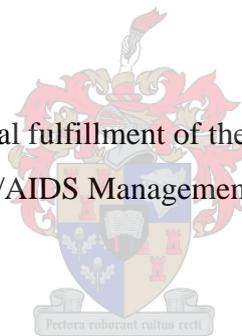


**The involvement of community pharmacists in the syndromic
approach to the management of sexually transmitted infections:
A proposed best practice model.**

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Assignment presented in partial fulfillment of the requirements for the degree of
Master of Philosophy (HIV/AIDS Management) at Stellenbosch University



Study leader: Prof JCD Augustyn

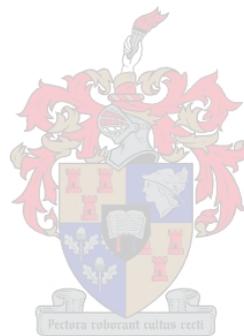
December 2005

Declaration

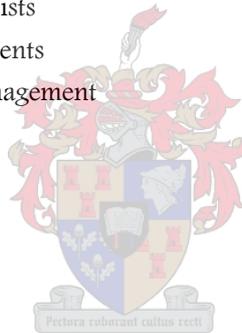
I, the undersigned, hereby declare that the work contained in this assignment is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date:



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Summary

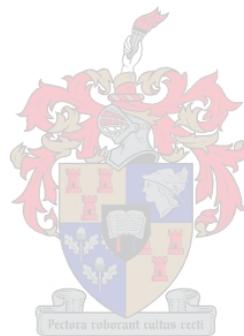
“Between 6.29 million and 6.57 million people in South Africa are estimated to be HIV positive” (Quinn, 7/11/2005) The primary issue pertaining to HIV/AIDS, is the control of the spread of the infection. A critical intervention strategy entails the effective management of sexually transmitted infections, which could reduce the HIV incidence by 40% according to Mayhew, S. et. al, 2001.

Factors such as; stigma, limited resources, inaccessibility to affordable and effective drugs etc, impact on the management of STIs. In view of the significant consequences of inadequate STI management, there is growing international support for STI prevention and control. It is clear that decreasing the rate of STI infection will impact positively on reducing the spread of HIV and AIDS.

Numerous epidemiological and biological studies now support the fact that STIs, enhance HIV transmission (Wasserheit JN, 1992). Those infected with HIV become more infective, due to the STI related inflammatory conditions. The more frequent the episodes of STI in a HIV positive individual, the faster the progression to full-blown AIDS.

This dissertation therefore, endorses the current strategy by the State involving the syndromic approach in the management of STIs. This approach is a treatment option based on the identification of a constellation of symptoms and signs experienced by the patient. The focus of this paper is a proposal for inclusion of pharmacists as essential role-players in this programme of action. Considering the significant role of the pharmaceutical industry in drug management, it is incomprehensible that the Government’s strategic plan currently excludes pharmacists. Pharmacists, generally, are perceived as trusted health care professionals with extensive knowledge on health care issues. Thus training pharmacists in the syndromic approach will certainly contribute to effective control of the infection. Issues such as adherence counselling will have a better prognosis due to the specialized knowledge of the pharmacist; and follow-up, if required, will be easily accessible to the patient. Further, the patient will be able to report any side effects, seek change to treatment and discuss any concerns almost immediately with the pharmacist.

The benefit will be seen in the possible decrease in the number of new infections, due both to the professional counselling intervention, and early detection. In view of the aforementioned, this paper proposes a review of legislation as well as the Government's strategic plan for STI management. It goes further to suggest a best practice model for the involvement of pharmacists in the programme of action to reduce the spread of STIs, and subsequently, HIV and AIDS. It projects a vision of a new professional role for pharmacy in the context of public/private partnerships in health delivery programmes. The rigorous tertiary training of pharmacists certainly suggests that their role surpasses the arena of drug delivery management and must therefore not be the only focus of their professional role. They must be seen as an essential part of the health care team with the freedom and endorsement to use the other professional skills with which they're equipped, to provide more comprehensive patient care.

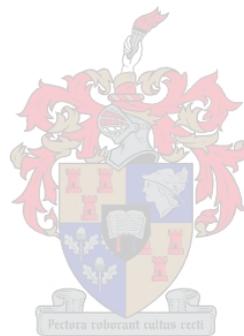


Opsomming

Dit is welbekend dat die familie-apteker normaalweg baie nou saamwerk met sy kliënte, naamlik die publiek. Net soos in die geval van die rol by die handhawing van goeie gesondheid, kan die apteker na alle waarskynlikheid ook 'n beduidende rol vervul by pasiëntesorg in die geval van MIV/Vigs.

Hierdie studie ondersoek die rol van die apteker in gesondheidsorg van die Vigs-pasient. Die resultaat van die studie is 'n voorstel vir 'n beste-praktyk model vir aptekers in die stryd teen MIV/Vigs.

Daar word voorgestel dat die Departement van Gesondheid en die Aptekersvereniging van Suid-Afrika hierdie voorstel ter tafel neem.



