more serious illness, STIs also have significant consequences for individuals and are a major public health problem in both developed and developing countries (Buve *et al.*, 1993; De Schryver & Maheus, 1990; Yankauer, 1994). Given that it is now accepted that the two are interrelated and that controlling STIs is identified as crucial to stopping the HIV/AIDS epidemic, it would be prudent to demonstrate the importance of treating STIs in concrete ways, such as providing reading material in languages that are accessible to most clinic users.

In addition to their educational value, Rondeau (1998) suggests that such materials are useful for improving the quality of the long waiting time for patients. Some patients did indicate that this would be a valued aspect of management:

> There is a place that I went to in [region]. I once went to their clinic where they had a TV and STD videos. They showed these diseases to the people. I think it would be best if we could have them here at this clinic. (Mp)

Simulated patients also indicated that where there was some information or health talks about STIs or AIDS by clinic staff, this facilitated discussions among the waiting patients:

> One nurse came to inform us that they would be through in about 15 minutes. She asked for prayer, and after we prayed she informed us about AIDS and TB, the causes and preventative measures that can be used. The patients embarked on a discussion about the role of parents in educating their children about STIs and AIDS. (Msp)

It emerged that such discussions among patients were beneficial in that they resulted in many patients feeling less stigmatised and ashamed about having an STI. However, such talks sometimes resulted in patients giving each other incorrect information, as shown by the second quote below:

> As we were talking, that is me and the other girl wearing brown jeans, others also admitted that they had the same problem. I got the guts to do so because I realized I'm not the only one who has this discharge. (Fp)

> It was not the nurse who explained – it was some people who were next to the file room....they said the discharge is caused by sperm which did not come out after having intercourse with a man. (Fp)

It is thus clear that while discussions among patients are useful, health providers need to provide more accurate information to correct misconceptions about these infections.

Although most PHCs were found to be relatively well-resourced, structural provisioning on its own is an insufficient indicator of quality of care (Reerink & Sauerborn, 1996), and focus should also be put on the process of service provision, as discussed below.

THE MANAGEMENT AND TREATMENT OF PATIENTS

Overall, the results showed that there were deficiencies in almost all areas of STI management. Some of these derived from structural issues, such as the lack of skills in executing certain duties, for example counselling. Compared to dedicated STI clinics, health providers working in PHCs are required to provide service to multiple patient populations, resulting in possible patient overloads that may impact negatively on service delivery. However, there were also problems that were unexpected, given that the overwhelming majority of health providers were professional nurses who had been trained in syndromic management.

There were some similarities as well as discrepancies in the reports of health providers, STI and simulated patients with regard to various aspects of the management of patients. The largest discrepancy was between what health providers report to do in their routine management of STIs, and what both STI patient and simulated patients reported to have received. As highlighted in the study by Franco *et al.* (1997), such discrepancies occur even where direct observations of service deliver occur, with health providers tending to under- and over-report different aspects of management. The different aspects of management will be discussed separately. Data from depth interviews with patients and focus groups that clarify or amplify different problem areas will be integrated into the discussion.

Waiting for service

With regard to the period of waiting, STI patients reported waiting for shorter periods whereas simulated patients reported waiting for longer periods. Given that simulated patients were required to keep track of this, their reports can be assumed to be a better indication of the time spent waiting for service. While long waits are not unusual at public health facilities, Rondeau (1998) indicates that it is the quality of the wait that is important and that the waiting period can be utilised for education. Simulated patients experienced the long waits in various ways. In some of the PHCs, they came on days that were known by community members to be immunisation days, which meant that they had to wait until all babies had been attended to. This was acceptable to the simulated patients. However, less favourable reports emerged which showed health providers to appear insensitive to the fact that patients had to wait for hours:

> I stayed the whole day - 8 hours - with my problem, also thinking of going home. The nurses were walking in and out, reading magazines, joking, others were going to [name of shopping centre] for shopping while we were waiting. (Fsp)

> Another nurse came with her baby – it looked like a very young child and she may have been on leave. All the nurses were busy looking at the baby and chatting to her. It seemed they had forgotten about us. (Fsp)

Privacy and confidentiality

Regarding privacy, the majority of PHCs managers reported that there were private rooms in which STI patients could be consulted and most patients reported that they were seen in a private room. In view of the shameful feelings evoked by STIs and the stigma attached to these infections, this aspect of management, together with assurances of confidentiality, is especially important for various issues related to treatment (Fortenberry *et al.*, 2002; Gesecke *et al.*, 1991; Wilson *et al.*, 2000). Moses *et al.* (1994), for example, found that the majority of STI patients in their study reported seeking health from pharmacies and informal traders because these offered more privacy, among other things. While privacy was possible for most patients, it was compromised by the presence of other health workers in the room.

The experiences of patients who were not consulted privately were captured in the depth interviews, in which some of the consequences of this were revealed:

> That's what I ran away from, because she [*the health provider*] was not alone and, the thing is, those are people who know me from the location and then they take it the other way....I thought we would be alone but it was not so. (Mp)

> No I could not [*speak privately*] ... there was another patient, an old lady, in the room. I was not at all comfortable, we spoke in low tones. (Fp)

The issue of privacy was linked to concerns about confidentiality. Assurances of confidentiality are crucial for a number of issues related to STIs. Giesecke *et al.* (1991), for example, argue that partner notification will not be successful unless clients are assured of confidentiality as well as good medical and psychosocial care. This concern in fact emerged in depth interviews, with the following quotes showing how the issue of confidentiality impacts on partner notification, contributes to negative perceptions about quality of care and influences health-seeking behaviours:

> Come here for the pills? ... Well, as I said he [*sexual partner*] might be scared of their [*health providers*] reactions ...he says he will never come to a clinic where he will be scrutinized by women who will automatically think he has a disease. (Fp)

> That is why we are having a problem. Clinics are not secretive, that is why we have a problem to got to the clinics. (E)

Furthermore, patients indicated that the lack of confidentiality extended beyond the confines of the health centre. This concern was reiterated in focus group discussions, as shown by the following examples:

> I once went to the clinic here in the location, at [*name of clinic*]. I had small pimples in my vagina which were very itchy [ ]. I realised that the pimples were getting worse so I went to the clinic. There I told the sister my problem....they asked us one by one as we were sitting there. One sister shouted in front of people that she had heard that we were sleeping with white men without using condoms. She said those white men were going to give us AIDS. She shouted [at] me in front of people who were there and she never talked to me in private. I was very angry, so I left. (B)

> P: The other thing they do if I go there suffering from [gonorrhoea] my problem will not end at the clinic. When I am in the community I will hear it ...they tell other people who are in the clinic not to sit or go with

> me because I've got gonorrhoea, and everybody will be looking at me for what I've got. (E)

In addition, the breach of confidentiality is accompanied by stigmatising behaviours and what is perceived as labelling by patients. Such experiences make it difficult for patients to seek appropriate help promptly (Plummer & Ngugi, 1990), as indicated by the above quote. The following quote highlights both the alienating experience of such labelling as well as the related lack of confidentiality:

> Sisters [*nursing sisters*] are the ones who call people cases. If you go there and speak with them about your problem, your problem is supposed to be secretive ...it is between you and the sister attending you. But when you come back next time the other sister which was not there ...you will hear them saying: Phindi here comes that case =
> = Makes you feel bad. (5)

The lack of confidentiality and abusiveness highlighted in some of the above examples is clearly an infringement of patients' right to privacy and the right to have their dignity respected and protected, as articulated in the Bill of Rights that forms Chapter Two of the Constitution of South Africa (1996). Furthermore, confidentiality forms part of the ethical code of most health professions. According to Rakosa (personal communication, 1 October 2003), who was involved in the training professional nurses for over a decade, this is an aspect of the nursing ethos that is emphasised from the first year of nursing studies, an emphasis that continues through all levels of training. Thus, such a breach of confidentiality is a contravention of the ethical guidelines that govern the practice of nursing in the country and has legal implications for health providers.

Time spent in consultation

For both health providers and STI patients the short duration of consultations, with the majority of patients spending less than 15 minutes with health providers, was felt to be inadequate. Given that the syndromic approach requires health providers to take a full sexual history, examine, educate and counsel patients, among other things (Department of Health, 1997; WHO, 1998), it is clear that this would need health providers to spend more than the time reported by both patients and providers. This may point to further problems with the integration of STI care in PHCs. While studies in various African settings (Grosskurth *et al.*, 2002; Harrison *et al.*, 1998; Mbofane *et al.*, 2002) show that it is feasible to integrate STI services, it is likely that such integration means increased work loads for providers. In addition, health providers are then required to have a broad spread of expertise in order to be able to address the varied health problems of all clinic users. However, while it is likely that health providers are overworked, the majority of managers reported that they had adequate staff to provide STI services. Furthermore, during the period of data collection, the research team often struggled to get the required number of patients who had received STI treatment, suggesting that there was sufficient time for those patients who had come on the day to have longer consultation times.

The short duration of the consultations was perceived by some patients as a particular short-coming of the service. This was seen to contribute to inadequate management as health providers did not get all the information related to the illness:

> She did not even wait for me to sit down – she asked me what my problem was as I was standing by the door. I told her the symptoms had not disappeared, then she gave me the pills and ointment. (Mp)

> Interviewer: Have you ever heard about diseases that are transmitted through sexual intercourse?
>
> P: I have heard about them, but I did not get someone who had time to sit down and talk about them. (Fp)

Both these examples show that patients expected to be asked about the illness and to have an opportunity to get clarification on issues they were unclear about. Thus they experienced the lack of history taking and education negatively. In particular, history taking is an important aspect of diagnostic and treatment decision-making, which is discussed in the next section.

Diagnosis-related issues

History taking

The majority of health providers reported that they always took a full history from STI patients, while reports from simulated patients on the diagnostic questions they were asked showed this to be one area in which health providers over-reported on what they actually do in consultations with STI patients. This is contrary to findings by Franco *et al.*, (1997) who reported that health providers tended to under-report this aspect of management. The syndromic approach emphasises that providers need to get a full history of the STI episode and previous ones, including symptoms of the current illness. Non-adherence to this aspect of management has also been found in other studies, where the implementation was found to be poor even after health providers had been intensively trained as part of a specific project (Grosskurth *et al.*, 2000; Harrison *et al.*, 1998).

