

National
**Sexually Transmissible
Infections** Strategy

2005-2008

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FOREWORD

The National Sexually Transmissible Infections (STIs) Strategy is the first of its kind in Australia.

The need for a National Strategy has become clearer in light of recent increases in diagnoses of some STIs. STIs can result in significant morbidity as well as increasing the risk of HIV transmission. While STIs are common in Australia, they often disproportionately affect specific groups of people.

The Strategy focuses on three specific priority areas: STIs in Aboriginal and Torres Strait Islander communities; STIs in gay and other homosexually active men; and chlamydia control and prevention.

The National STIs Strategy sits within a communicable diseases framework alongside other complementary Strategies, most notably the National HIV/AIDS Strategy 2005–2008, the National Hepatitis C Strategy 2005–2008 and the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy 2005–2008. These four Strategies have the common goal of reducing the transmission of infectious diseases and improving treatment, care and support for those affected.

Groups such as people who inject drugs, young people, people in custodial settings and Aboriginal and Torres Strait Islander people may be at risk of HIV, STIs and hepatitis C. The Australian Government recognises this multiple risk and is looking to maximise opportunities for offering prevention, testing, treatment and support services.

Other bodies, such as State and Territory Governments and community-based organisations, are vital in successful implementation of the Strategies.

This Strategy should build a cooperative national approach to STIs.

TONY ABBOTT
Minister for Health and Ageing

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1 Introduction

In the late 1980s, Australia led the way with the development of an integrated national approach to the HIV epidemic. Despite the demonstrable successes of having a clear and strategic approach to one specific sexually transmissible infection (STI), that is HIV, Australia has not until now had a national strategy that deals with other STIs.

The 2002 Review of the fourth National HIV Strategy recommended that, in framing a fifth HIV strategy:

consideration be given to developing a national strategy for sexually transmissible infections.

In light of recent rises in diagnoses of a number of STIs, and the synergy between many STIs and HIV/AIDS, the Australian Government recognised the necessity of and urgency for a National STIs Strategy.

Being the first National STIs Strategy, this Strategy reflects a national commitment to addressing STIs, describes the main guiding principles, and identifies immediate priorities. It is recognised that this Strategy is not comprehensive, nor does it consider broader issues of sexual health. During the life of this Strategy, it is intended that further work be undertaken on the development of a subsequent Strategy.

Goal and objectives

The goal of the National STIs Strategy is ‘to reduce the transmission of STIs, with particular reference to STIs other than HIV, through improved awareness and access to appropriate health services’.

The objectives of this Strategy are as follows:

- to improve awareness of STIs, in particular their economic, social and personal effects, within the government, medical and community sectors;
- to establish a basis for coordinated national action on STIs now and in the future;
- to increase access to diagnosis, treatment and care of STIs;
- to minimise the transmission and morbidity of STIs in identified priority groups; and
- to improve surveillance and research activities in order to guide the development and implementation of prevention initiatives.

Priority areas

Within this Strategy, three high priority areas have been identified. These are of such importance that action relating to them should not be delayed.

Selection of these priority areas has taken into consideration both population-based and disease-based factors. For example, the burden of disease in different sub-populations or in the community at large, the risk of increasing HIV transmission in particular sub-populations, the relative morbidity of different STIs, and the likelihood that coordinated action will lead to a decrease in the prevalence

of the infection.

On this basis the following priority areas have been identified:

- STIs in Aboriginal and Torres Strait Islander communities;
- STIs in gay and other homosexually active men; and
- chlamydia control and prevention.

Several STIs have substantially higher prevalence in some remote and regional Aboriginal and Torres Strait Islander populations, largely as a result of poor access to clinical services. STIs in Aboriginal and Torres Strait Islander communities are associated with substantial morbidity and increased vulnerability to HIV. Aboriginal and Torres Strait Islander people are a priority for health promotion and access to STI testing and treatment.

Rates of STIs in gay and other homosexually active men, including bisexual men and non-gay identified men who have sex with men, have shown marked increases in the past five years and have generally been more common, in comparison to their heterosexual peers, for at least the last 25 years. For this reason, and the fact that STIs increase the risk of transmission and acquisition of HIV, gay and other homosexually active men are a priority population for health promotion, prevention education, testing and treatment.

Within these two priority populations the Strategy concentrates on bacterial STIs, specifically chlamydia, gonorrhoea and syphilis, as they are likely to yield the most significant public health benefits over the life of this Strategy.

Chlamydia is the most common notifiable disease in Australia with recent substantial and sustained increases in notifications. Chlamydia is often asymptomatic, can result in serious and long-term complications, and is easily treated upon diagnosis. Thus, public health measures targeting chlamydia have the potential to significantly reduce the prevalence of this disease, and in turn its economic and social costs.

The National STIs Strategy will be augmented with an implementation plan that will identify specific actions, responsibilities and performance indicators. The implementation plan will be developed by the Australian Government in close consultation with the State and Territory Governments and other key stakeholders.

This document should be read in conjunction with the following – the National HIV/AIDS Strategy and the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy.

References to STIs within this Strategy do not include HIV unless specifically mentioned.

2 Guiding Principles

The guiding principles of the National STIs Strategy are based on those that have been fundamental to Australia's successful response to HIV/AIDS. They have been adapted to take account of the different psychosocial characteristics and the diffuse nature of affected communities and interest groups.

Underlying the National STIs Strategy are the following guiding principles:

- a national strategy approach;
- evidence-based policy;
- health promotion;
- an enabling environment;
- early intervention;
- access to appropriate health care; and
- the involvement of affected people and communities.

These guiding principles take into account the fact that all STIs have the capacity to cause asymptomatic disease within the natural progression of infection. The occurrence of asymptomatic infection has important personal and public health implications in that undiagnosed infection may result in long-term serious complications and prolong the period of infectiousness of that individual.

Adherence to these principles will establish a shared commitment that will be essential in supporting achievement of the Strategy's objectives.

2.1 A national strategy approach

The delivery of effective National HIV/AIDS and Hepatitis C Strategies has depended on the active involvement of all relevant parties, and has been described as 'the partnership approach'. The partnership approach recognises that collaborative efforts involving all levels of government, community organisations, the medical, healthcare, research and scientific communities, and affected persons are necessary in a national response.

The National STIs Strategy will utilise this concept. However, in recognition of the diffuse nature and interests of the relevant parties, the STIs Strategy may necessitate a different model. The partnership approach, as a component of the National STIs Strategy, will mean:

- a shared commitment to the goals of the National STIs Strategy;
- appreciation of the diversity of views and expertise within the partnership; and
- dedication to continuing consultation and collaboration between partners.

2.2 Evidence-based policy

Research and surveillance play a vital role in informing the evidence base in development of policies and practices, and the monitoring and evaluation of existing initiatives. Evidence-based policy ensures improved efficiency and effectiveness through adoption of and continuous evaluation of proven interventions and current knowledge. It requires networking and sharing of ideas as well as support for research and surveillance of disease and their risk factors. Best practice policy also requires an awareness and understanding of the health consequences of alternative approaches.

2.3 Health promotion

Australia's approach to health promotion is based on the 1986 Ottawa Charter. The Charter defines health promotion as the process of enabling people to increase control over and thereby improve their health. Health promotion includes equity in health, education, social mobilisation and advocacy.

The Charter requires health promotion action to be taken on five fronts:

- building healthy public policy;
- creating supportive environments;
- strengthening community action;
- developing personal skills; and
- re-orienting health services.

At the heart of this process is the empowerment of individuals and communities to take action to improve health and welfare, and the recognition that health and its maintenance is a major social and economic investment. This can only occur in a supportive environment where individuals are free from stigma and discrimination and social and economic factors are considered where they predispose or increase the vulnerability of particular communities.

There is a joint responsibility of government at all levels, the community sector, industry, the media, medical and health professionals, and the research sector to provide appropriate and accurate information to enable individuals to make healthy choices.

2.4 An enabling environment

The success of this Strategy is dependent on sustaining a supportive social, legal and policy environment that encourages health education and promotes access to appropriate health services.

Stigma and discrimination associated with STIs and related high-risk behaviours often present a barrier to education and prevention, early and effective diagnosis and treatment of these infections. Addressing stigma and discrimination is a necessary part of this Strategy and requires a supportive and enabling environment.

Policies and laws of government at all levels should be subject to ongoing scrutiny to ensure they continue to support improved health outcomes and combat stigma and discrimination. Similarly, continued education of the general population is crucial in order to demystify STIs.

2.5 Early detection and intervention

Early detection and intervention offers benefits for both the individual and the community at large. The objective is to initiate treatment at an early stage of the disease in order to prevent more serious or long-term consequences in the individual and to reduce the risk of transmission to sexual partners. This is particularly important for people with asymptomatic disease who can pass on the infection without knowing they have it.

Early diagnosis and treatment reduces the morbidity and mortality associated with these diseases. Undiagnosed or untreated STIs can lead to more serious complications and/or the need for more intensive treatment after diagnosis.

Early detection involves testing of asymptomatic persons who are at risk of STIs as well as encouraging those with symptoms to present early for diagnosis and treatment. Testing for asymptomatic infections can be done opportunistically (i.e. when the person sees their doctor for another reason), as part of a regular sexual health check or as part of a systematic, population screening program (see section 4.3).

For those with symptomatic infections, early intervention is enhanced by providing access to appropriate, affordable and non-judgemental care. This care can be provided within the existing health system. Enhanced testing for asymptomatic infections may require the provision of incentives or prompts targeting medical practitioners and/or the use of health promotion tools to encourage patients to present for testing.