1. Linking Sexually Transmitted Infections and HIV/AIDS

Between 6.29 million and 6.57 million people in South Africa are estimated to be HIV positive (Quinn, 7/11/2005). The critical issue in relation to HIV/AIDS is the control of the spread of the infection and the provision of support services to those already infected (medical, financial, psychological etc.). Although sexually transmitted infections (STIs) have been causing significant morbidity and mortality for years, it is only with the advent of HIV, that STI control is now receiving higher priority in both developed and developing countries. This is because STIs increase the transmission of HIV and have similar behavioural risk factors. (Family Health International, 2002) One of the key areas of control of HIV transmission therefore, is the effective management of sexually transmitted infections (STI's) which could reduce the HIV incidence by 40% (Mayhew, S. et. al, 2001).

The syndromic management of STIs is a treatment option based on a constellation of symptoms and signs experienced by the patient. Diagnosis requires no laboratory facilities and patients are able to obtain treatment at the time of their visit. Patients are not lost in follow-up and this contributes to the prevention of sequelae and further transmission. All major pathogens are treated.

STI control is now receiving higher priority in both developed and developing countries due to the presence of HIV although STIs have been causing morbidity and mortality for years. This is because STIs increase the potential and risk of transmission of HIV and are associated with a similar repertoire of behavioural risk factors. As many as 333 million new curable STIs occur globally each year (WHO 1995). It is also predicted that STIs have the potential for serious economic, social and health consequences particularly in view of their clear and indisputable link to HIV, yet all STIs are preventable and many are curable. It is therefore critical that every available resource is utilised in the prevention and control of STIs. The dynamic effect of STI prevention or cure is illustrated by the following: by curing or

preventing 100 cases of syphilis amongst an STI high risk group, approximately 109 new HIV infections and 4132 new syphilis cases could be prevented in the next ten years (Over M, 1993).

In many developing countries, the health care systems are already strained by having to deal with other health problems related to poverty, malnutrition and the lack of running water and sanitation. Provision of health care and diagnostic facilities is clearly inadequate in these countries this invariably impacts on the management of sexually transmitted infections. The stigma associated with STI's, the limited resources, and the lack of affordable and effective drugs exacerbate the situation. In view of the significance of the consequences of inadequate STI management, the cause poses a worthy focus for national level efforts given the growing literary and global support for, and awareness of, the importance of STI prevention and control. Indeed, if progress can be made in decreasing the rate of infection, a significant decrease in HIV infections, maternal and infant morbidity, and mortality will inevitably follow.

Numerous epidemiological and biological studies now support the fact that STIs, both ulcerative and non-ulcerative, enhance HIV transmission (Wasserheit JN, 1992). Those infected with HIV become more infective, due to the STI related inflammatory conditions. The more episodes of STI in a HIV positive individual expedite the progress to full-blown AIDS. In a recent community based, randomised trial in the Mwanza district of rural Tanzania, it was demonstrated that, treating STI-symptomatic individuals using the syndromic approach reduced HIV incidence in the study population by 42 percent (Grosskurth H, 1995). STIs have been ranked amongst the top 5 categories for which adults in developing countries seek health care services.

The high incidence and prevalence of sexually transmitted infections (STIs) in Southern Africa poses a serious threat to public health for two main reasons. First, the impact of these infections is a major cause of healthy life lost, particularly for women and children, and secondly, because STIs are *important co-factors* in driving the HIV epidemic (Colvin M). In developing countries, poverty both promotes the

transmission of STIs and diminishes the capacity of a nation to mount effective anti-STI programmes. Work-related migrants in Southern Africa contribute to the spread of STIs, including HIV, because individuals are at relatively high risk of having multiple and concurrent sexual relations. Women migrants and those left behind in the rural areas are often forced into 'survival sex', whereby sex is exchanged for favours. Those infected individuals who do seek treatment frequently delay before doing so and when treatment is obtained it may not be appropriate. These programmes *should* ensure access to effective and acceptable STI services, expanding public education and targeting STI interventions at high-risk and core transmitter groups. In the longer term, cheaper and effective diagnostic tests are needed that will permit large-scale screening to reduce the burden of asymptomatic STIs. Home test kits may be a possible solution.

Individuals with STIs are particularly prone to HIV infection and AIDS because:

- Sexual intercourse with an infected partner is by far the main mode of transmission of STIs as well as HIV and AIDS infection. (WHO 2001)
- Individuals with STIs that cause genital ulcers (sores) are especially susceptible to infection with the HI virus as the ulcers provide an easy way into the body through openings in the mucous membranes
- STIs that do not cause ulcers also facilitate the transmission of HIV because any genital inflammation speeds up the migration of certain HIV-sensitive and receptive cells (lymphocytes such as CD4 cells) to the site where the HI virus can attach itself and be carried further into the body
- Genital discharges and secretions are common symptoms of STIs and often the site of high concentrations of the HI virus
- A person infected with the HI virus who also has an STI is extremely infectious and, if the person has multiple partners, he or she will infect others.