Physical examination

Contrary to syndromic requirements, few of the STI patients were examined, and diagnosis appeared to be based on patients' reports. The majority of health providers indicated that they always examine patients, while about a third indicated that they do this mostly for abdominal pain or an abnormal discharge. Simulated patient reports showed that only about half were asked about the type of vaginal discharge and fewer still were asked about abdominal pain. Given the deficiencies in the history taking process, this raises questions about the appropriateness and efficacy of the treatment given. The diagnostic and treatment algorithms of the syndromic approach clearly state that confirmation of symptoms should be done through examination and then treatment decisions made on this basis (Department of Health, 1997).

Experiences of poor diagnostic procedures, particularly the lack of physical examination, were also reported by the STI patients in the depth interviews and by participants in focus groups:

> They never enquired about how the discharge is. As soon as you tell them that you have a discharge they just give you pills. Even now ...I thought that I would be given thorough examination so that when I drink these pills I'll know the nurses gave me treatment according to what they have seen. (Fp)

> I came to this clinic and I explained what the problem is but they did nothing to me. They just gave me medicine and told me to come to this room. I thought they would examine me but they did not....Yes, they must examine me. Perhaps I have a rash on my private parts and they won't know that.. (Fp)

> The other thing, if they do suspect STI, if you got the clinic having any pain they suspect that you've got STI. They do not take you to the consulting room and see what is wrong with you...ya...they do not examine and look what is your problem. (E)

The lack of examination and absence of clear information that one's illness is sexually transmitted, as shown by the percentage of patients not given a correct and/or appropriate diagnostic label, has implications for how patients manage the illness:

> As I told you, I once had something like this. It would have been good if the nurses had asked about my previous episode as well as tell me if this is related to it. Seeing that these pills I've been given are somehow similar to the ones I used that time, it seems as if I was not completely treated. It would have been good to be given advice as to how to ensure that I am completely cured of this disease. (Mp)

Linked to the confusion reflected in the above example, just under half of the patients were informed that they had an STI, with the majority receiving no explanation at all or being given an inadequate one. Getting information related to one's illness from health providers has been reported to enhance patients' responses in a number of ways, such as increasing adherence to the treatment and facilitating partner notification (Francis *et al.*, 1969; Giesecke *et al.*, 1991). In relation to STIs, some of the suggested behavioural prescriptions of the syndromic approach, such as using condoms and abstaining from sex until the treatment has been successfully completed, cease to make sense if patients are not even aware that they are infected with an STI.

Treatment-related issues

The results showed that most health providers were not adhering to the syndromic protocols in treating five specified syndromes. In this study, rates of non-adherence were similar for genital ulcers and vaginal discharges, contrary to La Ruche and colleagues' (1995) report of higher clinician adherence in the syndromic treatment of genital ulcers. The finding that adherence was highest in the treatment of syphilis may be partly due to the fact that it is one of the STIs that was commonly diagnosed and treated in the public health sector prior to the introduction of the syndromic approach (Jochelson, 1999). Considering that, together with the diagnosis-related problems discussed above, these aspects are an integral part of the clinical management that is emphasised in the training of health providers on syndromic management (Harrison *et al.*, 1998; Rakosa, personal communication, 25 January 2003), the findings suggest that there are other factors that need exploring with regard to the training and functioning of health providers.

Instructions for treatment compliance

Regarding instructions given about various aspects of management, such as compliance with medication, completing treatment even if symptoms subsided and returning for follow-up consultations, discrepancies were again found between health providers' reports and those of both STI and simulated patients. Health providers tended to over-report on their practice of these issues. The majority of STI patients were not informed that they had to complete their treatment, even if symptoms subsided, an important issue in sub-Saharan Africa where inappropriate medication is reported to have contributed significantly to the emergence of penicillin-resistant strains of gonorrhoea (Ballard *et al.*, 2000; Buve *et al.*, 1993). A number of studies have in fact shown that adherence is not easy, especially were the treatment regime becomes complex and requires behaviour modification, as in the case of STIs (Bennett, 2000; Chesney & Folkman, 1994; DiMatteo & DiNicola; 1982).

As indicated by Bennett (2000), compliance or non-compliance is determined by a number of factors related to the treatment itself and to personal characteristics of the patient, such as the costs to the patient of complying with the treatment or understanding the importance of compliance. In addition to complying with the drug treatment, STI patients have to adhere to other requirements, such as partner notification and condom use, which will be discussed below. Both these aspects are emphasised in the protocols (Department of Health, 1997) in order to assure complete cure and to prevent a cycle of re-infection occurring. Thus, in addition to being instructed to complete their treatment, patients need explanations for the instructions.

Partner notification

The majority of health providers indicated that they emphasised the need for sexual partners to be treated and that they issued partner notification cards, as indicated in the protocols (Department of Health, 1997). The practice of issuing cards is seen as useful because it represents a proactive role for health providers and, more importantly for resource-strapped settings, is a cheap way of getting even asymptomatic people treated (Asuzu *et al.*, 1984; Coetzee *et al.,* 1996). The prevalence of asymptomatic infections in the region makes this a crucial aspect of controlling the epidemic (Adler, 1996; Ballard *et al.*, 2000; Buve *et al.*, 1993). However, health provider reports were contradicted by results from STI and simulated patients, only half of whom were asked to inform their partners they had to come for treatment. In addition, fewer patients than those advised about the need for their partners to get treatment were given partner notification cards, although the majority of PHCs reported having these.

The findings in this study echo other reports of poor utilisation of partner notification systems in South Africa, with health providers not utilising consultations to facilitate the process (e.g. Coetzee *et al.*, 1996; Coetzee, Mathews & McCoy, 1996; Harrison *et al.*, 1998; Mathews *et al.*, 1998). Consultations can be effectively used to help build patients' coping skills and provide them with strategies for communicating with partners. In particular, female patients would profit from such inputs, given the recognised problem of gender violence that studies have found limits women's ability to negotiate safer sex with their male partners (Belcher *et al.*, 1998; Fullilove *et al.*, 1990; Mkhonza, 1998). While notification done by both providers and patients themselves are the frequent method of getting partners to come for treatment, the reinforcing role of health workers' inputs on patients' roles in notifying their sexual partners is reported to result in more partners coming for treatment (Asuzu *et al.*, 1984; Ogunbanjo *et al.*, 1986; Rutherford *et al.*, 1991).

In this study, health workers estimated that few sexual partners of STI patients come for treatment. As indicated in the literature, adherence to treatment regimens is determined by both psychosocial characteristics of the patient and patient-practitioner interactions (Bennett, 2000; Francis *et al.*, 1969; Giesecke *et al.*, 1991). Gender, in particular, is a psychosocial variable that has been found to be potent in sexual issues and, in this study it was found to influence the nature of health providers' interactions with patients as well as patterns of service use by patients.

Health providers reported that they approached men and women differently when talking about partner notification. Their explanations of this gendered phenomenon fell into two broad categories. Men were considered to be more able to talk about multiple sex partners, given the common male practice of having multiple partners (Asuzu *et al.*, 1984; Faxelid *et al.*, 1994; Wilson *et al.*, 2000), whereas women were seen as being less open about sexual issues generally:

> When you approach a woman it's not easy to say 'how many partners?', especially a married woman. You have to have a polite way. For men you can just say 'how many'...It's easy to talk to them about other partners. (HP)

In contrast to this, some health workers found women easier to talk to because they themselves were women and may have had similar experiences:

> Because I'm a woman it's easy to relate to women as we always have the same problems when it comes to men's infidelities. It's sometimes difficult to talk to men. (HP)

While men were considered more able to speak about their sexual lives, it seems they were felt to be less able to take responsibility for the illness:

> Males will not believe [*that they have an STI*]. They will say it's the girlfriend's illness. (HP)

> Most men are afraid of talking about STIs - men lie a lot about symptoms. (HP)

Most of the female patients acknowledged their own difficulties in getting partners to come for treatment. Again, gender differences emerged, particularly regarding males coming to the clinics, which are perceived as the domain of women. In addition, men's better access to financial resources enables them to seek help at places that offer more privacy (Moses, Muia *et al.*, 1994; Ndinya-Achola *et al.*,1997) and that are perceived as less stigmatising and alienating:

> No, he said he will not come to the clinic. He will buy some medication from the chemist...he said he will not go to the clinic. (Fp)

> Last week he went to the doctor. When I asked him to come to the clinic so as to get the same injection that I am getting, he said he would not be able to do so...he became evasive and said a lot of other things....He said he does not want to be seen by people when coming to the ...the busy-bodies will want to know why he is at the clinic, considering that the clinic is mostly used by women. (Fp)

In discussing the low success of partner notification, health providers attributed most of the difficulties to issues related to patients, with little awareness of how their interactions with patients impacted on this. It emerged in depth interviews that

STI patients were sometimes not adequately informed about the need for partners to come for treatment:

> No, the nurse did not tell me why [*he had to come here*]. She just asked for my boyfriend's name and then she wrote it down on the letter. She did not even tell me if I have to give it to him. I showed him the letter because his name was on it. (Fp)

> No, I am not satisfied at all. For example, if I want my boyfriend to come to the clinic, what am I going to tell him, because I don't know what is wrong with me and the treatment I am receiving here, so it will be difficult for me to explain to him the problem and it is difficult to approach someone with something that you yourself is not sure of ... really it is worrying that the sister did not tell me the cause of the discharge and what is really wrong with me. (Fp)

Some of the health providers actually refused to treat patients unless they brought their partners with them, explaining this as their 'last resort' attempt to improve partner notification. Indeed, in one of clinics, female simulated patients were refused treatment until they returned with their sexual partners. Such a practice is obviously too rigid and could cause particular problems for those who are not in monogamous relationships, including sex-workers, who reported similar experiences:

> Now they have a tendency to ask you to bring your boyfriend with you ... = There are times whereby they just refuse to help you. They want the two of you to come together. (B)

Sex-workers also spoke about specific forms of discrimination that they experience in clinics, with some having been refused any help because of the stigma attached to their occupation by clinic staff. And when they did receive help they spoke of being 'disciplined' and scolded by clinic staff:

> ... you know they [*sexworkers*] find it very difficult at some clinics because you know the reception you get there - its not always nice especially when they know you are a sexworker, you know. I am not going to tell everybody the clinic is nice, they are treating me nice. They treat the sexworkers like shit ... at [*name of clinic*] they look down on sexworkers. (A)

> They [*clinic staff*] first want to know how you might have gotten the illness. If you tell them that you are a prostitute then it becomes difficult to get treatment. If you do not tell them then you are given all the treatment you need.
>
> They say we are bitches...
>
> = They even say we are prostitutes for whites. (B)

Given that studies have found that a high percentage of men presenting at STI clinics had had sexual contact with CSWs, a population in whom high rates of STIs have also been found, such moralising and judgemental attitudes as shown in the above quotes compound the vulnerability of sex-workers (Ndinya-Achola *et al.*, 1997; Plummer & Ngugi, 1990; Ward & Day, 1991). It is also counter-productive with respect to controlling STIs.