2.6 Access to appropriate health care

Access to health care not only requires the physical presence of affordable and timely diagnostic and treatment services but also provision of culturally and socially appropriate care. This is particularly important for STIs as those most at risk of infection are often marginalised from the general community, especially Aboriginal and Torres Strait Islander people. To a lesser extent this is also true of gay and other homosexually active men, people from culturally and linguistically diverse (CALD) backgrounds, sex workers, young people, and people in custodial settings.

Important factors in the facilitation of appropriate health care include peer involvement, provision of multilingual health care workers in areas of high CALD populations, and non-judgmental health education which accounts for individuals' sexual identity, level of physical and emotional development, and cultural circumstances.

Access by young people to sexual health services can be hindered by the individual's fear of embarrassment and inconvenient locations or operating hours. Consideration should be given to options for improved access by young people—for example, promotion of the availability of sexual health services in schools, recreational and other community settings, and enhanced outreach services.

2.7 Involvement of affected people and communities

The involvement of people living with and affected by HIV/AIDS in shaping policies and programs has been critical to the success of Australia's national HIV/AIDS response. However, the participation of affected people and communities may not be as integral to the National STIs Strategy. This is not to diminish the importance of this involvement, nor the experiences and opinions of affected people, but rather it recognises the diffuse epidemiology of different STIs and differing degrees of morbidity and mortality.

Unlike HIV/AIDS, bacterial STIs and trichomoniasis can be cured once diagnosed. Furthermore, for most STIs, the long-term health consequences are less significant than for HIV/AIDS. This means that affected individuals and communities have different motivators for organised action in comparison to those affected by HIV/AIDS.

Despite this, there is an important and significant role to be played by individuals and communities at risk of acquiring STIs. For example, the gay community, in recognition of the increased risk to this community, has been instrumental in Australia's HIV/AIDS and STI prevention efforts. Similarly, sex workers, for whom STIs are an occupational health and safety issue, are actively engaged in STI prevention. Aboriginal and Torres Strait Islander communities also have an important role to play in STI prevention.

Thus this Strategy recognises the centrality of participation of affected and at risk people and communities in policy and program development, implementation, monitoring and evaluation. This participation ensures that policies and programs are responsive to needs, are informed by the experiences of people affected by and at risk of acquiring various STIs, and are designed for maximum positive effect.

3 STIs in Australia

STIs are common in Australia and are responsible for a significant amount of long-term morbidity. Chlamydia, for example, is now the most common notifiable infection in Australia and is a significant cause of infertility at a time when Australia's population growth is at its lowest.

Currently in Australia there are seven STIs of public health importance, other than HIV, as identified by their epidemiological and clinical significance. These are chlamydia, gonorrhoea, syphilis, hepatitis B, trichomoniasis, herpes simplex virus and human papilloma virus. Other infections such as donovanosis, chancroid and lymphogranuloma venereum are either not seen in Australia or are almost eradicated. However, ongoing surveillance is important in order to monitor the rates of these infections to inform preventive measures.

The patterns of infection are different between Aboriginal and Torres Strait Islander and non-Aboriginal and Torres Strait Islander communities and it is important to consider this document in conjunction with the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy.

This section describes each of the STIs listed above and identifies the groups of people most at risk of acquiring each infection. In reviewing the epidemiological data it should be noted that the robustness of data collection on Indigenous status varies considerably between jurisdictions and for each disease.

3.1 Chlamydia

Chlamydia is one of the most common bacterial STIs in developed countries, and is the most frequently notified infection in Australia. It is often present without symptoms in both men and women and increases the risk of HIV transmission.

In women it can cause cervicitis, urethritis or upper genital tract infection. Complications such as pelvic inflammatory disease (PID), tubal infertility, ectopic pregnancy and chronic pelvic pain are common. Between 10 to 40 per cent of chlamydial infections in women can lead to PID if left untreated and, of those with PID, up to 20 per cent may become infertile.

In men, it can cause urethritis and, occasionally if untreated, acute inflammation of the testis and epididymis. It may also cause rectal infection in gay and other homosexually active men which is often asymptomatic.

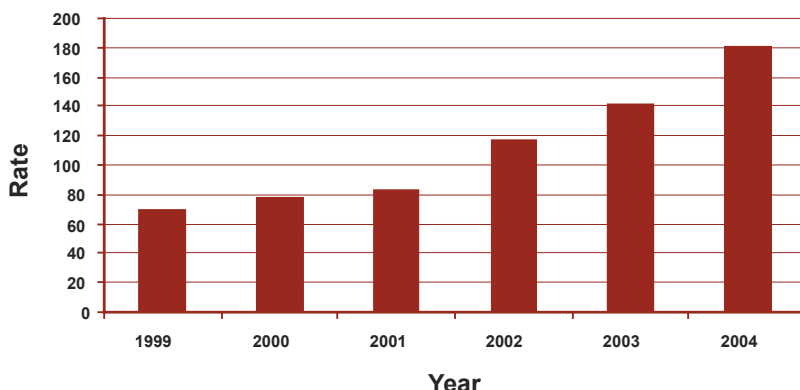
Chlamydia is easily diagnosed with self-collected specimens including first pass urine. It is effectively treated with single dose antibiotics.

Diagnoses of chlamydia

In Australia there were approximately 36,100 chlamydia notifications in 2004 which equates to approximately 180 per 100,000 population (based on provisional data). Notifications have been rising at an annual rate of about 20 per cent in recent years (Figure 1). As the notifications of

chlamydia are strongly associated with the number of tests performed it is unclear how much of this increase is attributable to more testing as opposed to a higher prevalence of disease. The most likely conclusion is that both factors are contributing to recent trends.

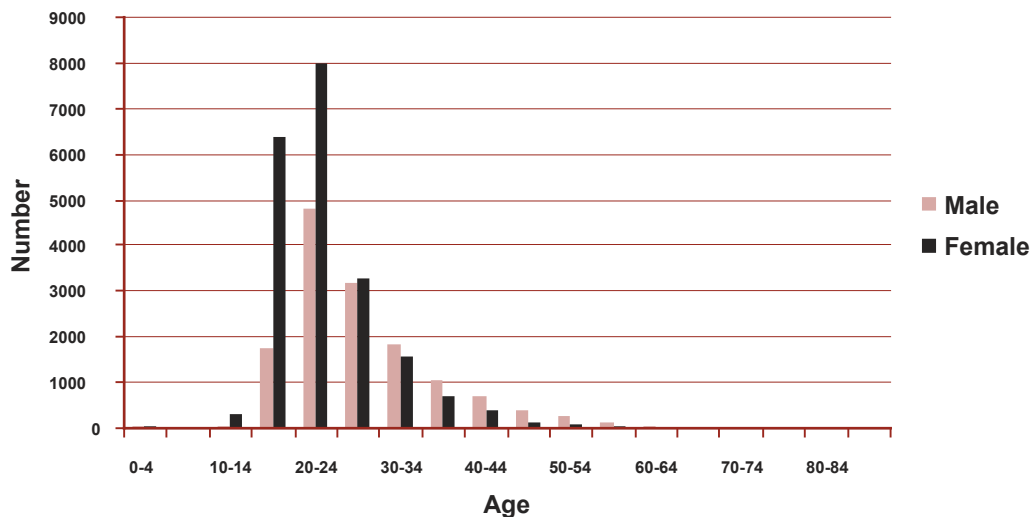
Figure 1. Notification rate of chlamydial infection in Australia 1999 to 2004 (per 100,000 population)



Source: Commonwealth Department of Health and Ageing, National Notifiable Diseases Surveillance System (NB. 2004 data is provisional.)

Notifications of chlamydia are strongly age related (Figure 2) and more common in women, although the disparity between notifications in men and women could be influenced by testing patterns. About 70 per cent of infections in women were notified in those less than 25 years of age.

Figure 2. Chlamydia notifications by age group and sex for 2004



Source: Commonwealth Department of Health and Ageing, National Notifiable Diseases Surveillance System (NB. 2004 data is provisional.)

Chlamydia overwhelmingly affects young heterosexual men and women with those most at risk being young women aged 15–29 years. Other contributing risk factors include a history of prior STIs, new or multiple sex partners, and inconsistent use of barrier contraceptives.

Chlamydia has recently been identified as a common infection in gay and other homosexually active men and may play a significant role in HIV transmission. Data from screening programs at male-only sex-on-premise venues (SOPV) and at sexual health centres has identified a relatively high proportion of gay and other homosexually active men with asymptomatic chlamydia. In one study, 6 per cent of men had rectal chlamydia at a SOPV and 8 per cent of asymptomatic gay and other homosexually active men attending Melbourne Sexual Health Centre had chlamydia.

Chlamydia also appears to be more prevalent in Aboriginal and Torres Strait Islander people. Where Indigenous status is reported for notifications of chlamydia (approximately 45 per cent), it is apparent that Aboriginal and Torres Strait Islander people have about an eight-fold higher rate of diagnosis (per 100,000 population) than non-Aboriginal people.

3.2 Gonorrhoea

Gonorrhoea is less common than chlamydia in most developed countries. In men, it most commonly presents with urethral discharge or asymptomatic rectal or pharyngeal infection. Apart from enhancing HIV transmission, complications are uncommon in men.

In women, gonorrhoea is often asymptomatic and can cause cervicitis, urethritis or upper genital tract infection. Complications such as PID, tubal infertility, ectopic pregnancy or chronic pelvic pain are common and their incidence is similar to chlamydia. More serious complications such as disseminated infection are rare.

Gonorrhoea is easily diagnosed with self-collected specimens and effectively treated with single dose antibiotics. However, some gonococcal isolates demonstrate antibiotic resistance and constant monitoring and revision of treatment schedules is required. The Australian Gonococcal Surveillance Program was established in 1995 to monitor the sensitivity of gonococcal isolates to an agreed core group of antimicrobial agents.