2. Current STI strategies in South Africa

There is compelling evidence regarding the importance of STIs as a major determinant of HIV transmission in South Africa. Approximately 11 million STI episodes are treated annually with approximately 5 million of these managed by the private general practitioner (HIV/AIDS/STI Strategic Plan for South Africa 2000-2005)(Feb 2000). Clearly, even without the HIV pandemic STIs as a health issue pose an important public health problem. These figures represent only those seeking treatment options.

Thus, in the countries strategic plan, (referred to above), the second goal in the priority area of prevention, addresses the issue of management and control of STI's. The Government's strategic plan in the area of prevention appears, at first glance, to be *inclusive* in that it places great emphasis on both the private and public sector in terms of effective use of the syndromic approach. However, while key health workers in both the private and public sector have been targeted, including **doctors, nurses**, the traditional healers; the pharmacist, pharmacy organisations and their professional council have been completely excluded from this plan. Considering the significant role of the pharmaceutical industry in drug management from manufacturing to the ultimate act of counselling and dispensing, this represents a significant and incomprehensible omission. Ironically, Government has elected to grant dispensing licences to nurses at considerable training costs to the state, for STI management but failed to utilise the existing resource of more than two and a half thousand existing dispensing licenses that are located in community pharmacy which represents a resource pool of 4000 pharmacists and almost double that number of pharmacist assistants.

The Department of Health in its strategic plan has identified “**adequate human resources**” as key to delivery of the plan, more significant even than the issue of funding. In keeping with this strategic focus, the NDOH has access to a large pool of health care workers within pharmacy that require minimal additional training to be

part of this human resource requirement. It is likely that while the plan did not focus particularly on the strategic role of the pharmacist, the Role of Sectors (Section 7.2) makes reference to each sector developing specific plans based on their ‘role in society, activities and their specific strengths’. This document therefore, attempts to highlight the significant role of community pharmacy and the need to for the community pharmacy industry to mobilize its resources and document a possible ‘Best Practice’ so as to demonstrate its vital role in addressing the problem of effective STI and HIV management.

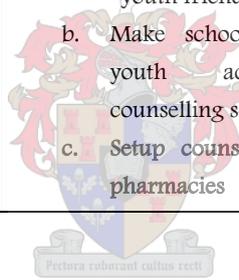
A detailed review of the strategic plan for STI management by the Department of Health highlights the absence of the pharmacist as part of the health care team. It is hoped that the next review due to take place soon will take full cognisance of the motivation and include some of the suggestions made. Below is an extract from the National Department of Health Strategic Plan for STI Management (2000)

(Highlighted in grey are suggestions by the writer for inclusion in future documents)

Improve the Management and Control of STI's

Objective	Basic Strategies	Lead Agencies
Ensure effective Syndromic Management of STI's in The private sector	<ol style="list-style-type: none"> a. Investigate granting Dispensing licences to nurses for STI treatment b. Monitor and regulate the quality of care in the private sector c. Training on syndromic management in the private sector d. Review Medical Schemes regulations to ensure minimum reimbursement for treating STI. e. Review regulations to allow pharmacist to dispense STI treatment. 	DOH, SAMA BHF, HPCSA, Organised Pharmacy

<p>Ensure effective Syndromic Management of STI's in the public sector</p>	<p>a. Training in syndromic management undergraduate/basic curricula of nurses, doctors, pharmacist</p> <p>b. Regular in-service training of HCW,s</p>	<p>DOH, SANC, Nurses training inst. Medical school. Pharmacy Schools</p>
<p>Collaborate with traditional healers to improve health care seeking behaviour for STI treatment</p>	<p>a. Develop, print and distribute training manuals in various languages.</p> <p>b. Conduct capacity building workshops with TH's and Pharmacies</p> <p>c. Sensitise the health sector regarding traditional medicine</p> <p>d. Consider referral systems between traditional and western medicine.</p>	<p>DOH, Traditional Healer Org, CONTRALESA Pharmacies</p>
<p>Increase access to youth friendly reproductive health services- including STI management, VCT and Rapid HIV testing facilities (special focus on youth, women, and migrant workers)</p>	<p>a. Make clinics and HCW's "youth friendly".</p> <p>b. Make schools places where youth access friendly counselling services.</p> <p>c. Setup counselling centres in pharmacies</p>	<p>DOH, DOE, Youth Sector Pharmacies</p>



While cost effective treatment protocols are available in the state health services the incidence of STI's in South Africa, as in most parts of Sub-Saharan Africa, is unacceptably high (WHO 1995). This may be related to a host of well known and well researched factors that contribute to the non-utilisation of state health services (overcrowding, waiting time, inability to get leave from work, transport and other related costs, attitude of service provider, etc).

Since 1994 in South Africa, there's been a massive shift from racially-biased, doctor-centred, hospital-based curative care, towards easily-accessible primary health care. According to Helen Schneider, head of the Wits Centre for Health Policy, the Government has failed miserably to demonstrate effective management of sexually transmitted infections (STIs), "While public sector hospitals and clinics are

following the correct diagnostic and treatment protocols, efforts are being undermined by private sector GPs and district surgeons who have appalling rates in treating the infections," she says. Thus, training protocols are of critical value for all sectors to our health care industry.