Condom promotion

The majority of health providers reported that they actively promoted condom use as part of their management. However a comparison of their responses with those of simulated patients showed that condoms were spoken about with only some of the patients, similar to other findings that showed health providers not to be emphasising condom use (Boonstra *et al.*, 2003). The control of the STI epidemic is based on the treatment of identified and asymptomatic cases as well as the prevention of further infection, through the use of condoms (Ballard *et al.*, 2000; Department of Health, 1997; WHO, 1998). Furthermore, the importance of promoting condom use as a preventative measure against HIV infections makes this aspect crucial, given that South Africa has one of the fastest growing HIV epidemics in the world. It has been suggested that condom promotion is likely to be more successful with STI patients because their current illness highlights their vulnerability to infection (WHO/UNAIDS, undated).

In addition to engaging with patients' perceptions of risk, consultations are a good opportunity for exploring other issues that act as barriers to condom use, such as the well-documented problem of gender inequalities and sexual violence in condom negotiations, normative beliefs and attitudes, as well as the subjective meanings that patients make of their illness (Beaman & Strader, 1989; Mkhonza, 1998; Shefer, 1998; Strebel, 1993). The lack of discussion around condoms represented a lost opportunity for exploring some of the problems and misconceptions patients had about condoms:

> They did not tell me anything. They just told me to use a condom.....They did not tell me [*how condom works*]. I just saw them lying somewhere. I thought perhaps one can help oneself. (Fp)

> I really do not want to use them [*condoms*]...I think these things can still burst while I'm busy.... The thing is these things scare me. I've never used them in my life. (Mp)

> At times I even give up [*insisting on condom*] because I think that he might just end up puncturing the condoms. This would then mean this condom will be left inside of me. (Fp)

Chatting to patients in the waiting room, simulated patients also gained insight into further difficulties that patients encounter with regard to condoms and the lack of clear information from health providers:

> My fear was for the patients who did not ask [*questions*] because there was no explanation. I met a friend with the same problem. She was given condoms and she explained that the husband cannot use the condoms. They have got a lot of them, but he did not know how to use

> them, because the one time they tried condoms, the condom was just inside her vagina and they looked all around for it. She found out when she went to wash. The doctors did not show her or her partner how to use it. (Fsp)

As mentioned earlier, patient-practitioner interactions are crucial in getting patients to comply with complex treatment requirements (Francis *et al.*, 1969). However, the interaction between STI patients and health providers in this study was problematic. In the depth interviews with STD patients and the focus group discussions it also emerged that health providers did not give adequate explanations to patients about STIs, and patients come out of consultation sessions without an accurate sense of their own illness or understanding of its associated risks. As indicated, this obviously has implications for implementing the required behaviour change and complying with the treatment regimen:

> For example, as I'm here, the nurse did not explain to me what this PVD is. I also don't know what it is. They could have explained this as well as how I got it, and also tell me if this means I'm not far from getting HIV, or even tell me if it's treatable. At the same time they could have explained as to whether I need to have it treated by a doctor or not, so that I can decide what to do about the treatment. (Mp)

> Well, it's okay but then my problem is when I get home I won't be able to tell my brother what's wrong with me as I was never told. The service would be perfect if I had been told clearly what the problem was. He

> then will ask me why I came to the clinic and also will want to know the causes of my illness, which I do not know. (Mp)

The lack of information was seen as a major shortcoming of the services by patients, who indicated a need for more information about STIs, for personal use and in order to be able to speak with more authority to their partners, as well as to assist other persons who might experience problems similar to theirs:

> It would be nice if there could be people like you who can be here so that they can explain to us what causes our problems ... Yes, sometimes it is difficult [*to ask for explanations*] because the nurses here will go back to the location and discuss these things. (Fp)

To sum up this section on management of patients, there were many contradictions between what health providers report they do in consultations with STI patients and what both STI and simulated patients experienced. Such contradictory findings confirm the argument of Franco *et al.* (1997), who indicate that there are often discrepancies between health providers' perceptions of their functioning and observations made of the process. The methodological issue of differentiating between provider competence and performance may apply here, with providers tending to report on their competence rather than actual performance (Rethans *et al.*, 1996). Thus while health providers knew of, and reported to fulfil almost all diagnostic procedures outlined in the syndromic protocols, they did not do so.

Attitudes of health providers

Most of the patients indicated that they found the health providers' attitudes to be acceptable. These quantitative results were contrary to the findings of many South African and international studies, where the negative attitudes of providers towards STI patients were reported as contributing to poor control of STIs (Abdool-Karim *et al.*, 1997; Harrison *et al.*, 1998; Parra *et al.*, 1990). The attitudes of health providers are obviously an important aspect of counselling and educating STI patients around STIs, as well as of the quality of care more generally.

The positive quantitative ratings were contradicted by the more critical evaluations of health provider attitudes that emerged in the qualitative interviews and focus groups. Generally it was found that STI patients would begin with a positive comment, but then move on to qualify that comment with a number of criticisms. In this respect, methodological triangulation proved to be particularly useful as the qualitative data from patients and focus groups contributed to a richer and fuller understanding of perceptions about health providers' attitudes.

In the expression of negative attitudes towards the clinics, there was a wide range of reasons given. Participants spoke about health providers' disrespect and rudeness, as well as judgmental attitudes towards and stigmatisation of their illness:

> Yes it's true they examine you. What also scares you in hospitals you might be examined by a nurse old enough to be your mother, so they shout at you like anything. I was once scolded by a nurse there. (D)

> On Friday I umm... on Friday last week I was there, and they treated me badly in such a way that I decided to go to the hospital rather than being treated badly. So it is a practical thing happened to me last week, Friday, they treat us more of the same way as women especially when they see that you can not do anything you need their help ..... and yhah ...... eh...
>
> Facilitator: Is that just for STI's or generally?
>
> It is also with STI, including everything, it includes everything, it's either you have STI or anything, or may be, need just .... ahh, they also treat you bad. But it is worse when you have STI, much worse and there are some certain cases that you can not even bear in your mind.... just ..its bad. I will never come here. (E)

> The nurse shouted at me and said I should not go there again ... The nurse told me not to sleep with him again because I am still very young. (Fp)

Perceptions that STI patients, especially those with HIV, are alienated by discriminatory and exclusionary practices in clinics emerged from both patients and focus groups:

> They [*other women*] do not treat it [*STIs*]. Most are scared that the nurses will shout and swear at them. They do want to be treated. I just got the guts to do it yesterday because I was not the only one there. If I was on my own maybe I would have backed down. (Fp)

> Yah, they discriminate and isolate them
> = There at hospital if someone has AIDs they will shout at people around the victim and told them to stay away from the victim and the nurses will shout at others to double their gloves ... Now the people know that if the nurses say to others 3 or 4 gloves they know that the patient is suffering from STIs. (H)

The health providers' attitudes and abusive behaviours were perceived as having a negative impact on patients, with some participants referring to lowered self-esteem and feeling dehumanised. In addition, such negative perceptions of providers influence health care seeking behaviour, as shown in the following quotes:

> Yes, they do isolate, for instance like here [*name of clinic*]. They do not treat people in the same way so if you are a patient you can see that you are not welcome and you will end up stopping to come for the treatment because you are not accepted. I think this is lowering their self-esteems and make them to lose hope that they can be cured. (H)

> That's why most people don't go to the clinic. Even our kids when we send them there for contraception won't go. They just turn right round and come home

> = Because they humiliate them ...
>
> The nurses are rude, they are so rude.
>
> = Even the clerk ...
>
> = She is worse. She tells you they are knocking off and don't have the time ... These clinic nurses are the reason people don't want to go there. They make you feel like a fool, a piece of rubbish, until you don't even know yourself anymore. You regret why you actually went there and all the time they'll be shaking their butts and walking around ... You'd probably just think of leaving the place, if you think of how humiliated and put down you'll feel when she finds out what disease you have. (C)

Other gender and class differences also emerged as playing a role in the way that patients are treated. In spite of the construction of clinics as a female domain, some participants felt that men were treated better than women and that status and class in particular played a role in this:

> And the other thing, the community does not contribute a lot to discriminate women but with hospitals/clinics ... If P [*name of participant*] as male have one of these diseases the nurse will say nothing to him, but if I, myself as female goes inside with the same disease they will say a lot. That is why it looks as if females are the one's who spread this disease because they are confronted, shouted and get names that they do not even expect. One rather stay with it, for that matter it is not sore.
>
> Facilitator: Is the problem in the clinics, one: that they treat males and females differently?

> Even for males it depends who are you ...they consider your status, if they do not know you they will play around with you, even if you are male! (E)

Thus, what also emerges from the above example is how gendered explanations of the attitudes of health providers are made more complex by the impact of socio-economic status, as has been reported for other STI-related phenomena such as vulnerability to infections and differential rates among differently positioned groups as well as decisions around condom use (Dallabetta *et al.*, 2002; De Schryver & Maheus, 1990; Eng & Butler, 2002; Hart *et al.*, 1990; Jochelson, 1999; Redfern & Hutchinson, 1993).

Qualitative descriptions by simulated patients of the education and counselling by health providers that took place during the consultations were also often more informative than the results of the checklist. They gave a clearer indication of what was helpful and what was not in consultations. Health provider attitudes varied and greatly influenced simulated patients' experiences:

> Initially I was anxious but then the nurse had a calming effect on me. That is because she was not judgemental nor did she pretend to know everything. She rather gave me medication and made suggestions on how to avoid STIs. (Msp)

> She was not friendly and her attitude was very negative when I mentioned that I had sex without using a condom with the boyfriend

> whom I suspect to be suffering with an STI. She was very angry and asked what is the use of being involved with people who are not honest ... She did not ask if I had seen any symptoms or if I had discharge. She was angry with the fact that I have a boyfriend who is not honest and said I must discipline him. (Fsp)

However, it is important to note that the negative experiences were contradicted by positive ones at 'other' or 'some' clinics for both STI and simulated patients, highlighting inconsistencies in participants' experiences of clinics:

> Service was very good in this clinic. Although I was not fluent in Tswana it was not difficult to communicate with them as they were mixing Zulu with Tswana. At least here they ask you about your illness in a private room. They have a lot of knowledge about STIs and AIDS. They explain everything very nicely. (Fsp)

> At [*name of clinic*] I got the best treatment. The nursing sister was kind and compassionate. She listened with empathy and counselled me. She was not judgemental. (Msp)

> These are the reasons why I never go to the clinic here in the location. I believe in going to [*name of clinic*] - they treated me with respect. (B)

Despite some positive reports from simulated patients about health workers' attitudes, the overwhelming perceptions from STI patients and various community groups are negative, confirming findings from other South African studies about the problematic interactions between health providers and STI patients.