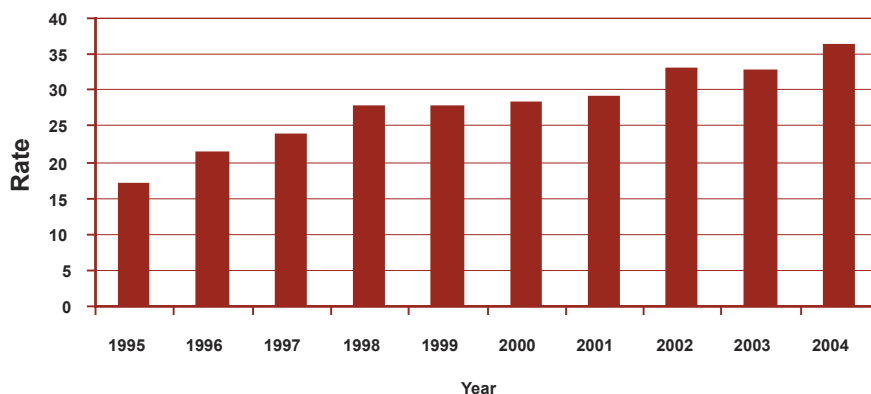
Diagnoses of gonorrhoea

In 2004, there were approximately 7200 notifications of gonorrhoea in Australia which corresponds to approximately 36 per 100,000 population (based on provisional data). Rates of notification of gonorrhoea have been slightly but steadily increasing over recent years.

In Australia, gonorrhoea is more prevalent in geographically isolated Aboriginal and Torres Strait Islander communities and gay and other homosexually active men. There is evidence of a sustained increase of gonorrhoea among gay and other homosexually active men, particularly in New South Wales and Victoria, and more recently South Australia.

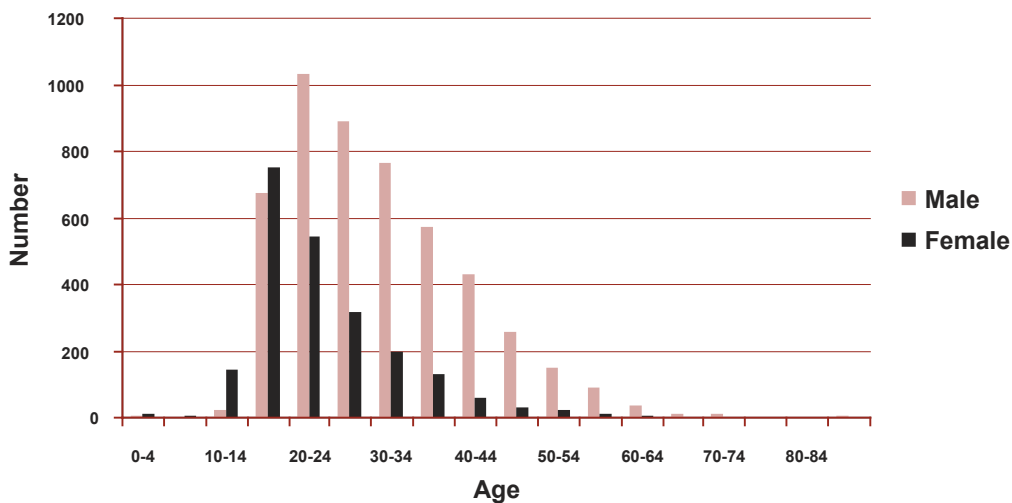
Where Indigenous status is reported for notifications of gonorrhoea (approximately 65 per cent) it is apparent that Aboriginal and Torres Strait Islander people have about a 40-fold higher rate of diagnosis (per 100,000 population) than the non-Aboriginal population. However, rates of gonorrhoea notification also vary within different Aboriginal and Torres Strait Islander communities, with more isolated communities reporting the highest rates of infection.

Figure 3. Rates of notification of gonococcal infection in Australia 1995 to 2004 (per 100,000 population)



Source: Commonwealth Department of Health and Ageing, National Notifiable Diseases Surveillance System (NB. 2004 data is provisional.)

Figure 4. Gonococcal notifications by age group and sex for 2004



Source: Commonwealth Department of Health and Ageing, National Notifiable Diseases Surveillance System (NB. 2004 data is provisional.)

3.3 Syphilis

Syphilis is relatively rare in most developed countries with the exception of small disadvantaged and geographically isolated groups. However, recently epidemics have been reported in gay and other homosexually active men in a number of developed countries.

Syphilis can present as a primary genital ulcer, a rash of secondary syphilis or as a large number of serious conditions as part of tertiary syphilis, if left untreated. It is particularly important in pregnancy because it may infect the foetus and, if left untreated, have serious life-long consequences. It also increases HIV transmission, particularly when a genital ulcer is present.

The diagnosis depends on the stage of infection and treatment requires penicillin injections.

Diagnoses of syphilis

In 2004, the total number of syphilis notifications in Australia was approximately 2500 (based on provisional data). In the general population the number and rate of diagnoses of syphilis has remained relatively stable over the past five years. However, this hides significant increases in new infections in some sub-populations.

In Australia, the pattern of syphilis infection is remarkably similar to gonorrhoea, in that it is more prevalent in isolated Aboriginal and Torres Strait Islander communities and gay and other homosexually active men.

The rate of diagnosis of syphilis among males has increased more than four-fold in New South Wales and five-fold in Victoria during 2001 to 2003. In Sydney, there has been a rapid increase in syphilis incidence among gay and other homosexually active men in the inner and eastern suburbs. A study of gay and other homosexually active men diagnosed with early syphilis in Sydney in 2003 found the disease more common in men who report higher numbers of sexual partners, are HIV-positive, report higher rates of recreational drug use, and use sex-on-premise venues. As syphilis is highly infectious, there is a risk that the disease will become more generalised among gay and other homosexually active men in Sydney.

Where Indigenous status is reported for national notifications of syphilis (approximately 80 per cent), it is apparent that Aboriginal and Torres Strait Islander people have about a 100-fold higher rate of diagnosis (per 100,000 population) than non-Aboriginal people. However, rates of syphilis notification also vary significantly within different Aboriginal and Torres Strait Islander communities, with more isolated communities reporting the highest rates of infection.

3.4 Viral hepatitis

Hepatitis, or inflammation of the liver, can be caused by a number of different viruses, most commonly hepatitis A, hepatitis B and hepatitis C. Sexual activity can result in the transmission of hepatitis A and hepatitis B and, rarely, hepatitis C. These viruses have different transmission routes: hepatitis A is transmitted via the faecal-oral route; hepatitis B is transmitted through body fluids (i.e. blood, semen and vaginal fluids); and hepatitis C is transmitted through blood-to-blood contact.

Hepatitis A and hepatitis B are both vaccine preventable and combination vaccines are available. Hepatitis B vaccination is provided to newborns and adolescents as a part of the National Immunisation Program. There is currently no vaccine for hepatitis C.

Hepatitis C is one of the most common infectious diseases in Australia with people who inject drugs being at greatest risk of contracting the disease. Given the significance of hepatitis C in Australia, the first National Hepatitis C Strategy 1999–2000 to 2003–2004 was released in 1999. This was followed by the second National Hepatitis C Strategy 2005–2008.

Hepatitis A is common in gay and other homosexually active men or bisexual men, especially when sexual practices involve faecal-oral contact. Hepatitis B is thought to be more common among Aboriginal and Torres Strait Islander people and some overseas born people from CALD backgrounds.

It is recommended in *The Australian Immunisation Handbook 8th Edition 2003* (<http://www.immunise.health.gov.au/>) that gay and other homosexually active men are vaccinated for both hepatitis A and hepatitis B (combination vaccines available). Both vaccinations are also recommended for injecting drug users, sexual contacts of high-risk people and health care workers.

3.5 Trichomoniasis

In the last few decades, there has been a dramatic decline in the prevalence of trichomoniasis in Australia. However, it still commonly occurs in remote Aboriginal and Torres Strait Islander communities.

In women it causes a vaginal discharge and irritation and in men it causes urethral irritation although many infections may be present without symptoms. Trichomoniasis is associated with an increased risk of premature labour and significantly increases the risk of HIV transmission.

Diagnosis is difficult in remote settings although newer techniques (such as nucleic acid amplification) have been used where available. Treatment requires a single dose of antibiotics.

There is limited data available on trichomoniasis because it is not a notifiable infection except in the Northern Territory. However, a number of studies have demonstrated that the prevalence of this infection in Aboriginal and Torres Strait Islander women is up to 30 times higher than in non-Aboriginal and Torres Strait Islander people.

3.6 Genital herpes

Genital herpes is a common STI. It is predominantly caused by herpes simplex virus type 2 (HSV-2) but an increasing number of new infections, particularly in young people, are caused by herpes simplex virus type 1 (HSV-1). Once infection occurs, individuals may develop episodic genital ulcers. These occur at different frequencies and vary greatly in their severity. There may be significant long-term psychological morbidity associated with infection but significant physical morbidity is uncommon.

A number of antiviral agents are available which reduce the severity and frequency of individual outbreaks. Recently they have been shown to reduce the transmission of HSV between regular partners.

Australian research suggests that more than 10 per cent of the adult population have antibodies to HSV-2. In comparison, the prevalence in gay and other homosexually active men is 30 per cent or more and thus control of HSV-2 is a significant factor in the prevention of HIV transmission among this group.

3.7 Human papilloma virus

Human papilloma virus (HPV) is the most common sexually transmissible infection in developed countries. In most individuals it causes no symptoms but some infected individuals will develop genital warts which are usually mild. Some sub-types of HPV are responsible for cervical and anal cytological abnormalities and the later development of cervical and anal cancer.