HIV and AIDS experts agree that health care professionals need to remain cognisant of the deadly association between HIV and other STIs. Individuals with STIs may already be infected with the HI virus and vice versa. A holistic treatment programme, which includes educating individuals about the dangers of STIs and HIV infection and presents sufferers with measures to prevent the spread of both diseases, should form part of the treatment programme.

Research shows that many GPs have never heard of the World Health Organisation guidelines on the subject, and in some categories of STIs, only four percent of private patients receive effective treatment. "As GP services are driven by profit, patients received only the treatment that they could afford to pay for and in most cases this was ineffective," says Schneider.

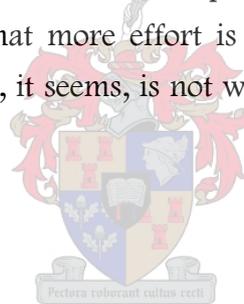
The District STI Quality of Care Assessment (DISCA) tool was used by the NDOH to evaluate the quality of STI services in South Africa. In 18 months, the percentage of clinics providing correct syndromic treatment for STIs increased to 86%, and the number of partner contact slips that were handed out increased from 156 to 1 122. This was as a result of the states education intervention which indicates that similar success can be achieved with the correct intervention in many other areas. In the case of pharmacy the states objectives can be achieved with the entire programme being managed within this sector, with minimum intervention by the State. It will be in the interest of this profession to facilitate this intervention and to bear the cost of training. A similar type of programme saw thousands of general practitioners upgrade their skills over a very short period to meet the requirement for the issuing of the dispensing licences.

For any STI programme to succeed it requires a high focus on educational efforts to reduce risk, condom availability, case finding through partner tracing and effective antenatal screening. The synergy of efforts in this direction promises to be a more effective approach to STI control and demands that more attention be directed

towards socio-behavioural aspects of STIs. The approach directs consideration of the STI policy environment as well as a more consumer or patient-oriented approach to health service delivery. Once a community is educated and motivated to seek treatment for STIs, there is more pressure on clinical services to meet its demands. If clinical services are more efficacious and user-friendly, it is more likely that the community will use them.

The level of accessibility and acceptability of services to a community, are important determinants of whether *those who know they may be infected will actually seek care*. Factors that detract from acceptability of services include high user fees, long waiting lines, lack of privacy, lack of empathy and acceptance by the health provider, and lack of access to effective drugs (Schultz KF 1987).

The Strategic priorities for the NDOH indicate that the syndromic approach to STI has been implemented in all public facilities with every facility having at least one trained health worker. Government has attempted to extend this training to the private sector but recognises that more effort is required especially with private general practitioners. The effort, it seems, is not well coordinated and structured to have any meaningful impact.



3. Review of the role of pharmacist in syndromic management of STIs on the international front

A recent study by the UK's Nuffield Institute of Health and the London School of Hygiene and Tropical Medicine together with the Ghanaian Health Ministry suggest that pharmacists represent *an under-utilised resource* for STI and HIV prevention activities. Interviews with pharmacists and patients in the Greater Accra Region revealed that each pharmacist sees an average of 30 STI patients per month. This translates to one STI patient per day adding up to almost 1 million cases per year in South African terms. In the above study more than 60% arrive without a prescription. Research suggests that proper treatment of sexually transmitted infections (STIs) could reduce HIV incidence by as much as 40% (Mayhew, S. et. al, 2001).

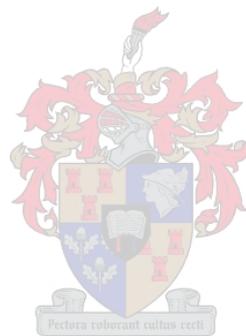
Pharmacists in the above study were placed in a training scheme and the study found a marked improvement in prescribing patterns for the simple urethral discharge. A study in Cameroon in the early 1990's indicated that 50% of male patients with a history of acute urethritis in the previous 12 months decided not to seek care in the formal health sector (Louis JP 1993).

There is increasing evidence that a large proportion of STI patients seek care elsewhere, such as from traditional healers, pharmacists, friends, or in the marketplace. Thus training pharmacists in the syndromic approach and allowing for marketing of STI treatment packages will certainly contribute to effective control of the infection.

In a study by the University of the Western Cape (K.L. Ward et. al.) it was determined that a large majority of pharmacist (74.1%) viewed their role in STI management as under utilised. There was a major indication of pharmacists' willingness to provide syndromic STI treatment (50.6 strong, and 47.1% slight). On

the other hand the quality of STI treatment amongst community pharmacists was poor (13.6% prescribing correct treatment for penile discharge, 6.3% for genital ulcers and 0% for vaginal discharge). While this study clearly underlines the need for STI treatment services in community pharmacies, there is a strong motivation for a training intervention and a best practice protocol for pharmacists.

Data from Mwanza, Tanzania, and Nairobi, Kenya, show that making available accessible and affordable care including effective drugs can cause a shift in health-care-seeking behaviour within the official medical services.



4. Role of pharmacist in current strategies of STI management and obstacles to full participation.

Pharmacists in South Africa are not able to effectively manage sexually transmitted infections (STI) because the law prevents the pharmacist from dispensing the necessary drugs without a prescription. There has been a belief in the industry that pharmacist could play a crucial role in effective STI management if they were sanctioned to dispense the drugs used in the *syndromic approach to STI management*.