OVERALL QUALITY OF STI CARE

In looking at overall quality of care, most of the issues relating to the structural aspects were assessed quantitatively through structured interviews and were discussed in the first section of this chapter, which focused on the availability of resources and accessibility of services. The PHCs were found to be well-resourced and the major short-comings of the service were process-related. It is particularly important to look at health providers' functioning because it is as central to the overall control of STIs as the behaviours of patients themselves (Parra *et al.*, 1990).

The quantitative results showed that health providers were not implementing most of the interventions required by the syndromic approach. Diagnostic procedures were poor, with some health providers taking a history of the current episode, but very few taking a full history or asking about sexual practices, for example. With the majority of patients spending less than 15 minutes with health providers, it is not surprising that health providers were unable to fulfil all that is required of them.

Medication was cited by both STI patients and health providers as an aspect of STI management that worked well, although only a low percentage of health providers were found to be adhering strictly to the syndromic treatment protocol in the treatment of specific STIs. Instructions for treatment were relatively good, with a high percentage of STD patients reporting to have been told about the importance of compliance. However, instructions to return for follow-up treatment were few and the partner notification system was problematic. Moreover, although condoms were almost always available, the promotion of preventative practices was not routinely reinforced with the direct offer of condoms and/or demonstration of their use.

In addition to the individual items, a comparison of composite scores computed for health providers, STI and simulated patients showed that health providers rated their service provision more positively than STI and simulated patients. Simulated patients are likely to have provided a more accurate measure of quality of care because they had been trained to look out for certain aspects of STI management. Health providers' positive perceptions of their functioning may be due, at least in part, to providers drawing on their knowledge and competence rather than reporting on their actual performance (Rethans *et al.*, 1996). In addition, awareness of the research and the research team' s association with the Department of Health, through whom access had been negotiated, may have contributed to providers giving responses that would present their functioning positively, in the same manner that being observed was reported to alter health providers' functioning by Franco and others (1997).

Generally, the quality of interactions between health providers and patients seems to be particularly problematic. This related to communications about the illness and related issues. Linked to the general problems of communication was the perception by many patients that health providers treated STI patients badly, that not only were they were often uninformative, but that they were judgemental and unsympathetic. There were also reports by simulated patients of health providers who clearly felt uncomfortable themselves with discussing STIs and other sexual matters.

A different part of the broader project, of which this study was a part, assessed knowledge, perceptions and beliefs of patients about STIs (Wilson *et al.*, 2000) and found that the majority of patients emerged from their consultations without a good understanding of their own illness. Furthermore, patients came out with a confused understanding of the health risks involved in having such an illness, such as the increased risk of contracting HIV. While it is possible that health providers did impart key health education messages, and that STI patients misunderstood these messages, the implication is that patients did not internalise the information given. In addition, simulated patients reported that education given by health providers was in fact often inadequate.

In order for patients to modify their sexual behaviours certain shifts need to occur, whereby new information can be integrated into existing cognitive structures that determine one's behaviour in particular contexts. Thus there is a need for the process to involve more than reciting facts. Rather, an attempt to make the information meaningful to the individual patient, as indicated by Glover and Bruning (1987), is important. Health providers can further contribute towards the development of modified normative beliefs (Beaman & Strader, 1989). In social constructionist terms, the interaction with patients can facilitate the emergence of different socially mediated meanings about sexual health, with health providers becoming co-constructers with patients of a new and enhanced understanding of STIs (Crossley, 2000).

A striking feature in the findings was the emergence of contradictory reports about the different aspects of service provision. There were often differences between what health providers reported to do and what patients reported to have experienced. In addition, while most STI patients reported that they found health providers informative, qualitative data from depth interviews, focus groups and simulated patients yielded a more complex picture of a service that has both negative and positive aspects. STI patients would often precede negative comments about provider attitudes with positive ones, which is likely to account for the apparently very positive quantitative evaluations of providers' functioning. However, it is also possible that the ratings were influenced by the researchers' location in the primary health care centres, which may have contributed to patients giving what they may have perceived to be acceptable and/or desired responses. In this respect, methodological triangulation again proved useful. In the depth interviews and focus group discussions, participants were able to say in their own words what they thought about the services at the local clinics, rather than just frame their responses within the limited options listed in the interview schedule.

In addition to avoiding some of the reductionism of quantitative measures discussed by Berg (1995), perceptions about the complex interactions between health providers and consumers of their services were elicited from patients and different community groupings. While there was agreement between providers and patients' quantitative reports on certain aspects of service provision, qualitative data from patients and focus groups contributed to a richer and fuller understanding of perceptions about more nuanced issues, in particular health providers' attitudes. The fact that the vignettes for focus group discussions centred on health-seeking behaviour and were conducted outside the clinic may have facilitated the emergence of negative evaluations of PHCs. The physical and psychological distancing is likely to have enabled participants to express their views of service providers with less inhibition (Berg, 1995; Strebel, 1995).

CHAPTER SUMMARY

This chapter presented a discussion of the results, beginning with structural issues. The actual process of managing patients, as well as overall quality of care, were discussed next. Qualitative findings from STI and simulated patients, focus groups as well as health providers were integrated into the discussion, which also highlighted similarities and differences between the reports of health providers and the other samples.

In summary, the PHCs in South Africa were found to have most of the resources required to implement the syndromic management approach, including protocols, medication and trained staff. There were many problems with the process of care-giving, as measured through a number of indicators related to diagnosis and treatment of persons with STIs. Similar to other studies, the attitudes of health providers were found to be problematic, which impacted negatively on health-seeking behaviour for STIs.

CHAPTER SEVEN

CONCLUSION AND REFLECTIONS

The aim of this study was to evaluate the quality of care for sexually transmitted infections in primary health care clinics in South Africa. STIs have been a public health problem in the country for decades, just as they have been and continue to be for both developed and other developing countries. The finding that this group of infections is linked to the more serious and fatal HIV/AIDS epidemic led to increased efforts to treat STIs effectively as part of the strategy of reducing or halting the AIDS epidemic. The findings from this project indicate that, despite having adequate resources, the quality of care for persons with STIs is poor. There are ongoing problems with regard to managing STIs in the public health sector that suggest a need for some radical changes and this chapter offers some thoughts on some of the issues.

SERVICE PROVISION: QUANTITY OR QUALITY

Prior to 1994, health services were inequitably distributed along racial and urban-rural lines. Urban blacks and whites had relatively better access than rural communities to good quality care, including the availability of dedicated STI clinics, a mode of service provision that is found mostly in developed countries. While such a vertical model of service provision has obvious advantages, including high levels of expertise across different categories of health providers, it is nevertheless inadequate in that such specialist care cannot service all communities.

Thus, when the first democratically elected South African government came into power in 1994, it faced major challenges in relation to the management of STIs that can be categorised into two broad strands. The first was the need to extend basic health services to all communities and, secondly, the issue of providing good quality health care as a means of controlling both classical STIs and the deadly HIV/AIDS. The two-fold nature of this task meant finding solutions that could be implemented within the budget limitations of a government that was tasked with transforming the whole South African society and its institutions from one in which white citizens were systematically advantaged while blacks were disadvantaged in every sphere of life.

The new Ministry of Health sought to address these twin issues by adopting the primary health care approach. The first step was to extend service provision by increasing the number of PHCs in order to make basic health care available and accessible to previously disadvantaged communities. This appears to be on track, since most of the participants in this study reported the clinics to be accessible with respect to distances and operating times. The second step, which is providing basic health care for communities, was the development of core packages for different illnesses that could be easily implemented at this level of service delivery. In line with these developments and with recommendations from WHO, STI services were integrated into PHCs and a core package based on the WHO recommended syndromic approach was introduced in place of the previous approach where treatment was based on clinical diagnosis and treatment. The syndromic approach came from recognition of the difficulties of managing and controlling STIs in resource-poor countries that do not have the financial and technical resources available to richer countries, where diagnosis and treatment is based on accurate, laboratory confirmed identification of causative organisms. In addition to the syndromic guidelines, the core package also consists of national norms and standards that inform the management of STIs. However, these are not adequate for addressing the problem of quality of care, particularly in the interpersonal aspect of service provision.

Towards addressing both quantity and quality

Although the core package approach has been criticized for falling short on the principles of the Alma Ata conference that laid the foundation for the PHC approach, it has nevertheless given many disadvantaged communities access to basic medical care. However, a number of issues related to the quality of care at PHCs still need to be addressed. One of these is the lack of expertise needed to execute particular duties within this context, given that the primary health providers in PHCs are mostly professional nurses. In addition to being required to be knowledgeable enough to service diverse patient needs, these health providers also have to perform functions that are beyond what they have been trained for. This issue has implications for how PHCs are structured and staffed, as well as for training of health professionals, as will be discussed later. However, in recognition of the limited resources in the country, a combination of models of service provision that could be accommodated within budget limitations without compromising quality of care needs to be explored.

Thus, it would be useful to have both vertical and horizontal services. Dedicated STI clinics, with the high levels of expertise and specialized knowledge found in them, can be a useful support system for the PHCs, which are able to reach more people. As suggested in the literature, they can serve as a referral centre for PHCs, assist in the training of PHC staff, monitor trends and developments regarding disease patterns as well as issues of control and management. Furthermore, such clinics would be ideal settings for the development, implementation and evaluation of different models of psychological interventions that are appropriate for the South African context.

While there may be problems with such clinics being stigmatised, and using one being stigmatising to patients, the expertise available in them offers patients a better chance of being managed appropriately and with sensitivity, thus increasing chances of sexual behaviour changes in the individual. The crucial factor would be to ensure that vertical services remain responsive to local needs and realities, as well as to PHCs in their areas. Similar to the relationship between state hospitals and tertiary services such as district hospitals and PHCs, the roles and functions of dedicated STI clinics and PHCs can be streamlined in such a way that the two can complement each other. In this way, issues of providing good quality care to as many patients as possible could begin to be addressed.