Among men, those with a history of homosexual contact are at about 20 fold higher risk of anal cancer than other men. Cervical cancer is the eighth most common cancer in Australian women and is the target of the National Cervical Screening Program.

Recently some vaccines have shown promising results in preventing the particular types of HPV that are most strongly associated with cervical and anal cancer.

Most individuals are asymptomatic and have evidence of infection only when the most sensitive DNA techniques are used. There is no prevalence data on genital warts because, like trichomoniasis, it is not a notifiable infection although it is about twice as common as chlamydia at most sexual health centres.

3.8 The role of sexually transmissible infections in the transmission of HIV

After the onset of the HIV epidemic in the mid 1980s, rates of most STIs decreased rapidly among homosexual men and the general community. Almost certainly, this was related to the widespread reduction of high-risk sexual behaviours as well as increased testing and greater awareness. More recently, there has been evidence of increasing high-risk sexual behaviours among gay and other homosexually active men as well as in the general population. It has been postulated that this has resulted in increasing rates of STI diagnoses. Alternatively, it is thought that reduced awareness of STIs, other than HIV, in particular their symptoms and preventive measures, may have contributed to the observed increase.

Since 2001, increasing numbers of homosexual men in Sydney and Melbourne have been diagnosed with infectious syphilis, a condition that was almost eradicated from this population in the early 1990s. There is little data about the other common ulcerative STI, herpes simplex virus type 2, but clinic-based samples suggest very high infection rates, particularly among HIV-positive homosexual men. High rates of STIs also generally occur among Aboriginal and Torres Strait Islander people where there is data available.

The occurrence of high rates of STIs in gay and other homosexually active men and in Aboriginal and Torres Strait Islander populations is of great concern because of the epidemiological synergy between HIV and STIs. In addition, the early detection and treatment of STIs, in both at-risk HIV-negative and HIV-positive individuals, is an important potential means of HIV prevention. As many

STIs can be asymptomatic, regular testing is particularly important for those people with multiple partners.

The prevention and control of HIV/AIDS is closely connected to other STIs because:

- people infected with an STI, particularly ulcerative STIs, are generally at higher risk of acquiring HIV;
- increasing evidence suggests that people dually infected with both HIV and an STI, particularly HSV-2, are at higher risk of transmitting HIV as well as progressing more rapidly to AIDS;
- many of the same intervention measures are used to prevent HIV and STI transmission;
- STI clinical services provide an important point of access to people at high risk of acquiring HIV infections; and
- trends in STI incidence and prevalence are a useful indicator of high-risk sexual behaviour associated with HIV transmission.

4 Comprehensive STI Prevention and Control

Three variables influence the spread of STIs: the risk of transmission; the number of at-risk partners an individual has; and the period of infectiousness. STI prevention and control requires attention to each of these aspects and the use of a range of behavioural and clinical tools. For example, vaccines can reduce the risk of transmission of some STIs and early diagnosis and effective treatment can reduce the duration of infectiousness.

There are seven main elements to a comprehensive approach to the control of STIs. These are health promotion and education, access to clinical care, screening and testing, partner notification (or contact tracing), treatment, surveillance and vaccines. The description of these elements below is very broad. It is recognised that for STI prevention and control initiatives to be effective, they must be tailored to the specific needs and characteristics of the target population.

4.1 Health promotion and education

As described previously health promotion is the process of enabling people to increase control over and thereby improve their health. Health promotion is one of the major tools in disease prevention and supports education as a fundamental principle.

Highest priorities for health promotion and education are those people most at risk of acquiring STIs. This includes gay and other homosexually active men, Aboriginal and Torres Strait Islander people, sex workers, young people, and people in custodial settings.

The currently accepted model of health promotion provides a rationale for the shift from broad-based to targeted initiatives. Health promotion strategies in Australia have routinely adopted the principles of social marketing in delivering health education. Social marketing involves the application of marketing techniques to influence health behaviours in a specific group, and is particularly evident in education targeted at gay and other homosexually active men.

Health promotion and education initiatives for young people are generally delivered through the school environment and necessitate a more holistic approach to sexual health. Education targeting young people should be developed with the intention of building the knowledge, skills and strategies they need in order to respond to HIV and STIs in the social context in which they live and make decisions. Young people outside the school environment are at an elevated risk of STIs. Programs for delivering education and clinical services to these adolescents, including community-based programs and peer-education, need to be prioritised.

For people of culturally and linguistically diverse backgrounds the most critical issue is access to appropriate information. Information on STIs should be provided in the relevant community language and with consideration of cultural characteristics.

4.2 Access to clinical care

The vast majority of testing and treatment for STIs in Australia occurs in general practice and thus a strategy for STI control requires recognition and support for general practitioners in this role. Dedicated sexual health centres in each State and Territory also provide a range of important clinical and counselling services, and surveillance and research activities.

It is important to sustain the development of clinical STI activity in primary care by:

- continuing to ensure appropriate distribution of general practitioners who are capable and willing to diagnose and manage STIs;
- strengthening training programs in sexual health for general practitioners and practice nurses;
- continued support for provision of private and confidential services; and
- considering possible alternative models of practice.

In addition to diagnosis and treatment, general practitioners have a key role in education and prevention. A patient presenting with an STI provides the clinician with an opportunity to discuss prevention and provide health promotion advice that can protect the patient and their future partners from infection.

4.3 Screening

Population screening is the systematic application of a suitable test in order to identify members of the community who may have asymptomatic disease and who therefore require further, more specific investigations. Screening can be defined in numerous ways. It is often characterised as opportunistic testing of individuals presenting to a medical practitioner. Alternatively, screening can be conducted at a population level whereby a formal organised program is introduced. Current Australian examples of formal population screening programs are the National Cervical Screening Program and BreastScreen Australia.

The various definitions of screening have generated some confusion in relation to compliance under the Medicare Benefits Schedule (MBS). The MBS defines screening as a medical examination or test that is not reasonably required for the management of the medical condition of the patient. That is, MBS benefits are generally not payable for population health screening services; however, testing of symptomless patients is subsidised if it is necessary for the management of the health of the individual. In a clinical context, this means that if after taking a sexual history, an individual is deemed to be at risk of STIs, testing for these conditions is justified.

In Australia, decisions on introduction of formal population screening programs are based on the World Health Organization's (WHO) principles of screening which are premised on an assessment of benefits, risks and costs. A coordinated national screening program for one or more STIs would need to fulfil the WHO's principles of screening.

4.4 Partner notification (or contact tracing)

Partner notification has a vital role in the management of STIs but methods of implementation vary across jurisdictions. Partner notification is also referred to as contact tracing and the terms are used

interchangeably. Essentially, the objective of partner notification is reduction in the transmission of infection through early detection and treatment and promotion of behaviour change.

Partner notification generally occurs through two different methods. The first method is 'patient referral' whereby the index case (i.e. the person diagnosed with an infection) notifies their contacts and refers them to appropriate services. The second method is 'provider referral' where the health care provider (or other agency) is delegated to directly trace contacts. These are both outlined in more detail in the *Australasian Contact Tracing Manual*.

The process of partner notification should be confidential and undertaken with appropriate and culturally sensitive support for both the index case and contacts. Cultural sensitivity is particularly important when working with Aboriginal and Torres Strait Islander people and people from culturally and linguistically diverse backgrounds.

There are advantages and disadvantages for both these methods. Patient referral is less resource intensive compared to provider referral; however, provider referral is generally more productive. Flexibility in the method of partner notification is beneficial in that it takes into account the capacity of the index case to advise their contacts. However, this flexibility may also result in an inconsistent and less effective approach being employed in the clinical setting. In light of this, a centrally supported and coordinated system of partner notification exists in some jurisdictions, although it is often limited to specific STIs.

Constant review of the effectiveness of various approaches to partner notification is necessary as it is an essential part of STI control at the jurisdictional level. Consideration should be given to a national forum on contact tracing, with the aim of reviewing the guidelines, sharing innovative approaches, and acting as a stimulus for action in the area.

For some STIs, partner notification should be undertaken as a matter of urgency because of the seriousness of the condition (e.g. HIV, syphilis) or because early intervention can lead to interruption of transmission (e.g. gonorrhoea and chlamydia). For genital herpes, partner notification may have a role in counselling of partners although it has little role in transmission interruption. For STIs such as HPV there is little or no place for partner notification.

4.5 Treatment

Most early stage STIs and some sexual health problems are appropriately dealt with by general practitioners. Specialist public and private sexual health clinics also play an important role in the treatment of STIs in high-risk groups or in more complicated cases.

Bacterial STIs and trichomoniasis are usually cured following treatment. However, this does not prevent reinfection from a subsequent exposure. Treatment is generally prescription of antibiotics and, in the case of chlamydia, gonorrhoea and trichomoniasis, the treatment is given as a single dose of medication. Treatments for viral STIs are available but are often not curative. Instead, treatment modifies the clinical manifestations of infection and individuals generally remain latently infected. Treatments are generally subsidised through the Pharmaceutical Benefits Scheme.

Minimising the delay between diagnosis and treatment of STIs is an important factor in interrupting disease transmission.

The provision of current and nationally applicable clinical management guidelines is essential to the control of STIs. The *Clinical Guidelines for the Management of Sexually Transmissible Infections Among Priority Populations* produced by the Royal Australasian College of Physicians, Australasian Chapter of Sexual Health Medicine is widely utilised in the prevention, diagnosis, management and treatment of sexually transmissible infections. The *Therapeutic Guidelines: Antibiotic* Version 12, April 2003, is commonly used in Australia as the foremost prescribing guideline.

4.6 Surveillance

Surveillance data and epidemiological analysis provide essential information for planning disease interventions, providing a background for determining public health priorities, and development of clearly focused evidence-based policy.