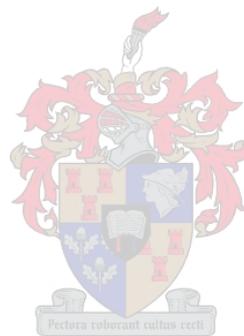
Community pharmacy is ideally placed to interact as a first point of treatment if given the opportunity. The inability of the community to seek treatment from pharmacy with current legislation barriers influences the behaviour of community members. Perceived high cost related to the private GP, waiting period in accessing the public sector and the negative association of public health currently, may prevent the patient from seeking treatment timeously. This would impact significantly on the spread of infection in view of the fact that, the longer the infection remains untreated, the more opportunities there are for transmission to occur.

The perceived lack of treatment options at community pharmacy may even prevent patients from accessing advice or preventative measures at the pharmacy level. This undoubtedly affects the opportunity to intervene as soon as possible.

Pharmacists in most communities are perceived as trusted health care professionals with extensive knowledge on health care issues. They are easily accessible and always available and their services are perceived as 'no cost' or 'low cost' especially with primary health care matters. With the stigma related to most sexually transmitted infections, the first point of contact must be provided with minimum barriers. If communities are made aware that they are able to collect medication for

these types of infection at their local pharmacy, the *response time in seeking treatment* post infection may be drastically reduced due to these minimized barriers. Unlike any other point of entry the adherence counselling will be extensive due to the specialized knowledge of the pharmacist on the drugs; and the follow-up, if required, will be easily accessible to the patient. Added to this, the patient will be able to report any side effects, seek change to treatment and discuss any concerns almost immediately with the pharmacist.

If the community pharmacist is seen as an additional entry point for STI treatment, those patients that need to be referred will first be counselled. The benefit will be seen in the possible decrease in the number of new infections, due to both the counselling intervention, and early detection.



5. A proposed Best Practice Approach

Understanding the characteristics of STIs commonly associated with HIV infection

In rural and less developed areas the identification and diagnosis of STIs (prior to treatment) is based on a checklist of symptoms associated with the following five categories of STI infection:

1. STIs characterised by a discharge from the penis or female urethra or cervix (not vagina) such as gonorrhoea and chlamydia (non-gonococcal urethritis) as well as rectal gonococcal infection (in homosexual males). It is also associated with gonococcal pharyngitis, a throat infection, linked to oral sex and candidiasis (thrush) in both men and women
2. STIs characterised by a discharge from the vagina such as trichomoniasis, that may also cause vaginitis (vaginal inflammation) and cystitis (bladder infection), genital candidiasis (thrush) and bacterial vaginosis (non-specific vaginitis)
3. STIs caused by syphilis, genital herpes and chancroid, characterised by genital ulcers or sores on the penis and in the anal/rectal region in homosexual males or on the labia, vulva, vaginal walls or cervix in women. Chancres are painless ulcers or soft sores that develop on the genitals while chancroid causes infection and ulceration of the lymph nodes in the groin
4. STIs characterised by a genital discharge as well as a genital ulcer or sore
5. STIs characterised by severe, lower abdominal pain such as acute pelvic inflammatory disease (PID). PID may and is often caused by gonorrhoea

Training Requirements for pharmacists

Diagnosis and treatment of STIs by pharmacists may form the backbone of a key initiative in the long term management of this infection. It opens the door for more role players to be involved in the fight against this disease and in the fight against

HIV/AIDS. It allows for easy entry of patients with fewer obstacles into an environment where changes in sexual behaviour can be encouraged, positive intervention in other risk-reduction strategies can be initiated with appropriate treatment of sexual partners. While Counselling and education, Condom promotion, Compliance to treatment/adherence counselling and Contact tracing of partners (referred to as the 4Cs) are critical components of a good STI management programme, the reality we face, is that patients only enter the system at the point when diagnosis and treatment is required. This then is the point of interception, a point where pharmacists are strategically placed to catch the flow.

Critical components of the training module must involve:

1. Identification and classification of the type of sexually transmitted infection. A diagnostic questionnaire needs to be designed to be used as a guideline by pharmacists in the identification/preliminary diagnostic process that will exclude physical examination of patient
2. Defining those infections which can be treated using the syndromic management approach and clearly defining those that must be referred. (clinic, doctor, hospital).
3. Equipping pharmacists with upgraded counselling skills and techniques needed to interact with a patient. This will include addressing attitudes, teaching skills such as listening, warmth, empathy and genuineness, using questioning techniques appropriately, verbal and non-verbal skills, guiding patients about how to help and protect themselves in respect of precautions necessary during infection, partner referral/tracing and condom use.
4. Review of drugs and their combinations needed for maximum effectiveness to treat the infections. This will include dosages, side effects, contra-indications, drug resistance, and most importantly adherence counselling.
5. Designing a follow up procedure for patients
6. Review of general education principles in STI management.
7. Customising existing algorithms for South African pharmacists to follow

Key elements of counselling of patients:

1. Nature of the infection: This must include its transmission mode.
2. Potential complications.
3. Partner treatment
4. Adherence to treatment
5. Abstinence/safe sex during infection
6. Prevention
7. HIV testing
8. Use of contact tracing and referral slips
9. Educational aids
10. Questions to determine diagnosis
11. Flow charts
12. Treatment guidelines with dosages

The training for STI management must be adapted to the pharmacy setting and clinical experiences of the pharmacist. The programme needs to factor in the perceptions, attitudes and current behaviour of the provider and the patients considering that this is a new avenue. The programme must be able to create and sustain an enabling environment especially the provision of antibiotics for treatment. Critical to its success is a system of continuous evaluation of the effectiveness and outcome of treatment options, follow-up procedure, and referral programmes. The programme must also be able to measure and evaluate the extent of counselling intervention and the partner treatment and its impact on new infections.

Effective STI management

It has been found that unsuccessful STI control is as a result of unavailable or poor clinic services, inadequately trained providers, unavailability of drugs, cost of treatment, incorrect or inappropriate usage of drugs when accessed in the absence of counselling and proper professional guidelines.

In 2002 the Health Systems Trust reported that at least 50% of professional nurses

surveyed in South Africa had some level of training in syndromic management of STIs. Almost all clinics in South Africa (94%) offered a STI service every week day (2003). Only 41% of the facilities surveyed (most senior nurse) was able to correctly outline the recommended drug treatment for the 3 common STI syndromes, i.e. vaginal discharge, urethral discharge and genital ulcers.

Another area of concern is that 13% of the PHC facilities in SA (2003) reported having at least one of the five drugs considered essential for STI management, out of stock. In some provinces such as Eastern Cape and Limpopo these figures reached 24% in the month of the survey.

Requirements for Effective STI management include:

1. Patients must be educated and informed so that they could tell if they were infected.
2. Good services and drugs must be available and accessible to all.
3. The creation of an environment to enable patients to access care promptly.
4. Appropriate diagnostic tools and procedures to ensure accurate diagnoses.
5. Education on proper and appropriate usage of drugs.
6. Patient education about behaviour and lifestyle change pre, during and post infection
7. Instruction about sexual activity during treatment must be followed.
8. Protocols to facilitate partner tracing and referral.
9. Easy accessibility and availability of Health Care providers to facilitate patient/partner follow-up.

Pharmacists are well positioned to implement all of the above with minimal additional training.

Most training interventions cover the three approaches to STI diagnosis: (EngenderHealth 2004)

The clinical approach is considered the least reliable of the three. Using this approach, the health provider relies on his or her own experiences to arrive at a diagnosis based on the symptoms reported by the client and clinical signs observed

during the physical examination. This can be problematic because

- STIs vary in appearance upon examination
- More than one infection may be present making clinical diagnosis more difficult
- Previous self-treatment or intervention by other providers may alter the appearance of signs and symptoms

The etiological approach is the most traditional and accurate of the three. It is based on the results of laboratory tests. However, this resource is not always available to health workers in third world settings. It requires trained technicians, availability of lab supplies, and sometimes expensive and specialised equipment.

The syndromic approach is often the most appropriate, particularly for poorly-resourced settings. The approach allows for diagnosis on the basis of appropriate history-taking and identification of syndromes or combinations of signs and symptoms that are reported by the patient. The recommended treatments are effective for *all* the diseases that could cause the identified syndromes (American Sexually Transmitted Disease Assoc) However, syndromic management cannot address the widespread problem of asymptomatic infections .This is an area that should be targeted in training .Pharmacists must be able to identify these patients from minor complaints and refer for appropriate etiological tests.



The World Health Organisation's classification of the syndromic management consists of **four key elements**:

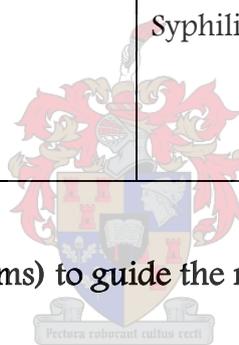
1. Classification of the syndrome by its causal pathogens

There are four main syndromes in this classification, urethral discharge in men, lower abdominal pain in women, vaginal discharge in women and genital ulcers in both men and women. This type of approach can only be used in patients with these distinct signs and symptoms.