Another issue in relation to quality of care is the lack of clear guidance towards addressing links between STIs and HIV/AIDS. It thus seems that the process of integrating STI care into primary health services needs to be broadened to include HIV/AIDS services as well, particularly as the strategic plan recognises the complex relationship between these two entities. Such an integration, particularly if the counselling aspect of health-care giving is strengthened, offers the option of facilitating behavioural changes at a time when patients may be more receptive to interventions. In addition, since the two disease entities share a common mode of transmission and socio-cultural co-determinant factors, interventions for STIs need to have broader focus that should address sexual behaviours that increase the risk for both STIs and HIV.

TIME FOR A PARADIGM SHIFT

While the systems theory that underlies the syndromic approach is laudable and represents a shift towards a biopsychosocial approach that recognizes the impact of factors external to the biological causative organisms on the management and control of STIs, such as gender inequalities, the dominance of biomedicine remains largely unchallenged. This can be seen, for example, in the emphasis of clinical aspects in the training of health providers. The diagnostic and treatment algorithms are clearly outlined in the syndromic protocols and can be implemented by any level of health providers. However, much less attention is paid to the psychosocial aspects of management. Although the syndromic approach includes education and counselling as core functions of managing STIs, the guidelines for these aspects are inadequate, especially in view of the fact that most health providers are not trained counsellors or educators. There is a lack of conceptual and theoretical focus, for example with the terms education and counselling seeming to refer to the same thing.

A further conceptual problem lies in the understanding of health care as implied in the core package approach, generally. Although the findings from this study indicate that significant strides have been made with respect to providing access to basic health care for most communities, the term basic health care still appears to be defined in terms of providing basic medical care. This points to a need to align this more closely to the WHO's definition, in which health is not just the absence of illness but encompasses all psychosocial aspects of people's lives.

A conceptual shift from a biomedical emphasis obviously has implications for the training of new and existing health providers of all categories, as well as the structuring of the public health sector, since this suggests that the constitution of the basic health team in PHC settings has to change substantially. With respect to STIs, the ideal would be to provide a comprehensive service consisting of professionals trained to deal with STIs, including adequately trained psychologists or psychological counsellors. A number of local universities are set to graduate the first batch of psychological counsellors, the new category of psychological service provider that is designed to work in community settings. However, to the author's knowledge, very few, if any, employment posts have been created in the public health sector for either psychologists or psychological counsellors. With regard to the latter, this oversight defeats somewhat the purpose of creating this category of psychological service provider.

In line with such a shift, the training of health providers needs to be broadened to include other disciplines that can add their insights and tools towards producing health providers who are responsive to the psychosocial needs of their patients. The focus of training should thus expand beyond the narrow biomedical aspects of management, which are clearly outlined anyway in the protocols and do not merit the inordinate attention they receive in training. The more complex dynamics of the interpersonal aspect of health provision require more time and energy, given that it should, ideally, produce internal cognitive changes within health providers themselves. The priority issue, as mentioned above, is to enable health workers to respond appropriately to issues related to sexuality, STIs and HIV/AIDS.

Theoretically, the counselling principles of non-judgemental acceptance and respect for patients are universally accepted as essential for establishing a basic therapeutic relationship. While Rogerian, person-centred therapists/counsellors are trained to use these as part of their therapeutic repertoire to facilitate change in clients, there is no evidence to suggest that they are sufficient, on their own, to assist STI patients implement the required behaviour change. Much of the work with respect to facilitating sexual behaviour modification derives from the cognitive and behavioural fields of psychology, where a number of psychological constructs like beliefs and perceptions have been identified as crucial determinants of health and illness behaviours. Counselling is crucial not only in relation to STIs, but also because it is a way of fostering healthy sexual behaviours that can reduce patients' risks of becoming infected with HIV. For this reason, more thought needs to be put into the content of the guidelines as well as the training programmes for health providers.

In addition to content issues, it would be useful to interrogate the training methodology itself, given that this study and similar others have consistently reported on the negative and judgemental attitudes of health providers towards persons infected with STIs. Thus, training of both health providers and any other person meant to counsel STI patients needs to engage the trainees on their own prejudices, preconceptions and attitudes around issues of sexuality in order to enable them to deal openly with patients' issues on these. This may contribute to less stigmatising behaviours and negative attitudes towards patients with STIs. This poses a challenge for psychology as a discipline – that of developing theoretically sound models that are applicable to the South African context with its history and diverse population, and that can be implemented easily at PHCs.

While the above discussion suggests that the retraining of health providers is an alternative to a multidisciplinary PHC team, it is not an either/or situation. The abusive treatment towards STI patients also raises issues about the ethical behaviour of health providers and the infringement of patients' human rights. As a relatively new democracy in which the principles of human rights and dignity have not yet replaced attitudes of subservience to authority figures, there have not yet been many cases of previously disadvantaged people instituting civil cases against health providers. Contrary to developed countries where patients are aware of and safeguard their rights stringently, health providers have largely not been held accountable for their professional activities. With the growing input of human rights organisations and consumer bodies, the abusive behaviour of health providers that has emerged from various studies may have major implications for individual practitioners and the Department of Health as the employer. Furthermore, it is clear that statutory bodies that govern professional practice in South Africa need to monitor the behaviours of their members more closely.

In addition to developing appropriate intervention models, psychology can also play a role in monitoring quality of STI services. Although the DISCA tool is useful for assessing structural aspects of STI services as a way of monitoring quality of care, the instrument's usefulness is compromised by the exclusion of the crucial interpersonal elements of STI care. This has also been highlighted as a problem in other studies that have used the instrument but no attempts have been made towards correcting this. In this regard, the discipline of psychology could contribute significantly towards developing indicators and measures of interpersonal aspects of management that would enhance the usefulness of the instrument.

A challenge to the psychology discipline

A number of the issues raised above indicate a serious need for the discipline to apply itself to the task of making its knowledge relevant and responsive to the needs of the country. This is not the first time that psychology has been challenged to prove its usefulness to South African society. The field of community psychology responded to and grew from the socio-political tasks it was faced with. Similarly, the threat of HIV/AIDS presents an opportunity for the emerging field of health psychology to find ways of making its presence felt and to develop from the endeavour. Theirs is not uncharted territory, because international efforts to respond to HIV/AIDS, particularly from the US, offer models of intervention and research that may be adapted for local use. In addition, their input would be particularly useful for developing indicators or variables for the assessment of interpersonal aspects of service provision that can be incorporated into the DISCA tool.

SOME POLICY RECOMMENDATIONS

Pulling together some of the strands from the above discussion, some practical recommendations are offered. Firstly, the composition of personnel for STI management needs to be multidisciplinary, especially including persons trained in psychological interventions. Secondly, the training of health professionals should include psychology as a core component. Thirdly, it would be beneficial for health providers who are currently providing STI care to be retrained in a multidisciplinary model of service provision to enable them to cope with the demands of playing multiple roles within PHCs. Fourthly, the health ministry should create employment posts for psychological counsellors. Lastly, the DISCA should be revised, using input from psychology, to include interpersonal variables.

REFLECTIONS ON THE METHODOLOGY USED FOR THE STUDY

This study was concerned with evaluating the quality of care for people with sexually transmitted infections in primary health care settings. With respect to the methodology, the need to focus any research endeavour means that certain issues are not addressed. For this study on STIs, it would have been useful to include more outcome measures, both at the individual and broader level of successful management. Ideally, such outcome measures would need to include measures of the various psychosocial aspects of the infections and their management in addition to biological outcomes. In addition, while a demographic profile of STI patients was elicited, no further analysis of some of these variables, such as education and employment, was done to check for effects of these on the quality of care. This would have shown more clearly the effects of socio-economic status, which was alluded to by some participants. The reason for this lapse was partly a lack of attention, during the conceptualisation phase of the study, to a stringent definition of some categories. As it stands, the study gives information about what is happening in primary health care settings but not much with respect to designing appropriate psychological interventions. A further short-coming of the study is that no attempt was made to explore how dedicated STI clinics, which still exist in some of the larger cities, relate to primary health care centres. This might have stimulated a more robust thinking on how the two could be articulated.

More research needs to be done concerning possible intervention models that would be suited to the South African context with its cultural diversity and limited resources. Models based on sound theoretical principles, particularly from the cognitive and behavioural fields in psychology, need to be modified for local use. More importantly, the training of health providers in syndromic management needs to be re-evaluated and modified. Input should come from a multi-disciplinary team and be research proven and theoretically sound. In addition, there is a need to explore fully how the two modes of service provision can be made to complement and service each other in a way that would improve the quality of care for persons with STIs presenting themselves at PHCs. Such an improvement in service delivery would contribute significantly to the management and control of both the STI and HIV epidemic in South Africa.

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APPENDIX A

CLINIC PROFILE

Thank you for participating in this study. We are aware theat you work under a lot of pressure and we hope that our findings will be used to help make the working conditions better for you and your patients. The questionnaire is confidential and your anonymity is guaranteed.

CLINIC NAME: ______________________________
DATE: ______________________________
REGION: ______________________________

POSITION OF PERSON BEING INTERVIEWED

I. INFRASTRUCTURE AND PATIENT LOAD

1. How far is the clinic for most of the people who use it?

Within	1 km	☐
	1 - 2 km	☐
	3 - 5 km	☐
	more than 5 km	☐

2. How do your patients get here? By:

car	☐
train	☐
bus	☐
taxi	☐
cart/bicycle	☐
on foot	☐

3. How many people work at the clinic:

	Full-time	Part-time
Nurses	☐	☐
Staff nurses	☐	☐
Doctors	☐	☐

4. How many consulting rooms does the clinic have?

____
____

5. Where do the nurses take a history from STD patients?

6. Is there a private room to examine patients?

Yes ☐ No ☐

7. On average, how much time do the nurses spend with an STD patient?

- Less than 5 minutes
- 5 - 15 minutes
- 15 - 30 minutes
- 30 - 45 minutes
- 45 - 60 minutes

8. On average, how many STD patients do they see in a week?

9. What is the procedure STD patients must follow when they come to the clinic for the first time? Can you explain to me, from start to finish, how the patient is dealt with

10. Is there any special training that the nurses must undergo in order to work with STD patients?

Move to next sectn

11. Are there guidelines on the syndromic management of STDs?

12. During what times are STD patients seen?

everyday all day
certain days only
everyday, at specific times only

13. Do you have problems with people coming at the wrong times?

14. What are the 5 main illnesses which people report to the clinic?

II DRUGS, TREATMENT AND EQUIPMENT

available.