The national surveillance of communicable diseases of public health importance is coordinated through the National Notifiable Diseases Surveillance System (NNDSS) in collaboration with Communicable Diseases Network Australia (CDNA). Currently there are over 60 communicable diseases classified as nationally notifiable. These include a number of diseases that are usually or frequently sexually transmitted, in particular:

- chlamydial infection;
- donovanosis;
- gonococcal infection;
- hepatitis A;
- hepatitis B;
- HIV; and
- syphilis.

Notification data provided to the NNDSS by States and Territories includes a unique record reference number, State or Territory identifier, disease code, date of onset, date of notification to the relevant health authority, sex, age, Indigenous status and postcode of residence. However, due to low reporting levels, fields such as Indigenous status are relatively incomplete. CDNA has recently agreed to collect additional data on gonorrhoea, donovanosis, and syphilis of less than two years duration. Additional data, particularly for asymptomatic STIs, is often required to enable better interpretation of surveillance data.

The need for the collection of additional data for some STIs was identified in the 2002 *Review of Procedures for Sexually Transmitted Infections Surveillance at the State and Territory Level*, conducted by the STI Surveillance Subcommittee of CDNA. This report provided procedural recommendations for the improvement of State and Territory surveillance activities for the four notifiable bacterial STIs. The report also recommended the standardisation of quality control procedures, especially aiming at improving the collection and reporting of Indigenous status in all jurisdictions.

4.7 Vaccines

When available, vaccination against specific infectious diseases is one of the most efficient methods of control. Vaccination reduces the number of new infections by reducing or eliminating the risk of transmission.

Both hepatitis A and hepatitis B can be prevented through vaccination. In the next five years an effective vaccine against certain strains of HPV will be commercially available and this is likely to have a dramatic effect upon the incidence of cervical and anal cytological abnormalities in those vaccinated. A HSV-2 vaccine with modest effects in limited populations is also in phase 3 trials and may also be commercially released in due course.

5 Priority Areas

This section elaborates on the priority areas which require immediate action as identified in the introduction.

5.1 STIs in Aboriginal and Torres Strait Islander communities

Several STIs occur in Aboriginal and Torres Strait Islander communities at rates significantly higher than in the non-Aboriginal and Torres Strait Islander population (e.g. syphilis, gonorrhoea, trichomoniasis and chlamydia) where accurate data exists. Other STIs, such as HPV, appear to be no more common than in the non-Aboriginal and Torres Strait Islander population. It has been suggested that these disparities mainly arise from limited access to clinical services rather than from differences in rates of sexual partner change between the two groups.

The high prevalence of bacterial STIs in Aboriginal and Torres Strait Islander communities is associated with substantial morbidity (including vaginal and urethral discharge, acute and chronic PID, premature labour, ectopic pregnancy and infertility). A significant proportion of these STIs are asymptomatic.

Aboriginal and Torres Strait Islander people are also recognised as a priority group under the National HIV/AIDS Strategy, in terms of both prevention and education and care and support. There are particular issues arising for HIV-positive Aboriginal and Torres Strait Islander people within their communities. These include:

- high levels of concern about stigma and discrimination, leading to fears of disclosure and heightened secrecy, particularly in smaller and remote communities; and
- the need to support people with HIV to adhere to complicated treatment combinations, particularly in environments where disclosure is a major concern.

Overall, the population rate of diagnosis of HIV infection in Aboriginal and Torres Strait Islander peoples has been similar to that in the non-Aboriginal and Torres Strait Islander population although the very high prevalence of STIs in these communities puts them at greater risk. While some screening programs have reduced the prevalence of STIs in Aboriginal and Torres Strait Islander communities, most communities continue to have high rates of STIs and inadequate access to appropriate screening and treatment. In the presence of generally high rates of STIs within these communities, there is risk of HIV becoming more prevalent.

A recent example of a successful targeted STI screening program is the National Donovanosis (Elimination) Eradication Project (NDEP) 2001–2004. The NDEP was funded by the Australian Government under the National Indigenous Australians' Sexual Health Strategy (NIASHS), and has resulted in enhanced surveillance, improved awareness, and declining notifications of donovanosis. The project evaluation will be critical in informing the development and delivery of other STI-specific interventions.

Program funding arrangements under the NIASHS and the subsequent National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy also facilitate the employment of Indigenous sexual health and other workers in both the community controlled primary health sector and State-funded health sector, and opportunistic community screening for chlamydia and gonorrhoea via non-invasive pathology tests.

The National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy, which complements this Strategy, will maintain a broad sexual health approach. Issues relating to STIs in Aboriginal and Torres Strait Islander communities have also been addressed in this Strategy. This highlights the importance of the problem and increases the ability of mainstream providers who care for Aboriginal and Torres Strait Islander people to adequately address STI-related issues.

Similarly, one of the aims of the 2003 *National Strategic Framework for Aboriginal and Torres Strait Islander Health* is to enhance the response to STIs through improved access to health care by Aboriginal and Torres Strait Islander people. The Framework is based on a commitment to nine principles including cultural respect, a holistic approach, working together, localised decision making, and community control of primary health care services.

Other recent initiatives include the addition, in May 2004, of a new MBS-funded biennial health check for Indigenous Australians aged between 15 and 54. The aim of the health check is to ensure early intervention and diagnosis of treatable conditions. The health check can be provided by both Aboriginal community health services and general practitioners. Even though STI testing for priority populations is recommended on a more frequent basis (generally annually), the biennial health check, if widely taken up, should assist in the control of STIs within these communities.

Action:

- Continue support through the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy for jurisdiction-based initiatives that include:
 - training and employment of male and female Aboriginal and Torres Strait Islander sexual health workers;
 - training for health practitioners who provide services to Aboriginal and Torres Strait Islander people to enhance appropriate management of STIs;
 - culturally appropriate disease prevention;
 - capacity building at the community level;
 - improved access to treatment and care in the primary care setting; and
 - augmented behavioural and social research.
- Explore possibilities for development and implementation of interventions to address high rates of syphilis in Aboriginal and Torres Strait Islander people.
- Promote and monitor uptake of the Aboriginal and Torres Strait Islander adult health check.
- Develop and implement culturally appropriate education and health promotion messages particularly aimed at young people and gay and other homosexually active men.
- Improve collection, analysis and use of surveillance data, particularly increased use of Indigenous identifiers, for nationally notifiable diseases and other locally significant STIs.

- Support the development and use of non-invasive fast diagnostic STI tests in Aboriginal and Torres Strait Islander communities.

5.2 STIs in gay and other homosexually active men

STIs are common in gay and other homosexually active men and are important for the following reasons:

- the infections carry significant morbidity;
- the presence of an STI may act as a marker of unprotected sex (including oral and anal intercourse); and
- the presence of an STI significantly increases the risk of HIV transmission and acquisition.

Currently, gay and other homosexually active men have both high rates of HIV transmission and high rates of STIs. For example, among gay and other homosexually active men attending sex-on-premises venues, up to 15 per cent of attendees who have been tested in outreach programs have either gonorrhoea or chlamydia at any site. Reducing the prevalence of these infections through screening and treatment programs is likely to also result in lower rates of HIV transmission.

There is some speculation that increases in the rates of both HIV transmission and some STIs are the result of increasing unsafe sex practices by gay and other homosexually active men. This may be the case; however, rates of unprotected anal intercourse with both casual and regular partners is not the only contributing factor. Increases in STIs may also be the result of different HIV risk reduction strategies being implemented by gay and other homosexually active men. While these strategies may reduce, though seldom eliminate, the risk of transmission of HIV, in many cases they do not reduce the risk of transmission of other STIs. It is also clear that, given the pre-eminent focus on HIV over the last 20 years, gay men have significantly reduced routine STI testing and that awareness about STI symptoms and management in this population has declined.

The Australasian Chapter of Sexual Health Medicine of the Royal Australasian College of Physicians recommends at least annual screening for STIs among gay and other homosexually men. The 2004 Melbourne Gay Community Periodic Survey reported that approximately 75 per cent of men participating in the survey had a sexual health check-up in the previous twelve months. However, these 'sexual health check-ups' do not appear to be comprehensive, with most men having an HIV test but only about a third of these men having anal, throat or penile swabs taken. This survey also showed that respondents had a poor understanding of infections that could be present without symptoms.

Other Gay Periodic Surveys of Australian capital cities report a similar pattern. Approximately 65 per cent of HIV-negative men have been tested for HIV within the past twelve months. However, only about 25 per cent of HIV-negative men have been tested for STIs via a throat, penile or anal swab. Approximately 40 per cent of these men had provided a urine sample for STI testing within the previous twelve months. These figures demonstrate the need for increased STI education, testing and treatment of gay and other homosexually active men, for the dual purposes of both reducing HIV transmission and preventing STI-associated morbidity.

In addition to increased testing and treatment, prevention efforts also need to be strengthened. The 2002 Review of the National HIV/AIDS Strategy highlighted the need for a broad education program

aimed at preventing STIs, a major component of which would focus on gay and other homosexually active men and would incorporate both HIV/AIDS and other STIs.

The identification of STI prevention and education as a priority among gay and other homosexually active men does not detract from the fact that most jurisdictions and the community sector are actively and continuously involved in the development and implementation of a wide range of prevention and education activities. The Australian Government currently funds a range of HIV/AIDS and STI-related health promotion projects through grants to States and Territories and community-based organisations. However, there is a need to further focus our efforts.