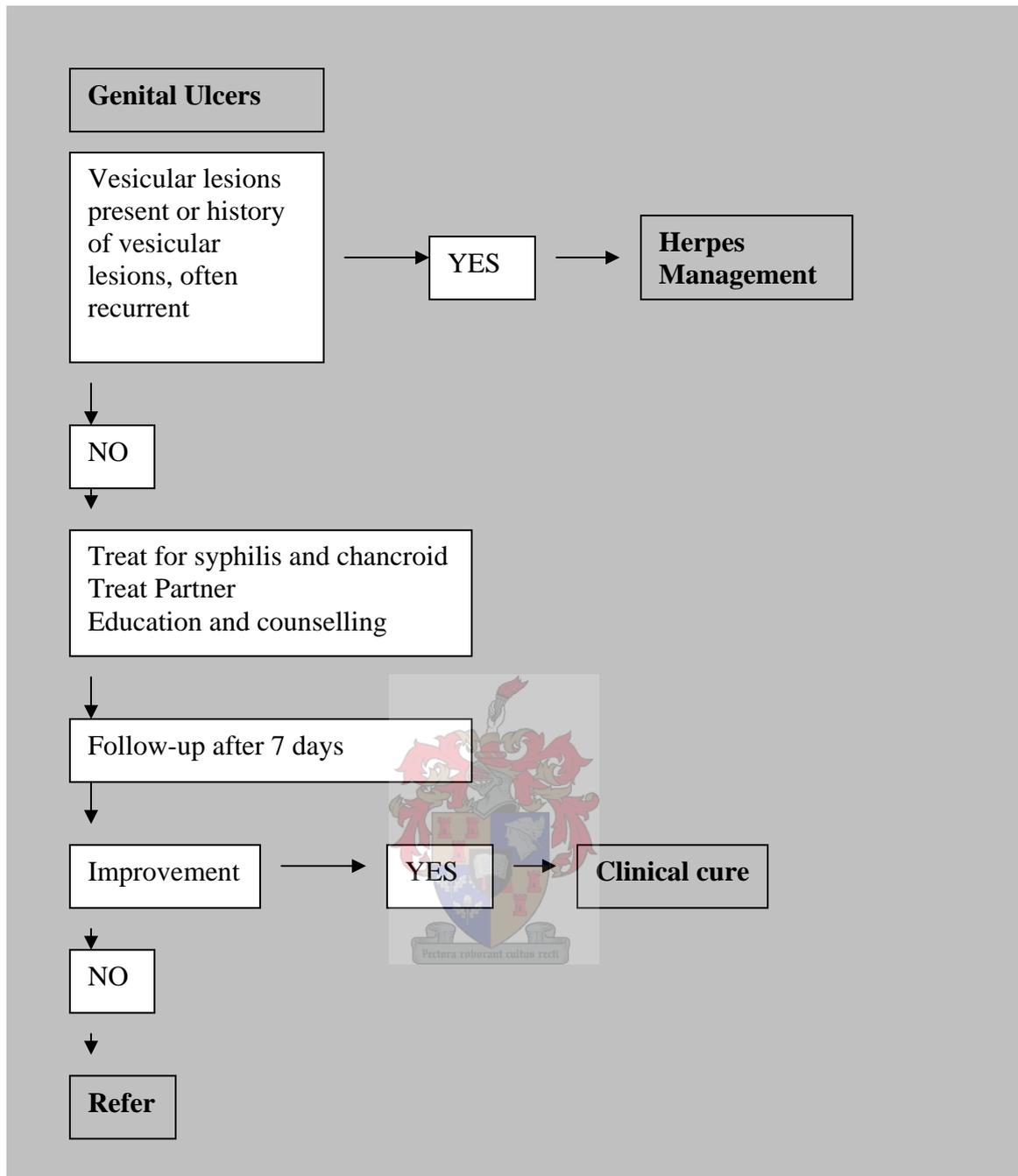
Table: Using the Syndromic Approach

	Syndrome	Possible STI
Men	Urethral discharge	Chlamydia, Gonorrhoea
Women	Lower Abdominal Pain Vaginal discharge	Chlamydia, Gonorrhoea, Other bacteria Chlamydia, Gonorrhoea Bacterial vaginosis, candidiasis, Trichomonas infection.
Men or Women	Genital Ulcers	Chancroid, Genital herpes, Syphilis

2. Using flow charts (algorithms) to guide the management of the syndrome



Flow charts have been designed to help the service provider determine which treatment to prescribe when using the syndromic approach. Each of these flow charts must be included in the training design so that the treatment protocol can be standardized. The flow charts in many instances are modified depending on what the common infection prevalence is for that particular area.



3. Using an appropriate combination of drugs to deal with all the pathogens i.e. treatment and counselling.

As this method treats all possible infections rather than single infection as in the etiological or clinical approach, the focus is largely on education and counselling. The pharmacist is in a position to help patients:

- understand and complete their treatment
- see the importance of condom usage in these instances
- change risk behaviour
- trace and assist partners.

STI	Single-dose therapy
Syphilis	Benzathine Penicillin
Chancroid	Azithromycin or ceftriaxone
Gonorrhoea	Cefixime, ceftriaxone, Ciprofloxacin or spectinomycin
Chlamydia	Azithromycin Doxycycline
Trichomonas vaginalis	Metronidazole

4. Partner treatment.

If patients are effectively counselled and are able to understand the importance of breaking the cycle of infection it may be easier to convince them to refer their partners for treatment. Even those with no symptoms must be encouraged to seek treatment. Partner notification may be easier in the pharmacy setting as they may be located conveniently within the pharmacy patient profile.

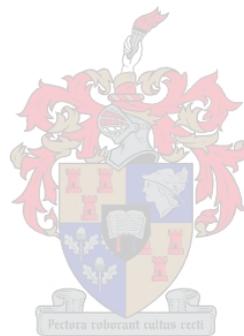
There is substantial evidence that the syndromic approach is easy to teach and learn, and that all levels of health care workers and facilities can use it. It does require an effective modular training approach with regular updates. In pharmacy this can be achieved with a short intensive classroom based module (weekends) and supported via updates through the various communication methods that already exists (internet, medical aids, computer vendors).