1. Are the protocals for the syndromic management of STDs displayed in the clinic?

Yes ☐ No ☐

2. Does the clinic have the necessary drugs to prescribe for syndromic treatment of STDs?

Yes ☐ No ☐

3. Does the clinic face problems with the supply of drugs?

Yes ☐ No ☐

4. If yes, what sort of problem?

Late delivery of drugs ☐
Run out of drugs ☐
Receive "second -choice" drugs ☐
Receive drugs whose expiry date has passed ☐
Other, specify ______________________

5. Today (on the day of the visit) does the clinic have the following drugs in stock?

Benzathine penicillin	Yes	☐	No	☐
Erythromycin	Yes	☐	No	☐
Ciforofloxacin	Yes	☐	No	☐
Doxyeycline	Yes	☐	No	☐
Metronidazole (Flagyl)	Yes	☐	No	☐
Imidazole (pessary)	Yes	☐	No	☐

6. Is the following equipment available?

gloves Yes ☐ No ☐
light Yes ☐ No ☐
speculum Yes ☐ No ☐

How many specula does the clinic have?

____

III HEALTH EDUCATION AND COUNSELLING

1. Does the clinic have posters about HIV/AIDS?

Yes ☐ No ☐

2. Does the clinic have posters about other STDs?

Yes ☐ No ☐

3. If yes, what problems do they address?

Causes ☐
Transmission/spread ☐
Treatment ☐
Complications ☐
Other, Specify ______________________

4. In what language are the posters?

____

5. Does the clinic give regular health talks to clinic attenders about STDs?

Yes ☐ No ☐

6. Does the clinic use other media/ways to teach patients about STDs?

Yes ☐ No ☐

7. Are there trained counsellors at the clinic? Staff - availability

Yes ☐ No ☐

8. If yes, how many? ______________________________

9. What are their levels of training? ______________________

10. Does the clinic distribute condoms?

Yes ☐ No ☐

11. Where are they distributed? ______________________

12. From where does the clinic obtain condoms? ______________

13. Does the supplier have problems maintaining the supply of condoms?

Yes ☐ No ☐

14. How many condoms does the clinic distribute in one month (on average)?

____

15. Does the clinic have a partner notification card?

Yes ☐ No ☐

16. If no, how does the clinic get partners to come?

____

17. If no, would the clinic like to use one?

Yes ☐ No ☐

18. If yes, how many in your estimation, of the partners actually attend?
(Percentage or fraction)

____

19. How does the clinic follow-up patients who do not return for subsequent visits?

Do not follow them ☐
Home visits ☐
Other, specify ______________________

20. What in you opinion, are the biggest obstacles to providing quality care to STD patients?

____

21. How can these problems be addressed?

____

22. How, in your opinion, can the services given to STD patients be improved?

____

APPENDIX B

HEALTH PROVIDERS - INTERVIEW SCHEDULES

Thank you for agreeing to answer some questions about your work with STDs. We are aware that you work under a lot of pressure, and we hope that some of the findings of this study can be used to help you in your work. You do not need to give your name, and you anonymity is guaranteed.

1. DIAGNOSIS

1.1 How do you diagnose STD's?

Do you:	YES	NO
use syndromic case guidelines	☐	☐
take full history of the disease	☐	☐
ask about previous episodes	☐	☐
ask about treatment for previous episodes	☐	☐
do a physical examination	☐	☐
take blood specimens for testing	☐	☐
ask about the health of the partner	☐	☐

1.2 How is your diagnosis confirmed?

1.3 Do you perform a vaginal examination on all women who present with a vaginal discharge.

Yes ☐ No ☐

1.4 If not, on which women do you do it?

1.5 Do you perform a physical examination of all male patients?

Yes ☐ No ☐

1.6 If yes, on which males do you do it?

1.7 Do you ever refer patients to a hospital, GP's or another clinic for treatment of STDs?

Yes ☐ No ☐

1.8 If yes, which patients get referred?

____

1.9 To whom do you refer them?

GP's ☐
General hospital ☐
Traditional healer ☐
Other (specify) ________________

1.10 How frequently does this happen?

Always ☐ Often ☐ Sometimes ☐ Seldom ☐ Rarely ☐

2. TREATMENT

2.1 Do you have a standard treatment protocol that you use to prescribe and give treatment?

Yes ☐ No ☐

2.2 If no, how do you decide on what treatment to give?

____

2.3 What are the standard drugs that you prescribe for patients on their first visit?

Doxycycline ☐
Metronidazole (Flagyl) ☐
Tarivid ☐
Ofloxacin ☐
Ciprofloxacin ☐

2.4 Do you sometimes have to give other drugs, in addition to the standard treatment.

Yes ☐ No ☐

2.5 If yes, to which patients are these given?

If VDRL is positive ☐
If symptoms to do not abate ☐

2.6 What drugs, in addition to the standard ones, do you give?

____

2.7 Are the drugs that you need to treat patients with STDs always available?

Yes ☐ No ☐

2.8 If not, how often do you run out?

Often ☐ Sometimes ☐ Rarely ☐ Never ☐

2.9 What do you do if the drugs are not available?

give substitute antibiotics ☐
ask the patient to come back when the medicine will
available - if so, ☐
after how long ☐
tell patients to abstain from sexual intercourse until they are treated ☐
tell patients where else they can get these drugs ☐

2.10 If you give substitute drugs, which ones do you give?

____

2.11 How many patients do you ask to return for follow up?

all ☐
some ☐
none ☐

2.12 If some, which ones are asked to return?

____

2.13 How do you arrange to follow up the patients who do not return for subsequent visits?

____

3. HEALTH EDUCATION AND COUNSELLING

3.1 Do you educate patients about STDs?

Yes ☐ No ☐

3.2 If no, does anyone else educate STD patients about the illness?

Yes ☐ No ☐

3.3 If yes, who?____

3.4 Below is a list of issues on STDs. Which of these issues are routinely part of your education?

	YES	NO
causes of STDs	☐	☐
ways of spread of STDs	☐	☐
the practice of monogamy	☐	☐
the avoidance of casual sex	☐	☐
encouraging the use of condoms	☐	☐
encouraging abstinence until completely healed	☐	☐
the importance of compliance even if symptoms abate	☐	☐
people with STDs may not show any symptoms	☐	☐
STDs increase the risk of getting HIV	☐	☐
the complications of STDs, eg. Infertility, congenital syphilis	☐	☐
the importance of treating sexual partners	☐	☐
abstinence from alcohol intake until healed	☐	☐
Others (specify) ____________________________		

3.5 Do you feel that you have enough time to spend on each patient?

Yes ☐ No ☐

3.6 On average, how much time do you spend with each patient with an STD?

less than 5 minutes ☐
5 - 15 minutes ☐
15 - 30 minutes ☐
30 - 45 minutes ☐
Up to 1 hour ☐

3.7 Do you have guidelines on counselling STD patients?

Yes ☐ No ☐

3.8 Would guidelines be useful?

Yes ☐ No ☐

3.9 What else would be useful for you?

____

4. CONTACT TRACING

4.1 When you see someone with an STD do you call anyone else in?

Yes ☐ No ☐

4.2 If yes, who? Please explain

____

4.3 Would you approach women and men differently?

Yes ☐ No ☐

4.4 What mechanism do you use for tracing the contacts/partners?

Partner notification cards ☐
home visits ☐
other, specify __________

4.5 In your estimation, how many of the partners come to the clinic?

less than 25% ☐
25% - 50% ☐
50% - 75% ☐
more than 75% ☐

4.6 In your opinion, how can contact-tracing be improved?

____

5. CONDOM PROVISION

5.1 Is the use of condoms encouraged in this clinic?

Yes ☐ No ☐

5.2 Are condoms used commonly by people in this community?

Yes ☐ No ☐

5.3 Do you have condoms available for STD patients?

Yes ☐ No ☐

5.4 Are condoms provided free to each STD patient?

Yes ☐ No ☐

5.5 How many do you give to each patient?

Yes ☐ No ☐

5.6 Do you demonstrate to each patient how to use a condom?

Yes ☐ No ☐

5.7. Is there anyone else at this clinic who teaches people how to use condoms?

Yes ☐ No ☐

5.8 How many patients with STDs request condoms?

Yes ☐ No ☐

5.9 In your opinion, do the STD patients use the condoms that they get?

Yes ☐ No ☐

5.10 What are the problem that make it difficult for patients to use condoms?

negative attitudes to condom ☐
partners' refusal to use condoms ☐
other, specify ____________________

5.11 How do you think the clinic can improve the use of condoms?

____

6. FURTHER EDUCATION AND TRAINING OF HEALTH PERSONNEL

6.1 Have your received any formal teaching or training on the management of STDs in the last 2 years?

Yes ☐ No ☐

6.2 If yes, how many times? ____________________

6.3 If yes, by whom? ____________________

6.4 If no, where do you get your information on the correct management and treatment of STDs?

____

6.5 Have you taught another health worker about the correct management and treatment of STDs in the last year?

Yes ☐ No ☐

6.6 Do you feel a need for continuing education and information on the topic of STD's?

Yes ☐ No ☐

6.7 If yes, specify ____________________

6.8 Overall, how would you rate STD treatment at this clinic?

Excellent ☐
Good ☐
Average ☐
Poor ☐
Very Poor ☐

6.9 What works well?

____

6.10 What are the main problems?

____

6.11 How could STD services be improved?

____

APPENDIX C

STD PATIENT SEMI-STRUCTURED INTERVIEW

For Official Use Only.
Please Do Not Write
In This Column

Thank you for agreeing to help us with our research. I am going to ask you a number of questions about the illness which brought you to the clinic today and how you experienced the service which you received here. Your name will not be used at any stage, so that your answers will b and e kept completely anonymous. Please answer as honestly as possible ask if you don't understand anything

Date:____________________

Clinic: ____________________________

Interviewer: ________________________

A. BIOGRAPHICAL INFORMATION

1. Sex of patient ☐ Female ☐ Male — 1. ☐

2. How old are you? — 2. ☐
   - ☐ Under 15
   - ☐ 16-25
   - ☐ 26-40
   - ☐ 41-60
   - ☐ Over 60

3. What is your home language? ____________________ — 3. ☐

4. Race of patient — 4. ☐
   - African ☐
   - Coloured/Indian ☐
   - White ☐
   - Other (specify) ☐

5. How much schooling have you had? — 5. ☐
   - None ☐
   - Primary ☐
   - Secondary ☐
   - Tertiary ☐

6. Are you employed? Yes ☐ No ☐ 6. ☐

[If yes ask; else skip to Q8]

7. What is your present job ______________________________ 7. ☐

8. When you are not working, who supports you? 8. ☐

Spouse ☐
Partner ☐
Parents ☐
Relative ☐
Other ☐
(specify)__________

✓ Demographics.