Action:

- Develop and introduce national prevention education approaches to STIs in relation to gay and other homosexually active men with the objectives of:
 - raising awareness of the relationship between HIV and other STIs, including rethinking prevention strategies;
 - reinforcing safer sex and condom use;
 - increasing testing and treatment of STIs;
 - improving understanding of the symptoms (or otherwise) of other STIs; and
 - addressing stigma and discrimination associated with gay and other homosexually active men's sexual health.
- Analyse and consider possibilities for addressing structural and remuneration barriers which may currently hinder increased STI testing of gay and other homosexually active men.
- Encourage HIV/AIDS drugs prescribing general practitioners to enhance STI testing of gay and other homosexually active men and improve sexual history taking and prevention education.
- Explore opportunities across all areas of medical education to increase knowledge and cultural capacity of health service providers to meet the needs of gay and other homosexually active clients.
- MACASHH to facilitate promulgation of current nationally applicable clinical guidelines for the management of STIs.

In developing prevention and education approaches for gay and other homosexually active men it will be important to:

- ensure education and prevention messages are focused to address the rises in HIV and STI infections;
- achieve the early and comprehensive involvement of affected people and relevant community organisations in order to ensure that messages are appropriately designed and delivered;
- recognise the differing significance of various STIs for HIV-negative and HIV-positive men;
- acknowledge that some homosexually active men have both male and female sexual partners;
- consult with all States and Territories with the intention of drawing on previous experience and encourage national uptake;
- continue efforts to provide high quality information which is evidence-based; and
- ensure that the changing nature of communities and society are reflected in the development and delivery of education and prevention messages.

5.3 Chlamydia control and prevention

As previously described, *Chlamydia trachomatis* was the most commonly reported notifiable condition in Australia in 2003. Significantly, the annual rate of increase in notifications has been approximately 20 per cent over the past five years. Despite the limitations in surveillance data for chlamydia, it is well accepted that infection is on the increase. Of concern is that, as chlamydia is often asymptomatic, infected individuals may develop long-term irreversible complications in the absence of diagnosis and treatment.

Control of chlamydia and its complications is feasible through the primary care health system but will require a coordinated national approach. As there are no human vaccines for chlamydia, control will entail increased testing and treatment of at risk people, improved awareness and prevention education, enhanced behavioural and disease surveillance, and contact tracing.

There are two main public health tools which can and have been utilised for the control of chlamydia. These are education and prevention initiatives, and screening programs. Screening interventions are usually accompanied by an education and prevention campaign. To be effective, education and prevention initiatives need to target those most at risk of infection, that is, sexually active young people. Furthermore, for screening to be taken up, either opportunistically or otherwise, access to confidential, affordable and 'youth friendly' health care services is needed.

Many countries promote opportunistic screening of some sub-populations (largely based on age and sex) for chlamydia screening; however, only a few conduct organised screening. A national screening program was introduced in Sweden in 1988 with considerable success and the United Kingdom is in the process of implementing its National Chlamydia Screening Program. The Australasian Chapter of Sexual Health Medicine recommends that young sexually active people (under 25 years of age) should be opportunistically screened for chlamydia on an annual basis if they have had multiple partners during that time.

Assessment of chlamydia against the WHO's screening principles meets the criteria to different extents, and thus the feasibility and acceptability of a national screening program for chlamydia requires consideration. In addition, unlike cervical screening which has no effect upon the prevalence of HPV infection in the target population, the implementation of an effective chlamydia screening program would lead to a decrease in the prevalence of chlamydia and may need to be modified as this occurs.

A number of studies have demonstrated the cost-effectiveness of chlamydia screening; however, this analysis is highly sensitive to the underlying prevalence of infection, the cost and accuracy of the screening test, the frequency of testing, the probability of persistent infection and/or reinfection, and the cost savings from avoiding long-term complications. Thus chlamydia screening programs would have to be specifically designed and targeted to epidemiological, social, and health system variables to enable maximum effectiveness and efficiency.

These variables could be assessed through a number of different mechanisms including collection of additional surveillance data, epidemiological modelling, a feasibility study or a pilot screening program. Additional data would be advantageous in the following areas:

- prevalence and risk factors in different sub-populations – to inform effective targeting and screening interval;

- methods to maximise participation, including specimen type and type of health facility;
- possible psychosocial impacts;
- infrastructure requirements, including pathology, surveillance and workforce issues;
- role and nature of education/health promotion messages; and
- social, structural and remuneration barriers to chlamydia testing.

While other STIs (e.g. gonorrhoea, syphilis, HSV) in the general population are unlikely to fulfil the criteria for organised screening, targeted screening of particular sub-populations in which STIs are more common may be advantageous.

Action:

- The HIV/AIDS and STIs Subcommittee to develop options for control and prevention of chlamydia for further consideration. These could include:
 - a chlamydia screening pilot targeting sexually active young people;
 - promotion of opportunistic testing and treatment in general practice and sexual health clinics; and
 - a national health promotion program.
- Improve partner notification for chlamydia.
- Explore and address barriers to enhanced data collection for chlamydia surveillance under the National Notifiable Diseases Surveillance System.

5.4 Future priorities

Workforce issues

The primary health care setting has been identified as an avenue for improving access to sexual health services, in particular management of STIs. Barriers to this occurring include insufficient training for general practitioners in sexual health, reluctance and unease with taking a sexual history, heterosexual bias in service delivery, and perceived barriers within the MBS.

Where general practitioners are involved in the management of STIs, they often focus on the diagnosis and treatment of symptomatic STIs as a result of existing training emphasis and the mechanics of the health care system. General practitioners should be encouraged to take a greater role in:

- patient education and prevention of STIs;
- identification of risk factors and appropriate testing for asymptomatic disease; and
- providing a holistic approach to patient care—for example, including STI prevention as a fundamental component of sexual health or contraceptive consults.

This highlights the need for continued support, training programs and incentives for general practitioners in both private practice and government-funded health services. The role of practice nurses in the provision of sexual health services is an opportunity which could be explored further. In addition, the role of allied health professionals (e.g. psychologists) and other related professions (e.g. contact tracers, youth workers etc.) should be enhanced where appropriate.

Aboriginal and Torres Strait Islander health care workers are also critical in helping to reduce the burden and transmission of STIs in these communities. Aboriginal and Torres Strait Islander health care and other workers are particularly valuable in that they often have greater understanding and are able to achieve better health outcomes. Provision of confidential services is particularly important in this situation, especially in rural and remote settings. There is a continuing need for additional Aboriginal and Torres Strait Islander health care workers as well as additional training and professional development opportunities.

Similarly, appropriately trained teachers are fundamental to STI prevention and control in the school-based education sector. School sexual health education is often the primary source of information for young people about STIs. Likewise, youth workers have the potential to be more active in addressing sexual health issues of young people.

Young people

Sexually active young people, that is people aged 25 or younger, are generally at greater risk of acquiring STIs and thus require specific and targeted interventions. Young people are at greater risk as a result of inexperience and lack of knowledge, social pressure, frequency of partner change, substance use, and reluctance to talk with parents or their family general practitioner. Furthermore, adolescence is often a period when individuals are exploring their sexual identity.

Survey results of secondary students in 2002 indicate that young people have an adequate knowledge of HIV/AIDS, but poor knowledge of STIs and other blood-borne viruses. Of particular concern is a lack of knowledge about some of the most common STIs, including chlamydia and gonorrhoea. The research also indicates shifts over time in sexual practices and safe sex behaviours with a substantial number of young people engaging in high-risk sexual practices.

Sex education targeting young people should address issues of sexual and reproductive health in a holistic and developmentally appropriate way. This includes consideration being given to the provision of information and support for delaying the commencement of sexual activity until it can be undertaken in safe and informed circumstances. Education should also acknowledge the variety of young peoples' circumstances with the intention of building the knowledge, skills and strategies they need to respond to HIV/AIDS and STIs in the social context in which they live and make decisions.

Although there are no specific priority actions targeted at sexually active young people in this Strategy, young people are in themselves important sub-populations of gay and other homosexually active men and Aboriginal and Torres Strait Islander people. Furthermore, a chlamydia intervention would be primarily targeted at sexually active young people as they are the main group at risk.

Future work may include improved access to 'youth friendly' health services and facilitation of innovative approaches to testing and treatment. Recently there have also been calls for mandatory comprehensive sex education in schools, rather than the current flexible arrangements. This highlights the need to examine current practices in school-based sex education with the objective of ensuring delivery of effective and appropriate education.

Sex workers

Despite the occupational risks, the incidence of STIs in sex workers in Australia is among the lowest in the world. This has largely been achieved through the adoption of voluntary health policies implemented by the sex industry. However, discrimination against sex workers is still widespread and can increase an individual sex worker's vulnerability to STIs. Marginalised populations of sex workers, such as street-based and overseas-born sex workers, generally experience higher rates of STIs.

Continued education and enablement of sex workers is fundamental in maintaining a safe sex culture and protecting the health of both sex workers and their clients. Particularly important is the provision of culturally appropriate interventions for overseas-born sex workers and outreach services for street-based sex workers. Prevention interventions also need to target male as well as female sex workers, especially as some studies report higher prevalence of STIs in male sex workers.

The continued consultation, development and implementation of prevention and health promotion programs for sex workers, in a variety of changing environments, is an integral part of any STI Strategy. Similarly, continued and frequent access to appropriate, private and non-discriminatory health services is vital.

People living with HIV/AIDS

As previously discussed, there is considerable epidemiological synergy between HIV and STIs. Infection of a person living with HIV/AIDS with another STI can have a significant impact on the health of the individual. Co-infection may result in reduced responsiveness to treatment, adverse drug interactions and side effects, more frequent reoccurrences of STIs after treatment, and accelerated disease progression.

STI prevention, early detection and treatment in people living with HIV/AIDS may also contribute to reducing the risk of HIV transmission. This is based on evidence that some STIs can increase the infectiousness of people living with HIV/AIDS, thereby multiplying the risk to their sex partners.

The relationship between HIV and other STIs highlights the importance of the involvement of people living with HIV/AIDS in both the National HIV/AIDS and STIs Strategies.