The second advantage of immense importance in the South African context is the cost to patient. If one considers that, with an appropriate fee for pharmacist time,

medicines sourced via the State to the pharmacy would mean

- little or no transport costs, as patients are located within communities served by community pharmacy
- reduced waiting time
- access to an after- hours service (so no need for time off from work)
- no necessity for laboratory testing

Thus savings will not only be related to the patient, but to the economy, the State and more importantly will impact on the HIV status of the nation. The syndromic management ensures diagnosis and treatment within a single visit. Although patients are treated for mixed infection the use of flow charts can reduce the chances of inaccuracy or ineffective treatment.



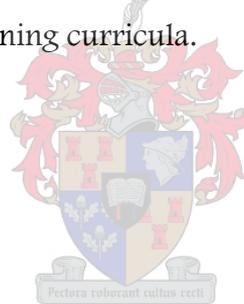
6. A vision for the future

This programme could map a new professional role in the context of public/private partnerships in health programmes. Pharmacists believe that the drug delivery management must not be the only focus of their activity. As part of a team they must be able to use the other professional skills for which they've been trained, to provide a more comprehensive patient care.

In Policy issues for Ghana the task team, as far back as 2001, recommended that pharmacists are a valuable point of contact for STI patients and policy makers should ensure that all pharmacists receive training on national guidelines for syndromic management of STI's. It was also recommended that pharmacists be encouraged to assist in prevention activities and that STI management be incorporated into pharmacy training curricula.

Regulatory Changes

De-scheduling



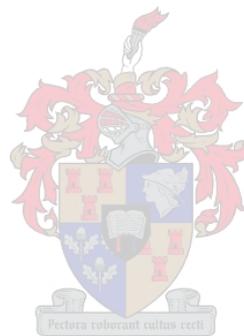
- Allowing Pharmacists to dispense those combinations for the specific management of STI.
- Removal of restrictive laws that prohibit diagnosis and treatment of STI's by other health care professional such as nurses and pharmacists.

Adapting: Developing the criteria needed to offer the service

1. Record keeping system.
2. The pharmacy will need a proper lockable filing system to store patient record cards. The card will contain patient history, diagnosis and treatment profile. Any side effects to medication or

referral may also be recorded.

3. Private counselling area is essential.
4. Pharmacist and assistants need to be trained in STI management.
5. Ensure availability/stock of medication to treat STI.
6. Proper systems for accountability of State dispensed medication.
The pharmacy must be able to provide stock control and audits on a regular basis.



7. Conclusion

It is envisaged that if the treatment protocol is made available in all South African private pharmacies (2600 country wide), at a minimum cost to patients, more individuals will utilise the service resulting in a substantial reduction in STI's and thus a decrease in the spread of HIV/AIDS. The Government of Nepal has classified this as 'filling a service delivery gap' and believe that in resource constrained settings utilising the pharmacist to provide improved, simple curative care services in STI management benefits the community as provision of quality drugs and health education by a trusted health care professional is a *sustainable best practice*

Pharmacists represent a valuable point of contact for STI patients. To capitalise on this, policymakers should:

- ✓ Ensure that all pharmacists receive training on the national guidelines for syndromic management of STIs
- ✓ Include a representative from pharmacy on the national strategic planning team
- ✓ Assess the array of skills embodied in a trained professional pharmacist for utilisation in the strategic plan rather than duplicate training and "re-invent the wheel"
- ✓ Assess the feasibility of utilising the infra-structure of community pharmacies ie physical location, professional skills, technical expertise, access to patients, patient data-bases and profiling, etc to maximise the impact of the strategic plan
- ✓ Encourage pharmacists to engage in preventative

activities such as promoting condom use ,displaying educational posters, and facilitating community workshops on prevention and safer sex practices

- ✓ Incorporate STI management into pharmacy training curricula
- ✓ Clearly define pharmacists' roles in STI treatment including limitations and when to refer
- ✓ Share responsibility for controlling pharmacists' activities between pharmacy regulating bodies and the Ministry of Health to avoid possible tensions and controversies

Finally, the global burden of STIs and their effects are sobering. Although there are resource issues that are beyond the direct influence of providers and managers, it is possible to improve services in the areas that are still within their sphere of influence. Programme managers are in a position to advocate for interventions and resources that will result in STI prevention and prompt and effective treatment. Training pharmacists to provide syndromic management of STI treatment may be one such intervention that promises to make a difference. Managers must meet the challenges posed by STIs by co-ordinating private and public practices, strengthening supportive infrastructures and community linkages, and providing active and informed support for excellence in the clinical practice of ***all health workers at all levels***. This issue is too important to allow for conscious or unconscious marginalisation of professionals who have a critical role to play. It is only through concerted, comprehensive efforts that strides will be made in preventing STIs and mitigating their effects with the ultimate objective of reducing STI morbidity and HIV transmission.

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