9. What is your marital status? 9. ☐

Married ☐
Cohabiting ☐
Separated ☐
Divorced ☐
Widowed ☐
Single ☐

[If not married/cohabiting ask; else skip to Q12]

10. Do you have a regular sexual partner? 10. ☐

Yes ☐
No ☐

[If yes ask; else skip to Q12]

11. How long have you been together? 11. ☐

Under 1 year ☐
1-5 years ☐
6-10 years ☐
Over 10 years ☐

12. How many other sexual partners have you had in the past year? 12. ☐

0 ☐
1 ☐
2-5 ☐
Over 5 ☐

13. How many children do you have? 13. ☐

0 ☐
1 ☐
2-5 ☐
Over 5 ☐

B. STD AWARENESS/PERCEPTIONS

1. Why did you come to the clinic today? (Prompt for terminology, especially name for illness)____________________________ 1. ☐

____

2 .How do you think you got this illness? ____________________ 2. ☐

____

3. Are there other things which can cause this illness? ____________ 3. ☐

____

4. Do you think you can spread this illness? 4. ☐

Yes ☐
No ☐
Don't know ☐

[If yes ask; else skip to Q6]

5. How can the illness be spread? ____________________________ 5. ☐

____

[If sexual transmission not mentioned, ask; else skip to Q7]

6. Do you think this illness can be transmitted through sexual intercourse? 6. ☐

Yes ☐
No ☐
Don't know ☐

7. Do you think that people around you may have the same illness? 7. ☐

Yes ☐
No ☐
Don't know ☐

[If yes ask; else skip to Q9]

8. Why do you think those around you may have the same illness as you have? 8. ☐

____

9. Who do you think gets this kind of illness? 9. ☐

____

10. Do you think this illness is a common health problem in your community? Please rate your response 10. ☐

Common ☐
Rare ☐
Never seen ☐

11. What would be your reaction if you heard that someone in your community had an STD?______________________ 11. ☐

____

12. Can a person have an STD without knowing it? 12. ☐

Yes ☐
No ☐

Don't know ☐

13. Can STDs increase the risk of getting AIDS? 13.☐

Yes ☐

No ☐

Don't know ☐

14. Please explain______________________________________ 14.☐

15. Can STDs be treated? Yes ☐ 15.☐

No ☐

Don't know ☐

16. How can STDs be prevented from spreading?_______________ 16.☐

____

[If not mentioned, prompt for condoms]

17. Do you use condoms during intercourse? Always ☐ 17.☐

Sometimes ☐

Never ☐

18. Please explain your answer__________________________ 18.☐

____

19. Where do/would you obtain condoms? 19.☐

Clinic/hospital ☐

Pharmacy ☐

Café/supermarket ☐

NGO ☐

Other (specify)_________________

20. Are condoms commonly used by people in your community? 20. ☐

Yes ☐
No ☐
Don't know ☐

21. Please explain your answer____________________________ 21. ☐

____

22. When someone has an STD, is it necessary to treat the partner as well? 22. ☐

Yes ☐
No ☐
Don't know ☐

23. Please explain your answer____________________________ 23. ☐

____

C. HEALTH-SEEKING BEHAVIOUR

1. Is this the first time you have the illness which brought you to the clinic today? C1.☐

Yes ☐
No ☐

[If yes skip the next section and go to question 11]

[If no, please ask the following]

2. How many previous times have you had the symptoms which brought you to the clinic today? 2. ☐

Once ☐
Twice ☐
Three or more times ☐

[For the last episode before this one, ask the following]

3. How long ago was it that you last had these symptoms? 3. ☐

Less than 1 month ago ☐
1-6 months ago ☐
6-12 months ago ☐
More than a year ago ☐

4. Did you go to anyone for treatment? Yes ☐ 4. ☐
No ☐

[If yes ask; else skip to Q11]

5. Who did you go to for treatment? 5. ☐

Private doctor ☐
Traditional healer ☐
Other clinic ☐
Pharmacy ☐
Other (specify) ☐

6 What treatment was given? 6. ☐

Pills ☐
Injection ☐
Other (specify)______________

7. Did you complete the treatment? Yes ☐ 7. ☐
No ☐

8. Was your partner treated? Yes ☐ 8.☐
No ☐

9. What did you like/not like about this treatment? ____________ 9. ☐

____

10. Why do you think the symptoms have returned? ____________ 10. ☐

____

[For this visit to the clinic, ask the following]

11. What are the symptoms which brought you to the clinic today? 11. ☐

____

12. Why did you decide to come to <u>this</u> clinic for treatment? 12. ☐

____

13. How long have you had these symptoms? 13. ☐

Less than 7 days ☐
8-14 days ☐
15-30 days ☐
More than 1 month ☐

14. What was your reaction to this illness? ____________________ 14. ☐

____

15. Did you tell anyone about your illness? Yes ☐ 15. ☐
No ☐

[If yes ask; else skip to Q18]

16. Who did you tell? 16. ☐

Spouse ☐
Partner ☐
Parent ☐
Relative ☐
Friend ☐
Other (specify) ____________

17. What was their reaction?______________________________

____

17. ☐

18. What else did you do about your illness?________________

____

18. ☐

19. Did you go to anyone for treatment before coming to this clinic?

Yes ☐

No ☐

[If yes ask; else skip to QD1]

19. ☐

20. Who did you go to for treatment?
Private doctor ☐
Traditional healer ☐
Other/this clinic ☐
Pharmacy ☐
Other (specify)____________

20. ☐

21. What treatment were you given?
Medication ☐
Injection ☐
Other (specify)_____________

21. ☐

22. What was the outcome of this treatment?

Symptoms went away ☐
Symptoms stayed same ☐
Symptoms got worse ☐

22. ☐

23. What did you like/not like about this treatment?______________

____

23. ☐

D. QUALITY OF CARE - history & examination

1. Is this your first visit to this clinic for this episode?

Yes ☐

No ☐

D1. ☐

[If yes, ask; if no (ie. if this is a follow-up), skip to Q34]

2. Who was the first person you had to speak to at the clinic? 2. ☐

Doctor ☐
Nurse ☐
Nursing Assistant ☐
Clerk ☐
Other (specify)____________________

3. Who was the person who actually treated you? 3. ☐

Doctor ☐
Nurse ☐
Nursing assistant ☐
Other (specify)____________________

4. Was this person a woman or a man? Female ☐ 4. ☐
Male ☐

5. How did you find that this staff member responded to you? Did you find her/him to be: 5.

Helpful	Yes ☐	No ☐	Unsure ☐	a. ☐
Unfriendly	Yes ☐	No ☐	Unsure ☐	b. ☐
Respectful	Yes ☐	No ☐	Unsure ☐	c. ☐
Judgemental	Yes ☐	No ☐	Unsure ☐	d. ☐
Informative	Yes ☐	No ☐	Unsure ☐	e. ☐

6. Were you able to speak privately with the staff about your problem? 6. ☐

Yes ☐
No ☐

7. Please explain your answer____________________________________ 7. ☐

8. Did the health worker talk to you in a language that you understood? 8. ☐

Yes ☐
No ☐

9. How long did you have to wait before you were seen by a health worker? 9. ☐

Less than 30 mins ☐
31 mins -1 hour ☐
61 mins -2 hours ☐
121 mins -4 hours ☐
More than 4 hours ☐

10. Was there any information about STDs available to read or watch while you were waiting? 10. ☐

Yes ☐
No ☐

[If yes ask; else skip to Q12]

11. What information was there? 11.

Posters	Yes ☐	No ☐	a. ☐
Pamphlets	Yes ☐	No ☐	b. ☐
Comic books	Yes ☐	No ☐	c. ☐
TV/video	Yes ☐	No ☐	d. ☐
Other (specify)____________________			e. ☐

12. Did the health worker examine you? 12. ☐

Yes ☐
No ☐

[If yes ask; else skip to Q14]

13. Was your permission obtained for the examination? 13. ☐

Yes ☐
No ☐

14. Did the health worker take blood? 14. ☐

Yes ☐
No ☐

15. How much time did you spend with the health worker? 15. ☐

Less than 15 mins ☐
16-30 mins ☐
31-60 mins ☐
More than 60 mins ☐

QUALITY OF CARE - Diagnosis, treatment and compliance

16. Did the health worker tell you what was wrong with you? 16. ☐

Yes ☐
No ☐

17. What did the health worker say?________________________ 17. ☐

____

18. What did the health worker say was the cause of your illness? 18. ☐

____

19. Did you understand what the health worker was explaining to you? 19. ☐

Yes ☐
No ☐

20. What treatment were you given?________________________

____

21. Was the treatment clearly explained to you? 21. ☐

Yes ☐
No ☐

22. Were you told to complete your medicine, even if you feel better? 22. ☐

Yes ☐
No ☐

[If yes ask; else skip to Q24]

23. Were you told why you have to complete your medicine? 23. ☐

Yes ☐
No ☐

24. Did the health worker explain how you can spread the illness? 24. ☐

Yes ☐
No ☐

25. Were you told that your sexual partner/s also need/s treatment? 25. ☐

Yes ☐
No ☐

26. Were you given a slip to give to your partner requesting him/her to come to the clinic for treatment? 26. ☐

Yes ☐
No ☐

27. What other treatment was offered for your partner?________ 27. ☐

____

28. Do you intend to notify your spouse/regular partner? 28. ☐

Yes ☐
No ☐
Don't know ☐

29. Do you intend to notify other sexual partners? 29. ☐

Yes ☐
No ☐
Don't know ☐

30. What would you expect their reactions to be?____________ 30. ☐

____

31. Were you asked to return for follow up treatment? 31. ☐

Yes ☐

No ☐

32. Were you given any condoms? Yes ☐ 32. ☐

No ☐

[If yes ask; else skip to Q34]

33. Do you intend to use the condoms? Yes ☐ 33. ☐

No ☐

Don't know ☐

[ONLY if this is a follow-up visit ask; else skip to Q43]

34. What were you told to do about your illness at your last visit? 34. ☐

____

____

35. How much of your medicine did you take? 35. ☐

____

[If medicine not completed ask; else skip to Q37]