People in custodial settings

People in custodial settings generally have lower health status than the general population, and often present with a combination of health problems such as communicable diseases, mental health and drug and alcohol related issues. Aboriginal and Torres Strait Islander people make up a large proportion of people in custodial settings.

Despite the potential significance of communicable diseases among people in custodial settings there is very little data on the prevalence of STIs or associated risk factors. Studies in the New South Wales correctional system have reported higher prevalence of syphilis, HSV-2, hepatitis B and hepatitis C in comparison to the general population. In these studies, Aboriginal and Torres Strait Islander people in custody generally had a higher prevalence of STIs than non-Aboriginal prisoners.

The National HIV/AIDS and Hepatitis C Strategies recognise people in custodial settings as a priority group for prevention and education on safe sex and safe injecting practices, and testing and treatment. People in custodial settings generally report higher levels of injecting drug use, which— together with unsafe injecting while incarcerated and other high-risk behaviours—means that they

are at greater risk of transmitting and acquiring both hepatitis C and HIV/AIDS. In addition, a higher prevalence of STIs among people in custodial settings means that those who engage in sexual activity may also be at greater risk of transmitting or acquiring HIV.

6 Roles and Responsibilities

To be effective, the National STIs Strategy will depend on continued cooperation between and within a number of players including:

- the Australian Government;
- State and Territory Governments;
- research, medical, scientific and health care professionals; and
- the community sector.

Implementation of the National STIs Strategy will take place at a number of levels, involving a large number of organisations and a wide range of mechanisms. Although implementation must be coordinated, it must also remain responsive to specific contexts at the local or community level and be sufficiently flexible to respond to future challenges.

6.1 The Australian Government

National leadership is critical in order to effectively coordinate national efforts to address STIs. The Australian Government is committed to providing strong national leadership in working across portfolios and jurisdictions to further the objectives of this Strategy.

The core role of the Australian Government in relation to STIs is:

- facilitation of national policy formulation;
- coordination of national initiatives;
- provision of subsidised diagnosis and treatment of STIs through the MBS and the Pharmaceutical Benefits Scheme respectively;
- commissioning of research into key areas of strategic relevance such as surveillance and data collection;
- monitoring and evaluation of the National STIs Strategy; and
- administration of funding to the States and Territories, national community-based organisations and research institutions.

The Australian Government Department of Health and Ageing (the Department) is the principal Australian agency responsible for coordination of the national response to STIs. The Department also has carriage of the National HIV/AIDS Strategy, the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy and the Hepatitis C Strategy and will have day-to-day responsibility to ensure that synergies between these strategies are identified and pursued.

Through the Public Health Outcome Funding Agreements (PHOFAs), the Australian Government provides broadbanded funding to States and Territories toward nominated population health programs and strategies. These agreements ensure a shared commitment between Australian and State and Territory Governments to work towards nationally agreed outcomes by implementing

national strategies and programs. The PHOFAs include funding for State and Territory HIV/AIDS related programs, cervical cancer screening, and sexual and reproductive health services provided via family planning organisations. A range of agreed performance indicators assist in directing priorities and tracking how programs are implemented.

The Ministerial Advisory Committee on AIDS Sexual Health and Hepatitis (MACASHH)

MACASHH is responsible for providing independent and expert advice to the Minister for Health and Ageing on the implementation of this Strategy, the National HIV/AIDS Strategy, the National Hepatitis C Strategy and the National Indigenous Australians' Sexual Health Strategy. MACASHH reports annually to the Minister on the appropriateness of current priorities and efforts. This advisory structure consists of an overarching committee and three expert subcommittees – the HIV/AIDS and STIs Subcommittee, the Hepatitis C Subcommittee and the Indigenous Australians' Sexual Health Committee.

6.2 The States and Territories

State and Territory Governments are responsible for providing leadership in their jurisdictions in response to STIs. This is primarily through health departments, which encompass both public health and the provision of health services through hospitals, community health and other primary care facilities.

State and Territory Government responsibilities include the following:

- monitoring and analysing the epidemiology of notifiable STIs within their jurisdiction;
- developing, funding, delivering and evaluating a range of services including health promotion, treatment and care, and workforce training that reflect the prevalence and changing needs of populations at risk;
- establishing public policy and legislative frameworks consistent with the objectives of this Strategy;
- ensuring that resources are allocated in accordance with the guiding principles of this document;
- delivering appropriate, relevant and consistent sexual health education through the public education system;
- management of custodial settings;
- participating in relevant national forums; and
- ensuring effective inter-sectoral cooperation between State and Territory and local government agencies and public health units.

The National Public Health Partnership (NPHP)

The NPHP provides a formal structure for the Australian and State and Territory Governments to come together to develop a joint Australian intergovernmental agenda for public health into the future. The NPHP covers areas such as strategic coordinated approaches to communicable disease control (including HIV/AIDS and other STIs) and health system integration focused on consumers.

A number of committees and working groups report to the NPHP, including CDNA and the Intergovernmental Committee on HIV/AIDS, Hepatitis C and Related Diseases (IGCAHRD).

Opportunities for establishing further links between the NPHP and its subcommittees and the work of the MACASHH should be sought.

The Intergovernmental Committee on HIV/AIDS, Hepatitis C and Related Diseases (IGCAHRD)

IGCAHRD is responsible for coordinating efforts under the Hepatitis C, HIV/AIDS and STIs Strategies across jurisdictions and for developing nationally consistent reporting standards. This committee is made up of jurisdictional representatives from State and Territory Governments along with representatives of key peak stakeholder organisations and has a critically important role to play in the implementation of the National STIs Strategy.

IGCAHRD and MACASHH will actively collaborate on important aspects of this Strategy. Collaboration will be facilitated by cross-membership between and community representation on both bodies.

6.3 Research, medical and health care workers

The research, medical and health care professions play an essential role in the national response. The research sector is important in informing best practice treatment and care, providing training and workforce development, and inputting to prevention strategies and policy development. The medical and health care professions represent the frontline response to STI control, as well as being critical in health promotion and education.

Among the bodies responsible for contributing to the response to STIs are the national centres in HIV research, sexual health clinics and family planning organisations, medical and public health research centres and societies and colleges of medical and health care professionals.

Two major professional associations in the field are the Australasian Chapter of Sexual Health Medicine of the Royal Australasian College of Physicians, and the Australasian Society of HIV Medicine. An application by the Australasian Chapter of Sexual Health Medicine for sexual health to be recognised as a medical specialty is to be considered by the Recognition of Medical Specialties Advisory Committee (ROMSAC) of the Australian Medical Council. The Royal Australian and New Zealand College of Obstetricians and Gynaecologists has an increasing role in promotion of women's sexual health.

Health care professionals in the primary care sector are often represented by the Royal Australian College of General Practitioners, the Australian Divisions of General Practice, the Australian College of Rural and Remote Medicine, and the Royal College of Nursing. As previously discussed, the primary care setting is a critical point of diagnosis and treatment in the control of STIs.

Other important medical and health care organisations include the National Aboriginal Community Controlled Health Organisation (NACCHO) and Family Planning Organisations. NACCHO is the national peak Aboriginal health body representing Aboriginal community controlled health services throughout Australia. Sexual Health and Family Planning Australia, and its subsidiary organisations in each State and Territory, are instrumental in providing sexual and reproductive health services that focus on prevention, early intervention, and diagnosis and treatment. In addition, Family Planning Organisations also play an important role in community and professional education.

6.4 The community sector

As previously discussed, people living with and affected by HIV/AIDS and their community-based organisations have played a crucial leadership role in Australia's strategic response to HIV/AIDS. The National STIs Strategy also recognises the centrality of participation by affected and at risk people and communities in policy and program development, implementation, monitoring and evaluation.

The national HIV/AIDS community-based organisations also have a strong and active interest in other STIs. These include the Australian Federation of AIDS Organisations and the National Association of People Living with HIV/AIDS. Other related community-based organisations include the Scarlet Alliance, which has an important role in HIV/AIDS and STI prevention education for sex workers and their clients. Those with an interest in women's health, sexuality and sexual health, and young people will also have a role in the delivery of the objectives of this Strategy.

7 Research

Research plays a critical role in informing the evidence base for policies and practices at a national level. Furthermore, research produces valuable data to enable monitoring of the effectiveness of national public health strategies such as the National STIs Strategy.

The Australian Government provides funding for both public and private research, including the provision of competitive grants through the National Health and Medical Research Council (NHMRC) and the Australian Research Council (ARC). To make best use of this funding the Australian Government has identified four national research priorities, one of which is 'Promoting and Maintaining Good Health'. While the priority goals under this research priority are not specific to sexual health or STIs, they do include preventative health care.

There are a number of institutes which conduct research into HIV/AIDS and other STIs, including State and Territory-based sexual health centres, medical research institutes and universities. While it is only a small component of their research program, the Australian Government funded national centres in HIV research also conduct research into other STIs. These research centres are the National Centre in HIV Epidemiology and Clinical Research, the National Centre in HIV Social Research, the Australian Research Centre in Sex, Health and Society, and the Australian Centre for HIV and Hepatitis Virology Research.

With recent rises in reported cases of some STIs and an improved understanding of the synergies between HIV/AIDS and other STIs, consideration should be given to enhancing current research efforts. Currently there is no priority-directed mechanism to fund research into STIs; however, priority areas for STI research may include:

- improved understanding of the factors that determine health seeking behaviour, including health promotion/education and access to clinical services for those at risk of STIs;
- improved partner notification strategies for STIs;
- improved epidemiological and behavioural data on prevalence and risk factors for STIs in various populations;
- improved understanding of the factors that predict risk behaviour;
- improved research into the psychosocial effects and determinants of STIs;
- greater understanding of the key factors that would determine the success or otherwise of chlamydia screening in Australia;
- research and development of candidate vaccines for other STIs;
- producing home and clinic-based fast diagnostic (or rapid) tests for suitable STIs;
- developing new drug treatments and therapies for antibiotic resistant strains of STIs;
- greater understanding of the educational requirements and support necessary for general practitioners and other health care providers to provide sexual health services;
- innovative approaches to the provision of clinical care for those most at risk of STIs; and
- managing co-infection of HIV/AIDS and other STIs.

The Australian Government will host an annual roundtable consultation on research priorities for HIV/AIDS, STIs and hepatitis C. The roundtable will be facilitated by MACASHH and the identified research priorities will inform research workplans.

8 Linkages

Synergies exist between this National STIs Strategy and a number of other national strategies. By identifying related strategies, mechanisms can be put in place to ensure the necessary linkages, avoid duplication or contradiction, and enable identification and exploitation of mutually beneficial opportunities. Related strategies include:

- the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy;
- the National HIV/AIDS Strategy; and
- the National Hepatitis C Strategy.

National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy

The National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy outlines a national approach to preventing the spread of HIV and other STIs in Aboriginal and Torres Strait Islander communities. It is important to recognise that the National Aboriginal and Torres Strait Islander Sexual Health and Blood Borne Virus Strategy is complementary to the National STIs Strategy rather than being a substitute Strategy for this identified priority group.

National HIV/AIDS Strategy

The prevention and control of HIV/AIDS is inexorably connected to other STIs and thus the National HIV/AIDS Strategy and the National STIs Strategy will have to be implemented in a cooperative and congruent way.

National Hepatitis C Strategy

Like the STI Strategy, the National Hepatitis C Strategy recognises the need for strategic action to prevent the transmission of blood borne viruses, in this case hepatitis C. The second National Hepatitis C Strategy also aims to minimise the personal and social effects of hepatitis C infection by addressing discrimination, and increasing care and support.

Opportunities for further linkages

There are several other national public health strategies in Australia that relate to service provision to groups at risk of STIs. These include the:

- National Strategic Framework for Aboriginal and Torres Strait Islander Health;
- Healthy Horizons: A Framework for Improving the Health of Rural, Regional and Remote Australians;
- Rural Primary Health Program;
- Talking Sexual Health: National Framework for Education about STIs, HIV/AIDS and Blood Borne Viruses in Secondary Schools; and
- National Framework for Values Education in Australian Schools (under development).

9 Implementation, Monitoring and Evaluation

Monitoring and evaluation is necessary in order to determine the appropriateness, effectiveness and efficiency of any initiative whether it is an individual program or the whole Strategy. More specifically, monitoring and evaluation:

- provides an accountability mechanism for use by all levels of government and other interested parties;
- ensures that the Strategy's objectives and priorities can be continually informed by the best available social and epidemiological evidence;
- meets program managers' and policy makers' need for timely, accurate information on program performance, especially in the context of planning and program management; and
- provides information for communicating to the wider community the successes of the Strategy and the challenges that need to be met.

It is recognised, however, that as a result of the number and complexity of causal factors for STIs, program outcomes in this area are difficult to identify and monitor accurately. It is also the case that, generally, health promotion programs aimed at long-term behaviour change and population health are difficult to monitor and evaluate and may involve a significant lead time. Nevertheless, it is essential to ensure that under the National STIs Strategy, programs are developed and implemented to meet the needs of the priority groups. This should be done at a national, State/ Territory and community level and will be monitored through the MACASHH and IGCAHRD.

Implementation plan

An implementation plan will be developed by the Australian Government, in consultation with the State and Territory Governments and peak community-based organisations. The implementation plan will specify deliverables, responsibilities and performance indicators.

Performance indicators are essential sources of insight for evaluation of the Strategy. Such measures could include quantitative and/or qualitative benchmarks of a short, medium and more long-term timeframe, for example:

- increased STI testing in Aboriginal and Torres Strait Islander communities and gay and other homosexually active men;
- increased testing and treatment of chlamydia;
- improved awareness of STIs among priority groups and the general population;
- a reduction of STIs reported in Aboriginal and Torres Strait Islander communities and gay and other homosexually active men;
- increased STI research; and
- evaluation and identification of best practice policy and programs.

Reporting

Progress against the priority action areas identified in this Strategy will be monitored through regular reports to MACASHH, its subcommittees, IGCAHRD, and other relevant bodies at the jurisdictional level. More specifically, reporting will take place through the following means:

- MACASHH's annual report to the Australian Government Minister for Health and Ageing;
- the surveillance reports of the National Centre in HIV Epidemiology and Clinical Research, the National Centre in HIV Social Research and the CDNA; and
- State and Territory Governments' reporting annually to the Australian Government against the PHOFA performance indicators.

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GLOSSARY

Acquired immune-deficiency syndrome (AIDS)

A syndrome defined by the development of serious opportunistic infections, neoplasms or other life-threatening manifestations resulting from progressive HIV-induced immunosuppression.

Best practice

On the evidence available, the best intervention to produce improved outcomes for an identified problem.

Blood borne virus

A virus that may be transmitted via blood or body fluids that contain blood. Such transmission can result from sharing injecting equipment.

Capacity building

An approach to working with the community that aims not only to involve the community in dealing with the problem at hand but also to increase the community's capacity to deal with any future problems that arise.

Clinical research

Health research relating to individual patients as well as the development and evaluation of treatments for diseases.

Clinical trial

A research activity designed to test a drug or treatment in humans and so establish its efficacy and safety and to identify groups of patients who can be expected to benefit from such a drug or treatment.

Co-infection

In this context, the term used to describe the circumstance in which a person is concurrently infected with hepatitis C and another blood borne virus such as HIV.

Communicable diseases

An illness caused by a specific infectious agent or its toxic products and that arises through transmission of that agent or its product from an infected person, animal or other reservoir to a susceptible host.

Discrimination

Any unfavourable treatment on the basis of known or imputed disease status; any action or inaction that results in a person being denied full or partial access to otherwise generally available services or

opportunities because of known or imputed disease status. The definition includes discrimination on the grounds of known or imputed membership of particular groups that are commonly associated with the related disease.

Early intervention

An approach to treatment characterised by action in the early stages of a condition; for example, treatment to cure an STI before development of possible complications.

Epidemiology

The study of the distribution and determinants of health-related states or events in specified populations and the application of the knowledge thus gained to deal with health problems.

Evidence-based practice

Involves integrating the best available evidence with professional expertise to make decisions.

Gay man

A homosexually active man who identifies himself as gay or is attached to the gay community, or both. Individuals can alter both their self-definition and the level of their community attachment over time. Education and prevention programs typically distinguish between gay men and other homosexually active men.

Health education

Health education comprises consciously constructed opportunities for learning involving some form of communication designed to improve health literacy, including improving knowledge and developing life skills which are conducive to individual and community health.

Health promotion

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social wellbeing, an individual or group must be able to identify and to realise aspirations, to satisfy needs, and to change or cope with the environment. Health is therefore seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities.

Homosexually active man

A man who engages in male-to-male sexual behaviour, regardless of whether he identifies himself as gay, heterosexual or bisexual.

Human immunodeficiency virus (HIV)

A human retrovirus that leads to AIDS.

Incidence rate

The number of new cases of a disease in a defined population within a defined period.

Mainstreaming

An approach to service delivery characterised by a move from specialist HIV/AIDS services towards increasing the capacity of the entire system to deliver appropriate services.

Partner notification (or 'contact tracing')

The process of identifying relevant contacts of a person with an infectious disease and ensuring they are aware of their exposure. For STIs, relevant contacts include those with whom the index case (the original person identified with an infection) has had sex during the infectious period.

Peer education

Any education process devised and implemented by members of a population subgroup specifically to alter the behaviours and attitudes of other members of that subgroup; for example, gay men delivering education programs relating to gay men's sexual health.

Prevalence rate

The total number of all individuals who have an attribute or disease at a particular time or period divided by the population risks of having the attribute or disease at this time or midway through the period.

Safe sex, safe sexual practice

Sexual activity in which there is no exchange of body fluids such as semen, vaginal fluids or blood.

Screening

Screening for a disease involves performing tests in members of the community without symptoms of the disease, in order to identify individuals who may have the disease and who therefore require further, more specific investigations.

Sexually transmissible infection

An infection – such as HIV, gonorrhoea, syphilis or chlamydia – that is transmitted through sexual contact.

Surveillance

In this context, the continuing scrutiny of all aspects of the occurrence and spread of a disease. The main purpose is to detect changes in trends or distribution in order to initiate investigative or control measures.

ABBREVIATIONS

AIDS	Acquired Immune-Deficiency Syndrome
CALD	Culturally and linguistically diverse (background)
CDNA	Communicable Diseases Network Australia
HIV	Human immunodeficiency virus
HPV	Human papilloma virus
HSV-1	Herpes simplex virus type 2
HSV-2	Herpes simplex virus type 2
IGCAHRD	Intergovernmental Committee on HIV/AIDS, Hepatitis C and Related Diseases
MACASHH	Ministerial Advisory Committee on AIDS, Sexual Health and Hepatitis
MBS	Medicare Benefits Schedule
NHMRC	National Health and Medical Research Council
NIASHS	National Indigenous Australians' Sexual Health Strategy
NNDSS	National Notifiable Diseases Surveillance System
NPHP	National Public Health Partnership
PHOFA	Public Health Outcome Funding Agreement
PID	Pelvic inflammatory disease
ROMSAC	Recognition of Medical Specialties Advisory Committee
SOPV	Sex-on-premise venue
STI	Sexually transmissible infection
WHO	World Health Organization