36. What would have made it easier for you to complete the medicine? 36. ☐

____

37. Did you ask any of your partners to come to the clinic for treatment? 37. ☐

Yes ☐

No ☐

38. Please explain________________________________ 38. ☐

39. What would have made it easier for you to tell your partner/s to come to the clinic? 39. ☐

____

40. Have you used condoms since your last visit? 40. ☐

Always ☐
Sometimes ☐
Never ☐

41. Please explain________________________________ 41. ☐

42. What would make it easier for you to use condoms?__________ 42. ☐

____

QUALITY OF CARE - accessibility of health services

43. Do you live near to the clinic? Yes ☐ 43. ☐
No ☐

44. How many minutes does it take you to get to the clinic? 44. ☐

Under 30 mins ☐
31-60 mins ☐
61 mins-2 hours ☐
More than 2 hours ☐

45. How do you travel to the clinic? 45. ☐

On foot ☐
Car ☐
Cart/Bicycle ☐
Taxi ☐
Bus/train ☐
Other (specify)__________

46. Are the clinic times convenient for you? Yes ☐ | 46. ☐

No ☐

[If no ask; else skip to Q48]

47. What would be the most suitable time for you? | 47. ☐

Morning ☐
Afternoon ☐
Evening ☐
Other (specify)______________

48. What other problems do you experience which prevent you from getting to the clinic? | 48. ☐

____

49. What would make it easier for you to attend this clinic? | 49. ☐

____

50. Overall how would you rate your visit to the clinic today? | 50. ☐

Satisfactory ☐
Neutral ☐
Unsatisfactory ☐

51. Please explain____________________________________ | 51. ☐

52. Would you advise your friends to come to this clinic if they had a similar problem? | 52. ☐

Yes ☐
No ☐
Don't know ☐

53. Please explain ____________________________________ | 53. ☐

THANK YOU FOR YOUR HELP AND CO-OPERATION

APPENDIX D

SIMULATED PATIENTS - SEMI-STRUCTURED INTERVIEW

For Official use only. Please do not write in this column.

Date:

Place:

Biographic information of simulated patient:

1. Sex: ______________________________

Accessibility:

1. How long did you have to wait before you were seen by the health provider? 1.☐

____

2. Were you seen by a: ☐ Male ☐ Female 2. ☐

3. Where was the history taken? 3.☐

4. Were you consulted in a private room? 4.☐

History and examination:

1. Which of the following were you asked about? 1.

Women

	YES	NO	
– pain when having sex?	☐	☐	☐
– heavy period bleeding?	☐	☐	☐
– irregular period?	☐	☐	☐
– bleeding after sex?	☐	☐	☐
– the dates of your last menstrual period?	☐	☐	☐

– the type of vaginal discharge?	☐	☐	☐
– lower abdominal pain?	☐	☐	☐
– sores?	☐	☐	☐
– duration of symptoms?	☐	☐	☐
– previous STDs?	☐	☐	☐
– previous treatment?	☐	☐	☐
– last sexual intercourse?	☐	☐	☐
– number of recent sexual partners?	☐	☐	☐
– contraceptive use?	☐	☐	☐

<u>Men</u>

	YES	NO	
- urethral discharge?	☐	☐	☐
– pain when urinating?	☐	☐	☐
– sores on the genitals?	☐	☐	☐
– duration of symptoms?	☐	☐	☐
– last sexual intercourse?	☐	☐	☐
– number of recent sexual partners?	☐	☐	☐
– previous STD within last 3 months?	☐	☐	☐
– previous treatment?	☐	☐	☐
– contraceptive use?	☐	☐	☐

Diagnosis and treatment:

1. What diagnosis did he/she give you? 1 ☐

☐ vaginal discharge
☐ urethral discharge
☐ syphilis
☐ gonorrhea
☐ warts
☐ genital ulcers
☐ other ____________________________

2. What did he/she say was the cause of the illness? 2.☐

____

3. What medication did he/she give you? 3. ☐
(Give dosage)

☐ Ciprofloxacin
☐ Doxycycline
☐ Metronidazole
☐ Other ____________________

4. What instructions were you given for taking the medication? 4. ☐
(Be specific).

____
____

5. Were you told to complete the full course of treatment even if you feel better? 5. ☐

Yes ☐ No ☐

6. Were you told to practice safe sex or abstain from sex during the treatment? 6. ☐

Yes ☐ No ☐

7. Do you feel that the treatment was clearly explained to you? 7. ☐

Yes ☐ No ☐

8. Were you asked to return for a follow-up session? 8. ☐

Yes ☐ No ☐

If yes, were you asked to return:

☐ within 1 week
☐ within 1 month
☐ within 6 months

1. Overall, how would you rate the STD treatment at this clinic. 1. ☐

1 Very Good	2 Good	3 Average	4 Poor	5 Very Poor

Condoms:

1. Did the health provider encourage the use of condoms? 1. ☐

Yes ☐ No ☐

2. Were you given a demonstration of how to use condoms, using a dildo or penis? 2. ☐

Yes ☐ No ☐

3. Were any condoms offered to you? 3. ☐

Yes ☐ No ☐

Contact Tracing:

1. Did the health provider say that all your recent sexual partners should be treated 1. ☐

Yes ☐ No ☐

2. Did the health provider ask you to tell your partners to come for treatment? 2. ☐

Yes ☐ No ☐

3. Did the health provider give you a date for your partners to come in? 3. ☐

Yes ☐ No ☐

4. Did the health provider give you a contact tracing card(s) for your partner(s)? 4. ☐

Yes ☐ No ☐

Counselling:

1. Were you given counselling and information about the following: 1.

	YES	NO	
– causes of STDs	☐	☐	☐
– practice of monogamy	☐	☐	☐
– avoidance of casual sex	☐	☐	☐
– the use of condoms	☐	☐	☐
– STDs increase the risk of infertility	☐	☐	☐
– STDs increase the risk getting AIDS.	☐	☐	☐
– STDs increase the risk of having spontaneous abortions	☐	☐	☐
– STDs increase the risk of congenital diseases	☐	☐	☐
- people with STDs may not show any symptoms	☐	☐	☐

Quality of consultation:

1. Please rate the attitude of the health provider using the following scale: 1.

	YES	NO	
– Helpful	☐	☐	☐
– Unfriendly	☐	☐	☐
– Respectful	☐	☐	☐
– Judgemental	☐	☐	☐
– Informative	☐	☐	☐

2. How long did the consultation with the health provider last? 2. ☐

☐ up to 5 minutes
☐ 6 - 15 minutes
☐ 16 - 30 minutes
☐ over 30 minutes

3. Are there any other comments you would like to make regarding your experience at this clinic?

____

____

APPENDIX E

VIGNETTE USED IN FOCUS GROUP DISCUSSIONS

Vignette One

S is a 30 year old woman who lives in Khayelitsha (change age and place name according to group). She has three children – aged 10, 8 and 5 years. She works as a cleaner/clerk at Lingelethu Town Council, Khayelitsha (other examples according to group). Recently she has found that when she urinates or has sex she has a terrible burning feeling. Sometimes she also has an itch that does not go away. She has also noticed a yellow discharge which has a bit of a smell. She is very worried because se has been having these problems for the past months.

Vignette Two

S is a 20 year old man who lives in Khayelitsha (change age and place name according to group). He works as a petrol attendant (change according to group), a job he has held for the last year. For the last few weeks S has had a burning pain when he urinates and there is a strong-smelling liquid dripping from his penis. In the last day or two he has noticed some sores on his penis as well. He is afraid that he is ill.

APPENDIX F

PARTICIPANT CODES

HP : Health provider

Fp : Female STI patient

Mp : Male STI patient

Fsp : Female simulated patient

Msp : Male simulated patient

Description of and codes for community groups

Group A : Commercial sex-workers (all female)

Group B : Commercial sex-workers (all female)

Group C : Housewives

Group D : Prison in-mates (all male)

Group E : Volunteer health workers (male and female)

Group F : Mine workers (all male)

Group G : Community members (male and female)

Group H : Church members (all female)

Group I : University students (all female)

Group J : Community members (male and female)

APPENDIX G

QUALITY OF CARE –COMPOSITE SCORE ITEMS

STI Patients

1) Privacy - was patient consulted privately about problem?
2) Language - was patient spoken to in a language s/he understood?
3) Educational material - was any information about STIs available for patient?
4) Examination - Did health provider examine patient?
5) Length of consultation - was consultation more than 15 minutes?
6) Diagnosis - was there communication from health worker about what was wrong with patient?
7) Causal explanation - was there accurate communication about the cause of patient's illness?
8) Compliance - was patient told to complete medication even if better?
9) Partner notification 1 - was patient told that partner needs treatment?
10) Partner notification 2 - was patient given partner notification slip?
11) Follow up - was patient asked to return for follow up?
12) Condoms - was patient given condoms?

Simulated Patients

1) Privacy - was patient consulted privately about problem?
2) AIDS Risk - was patient told that STIs increase risk of getting AIDS?
3) Asymptomatic Carriers - was patient told that people can have an STI without symptoms?
4) Complications - was patient told about complications of STIs (congenital syphilis)?
5) Length of consultation - was consultation more than 15 minutes?
6) Condoms 1 - were condoms encouraged?

7) Causal explanation - was there communication about the cause of patient's illness?

8) Compliance - was patient told to complete medication even if better?

9) Partner notification 1 - was patient told that partner needs treatment?

10) Partner notification 2 - was patient given partner notification slip?

11) Follow up - was patient asked to return for follow up?

12) Condoms 2 - was patient given condoms?

Health Providers

1) Examination - Does health provider always examine patients?

2) AIDS Risk - are patients told that STIs increase risk of getting AIDS?

3) Asymptomatic Carriers - are patients told that people can have an STI without symptoms?

4) Complications - are patients told about complications of STIs (congenital syphilis)?

5) Length of consultation - are consultations more than 15 minutes?

6) Condoms 1 - are condoms encouraged?

7) Causal explanation - is there communication about the cause of patient's illness?

8) Compliance - is patient told to complete medication even if better?

9) Partner notification 1 - is patient told that partner needs treatment?

10) Partner notification 2 - is patient given partner notification slip?

11) Follow up - is patient asked to return for follow up?

12) Condoms 2 - is patient given condoms?

APPENDIX H

CODING CONVENTIONS USED

[ ]	Material omitted
…	Pause
]	Overlapping talk (put on each statement that overlaps)
=	Speaker cuts in
[*text*]	Explanatory material
[text]	Unclear, probably what was said. This is also used to indicate an additional or replaced word that was probably meant by the speaker or by the writer to make the excerpt read better and/or make grammatical sense
text	emphasised by participant