Infections and Immunology Health Network

Sexually Transmitted Infections Model of Care

Prepared by the
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Working Party
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Working Together to Create a Healthy WA

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SEXUALLY TRANSMITTED INFECTIONS MODEL OF CARE

EXECUTIVE SUMMARY

Sexually transmitted infections (STIs) are a major public health problem in most parts of the world. They are a major cause of acute illness, infertility, long-term disability and premature death, and have been shown to increase the spread of HIV.

In Australia, chlamydia and gonorrhoea are the most commonly notified STIs with 47,104 and 8,554 notifications respectively reported in 2006 (NNDSS 2007).

In Western Australia (WA), the incidences of notifiable STIs (chlamydia, gonorrhoea and infectious syphilis) have continued to increase. The total number of chlamydia notifications increased almost four-fold from 1,591 cases in 1997 to 5,887 cases in 2006, while the total number of gonorrhoea notifications increased by 31 per cent from 1,267 cases to 1,665 cases in the same time period (DoH 2007a). Cases of infectious syphilis have started reappearing in the metropolitan region.

Rising rates of many STIs (including syphilis, genital herpes and HPV), and documented behavioural changes indicating increased risk-taking in some population subgroups, highlight the need for STI-focused action along the continuum of care. The demand for appropriate and efficient sexual heath clinical services, including contact tracing responsibilities, is increasing: the development of a patient-centred STI Model of Care is both timely and critical.

Models of Care, developed as part of WA Health reform, aim to describe best practice care and services within the WA health care system for a person or population group prior to and following diagnosis with a particular condition. The future STI Model of Care must be patient-centred and focus on the following principles of respect, choice and empowerment, patient involvement in health policy, access and support, and information. It must also promote equity of health services throughout WA, be evidence-based and forward looking, respond to existing policy, influence future planning and involve consultation and collaboration with all stakeholders. It includes the following recommendations:

Primary Prevention

- Continue and enhance state-wide and targeted social marketing of healthy sexual behaviour
- Continue legislative and policy reform to ensure an enabling environment
- Continue to develop and provide quality school-based health/life skills education and prevention
- Continue to develop and provide out of school health/life skills education and prevention programs and resilience enhancement programs
- Invest in existing, new and emerging prevention and education programs
- Enhance education and prevention strategies for the Aboriginal community
- Enhance education and prevention strategies for men who have sex with men.

Secondary Prevention and Early Detection

- Improve early detection and intervention, particularly for high-risk populations
- Remove barriers to testing
- Continue and enhance disease notification and surveillance systems
- Expand contact tracing services in the metropolitan area and throughout WA.

Disease Management and Tertiary Prevention

- Enhance metropolitan-based tertiary sexual health clinical services
- Ensure that clinical services are more accessible and meet the needs of clients
- Expand rural and remote clinical services
- Utilise information and communication technology to improve service delivery
- Support improved research into sexual health issues.

Workforce Development and Training

- Continue to provide opportunities for primary health care providers to undertake sexual health/STI training
- Enhance medical student training
- Ensure that the Poisons Act 1964 is amended as a matter of urgency to enable the creation of Advanced Sexual Health Nurse positions in WA
- Establish training and provide ongoing support for Advanced Sexual Health Nurse positions in WA
- Increase the number of positions and training opportunities for clinicians specialising in sexual health medicine
- Increase the number of sexual health promotion officers throughout WA
- Continue to update and disseminate best practice guidelines for primary health care providers involved with the management of STIs.

WA has always had a strong commitment to practical partnerships supporting the response to STIs. There has been a sustained relationship between the Department of Health (DoH), other state and local government organisations, community-based organisations, primary health care providers, the education sector, and medical, scientific and research sectors. These partnerships must continue to work together to support the new Model of Care.

1. INTRODUCTION

1.1 Key Objective and Outcomes

The broad objective of developing an integrated Model of Care is to ensure people get the right care, at the right time, by the right team and in the right place (DoH). The aim of this document is to describe a Model of best practice care and services within the WA health care system for a person or population group prior to infection and as they progress through the stages of testing, treatment and care for a sexually transmitted infection (STI):

- **Primary prevention** aims to limit the incidence of STIs in the population by measures that eliminate or reduce causes or determinants of departures from good health; control exposure to risk and promote factors that are protective of health;
- **Secondary prevention and early detection** aims to reduce progression of STIs through early detection, usually by screening at an asymptomatic stage and early intervention;
- **Disease management and tertiary prevention** aims to improve function and minimise the impact of established STIs, and prevent or delay complications and subsequent events through effective management and rehabilitation (adapted from NPHP 2006).

Outcomes of an effective model of care

The intended outcomes of an effective and integrated STI Model of Care are:

- To reduce the rates of STIs in WA;
- To increase the levels of STI testing;
- To improve screening and treatment of STIs within mainstream and high-risk populations;
- To improve access to appropriate sexual health services;
- To increase the number of skilled practitioners in the workforce; and
- To increase the yield in contact tracing of index cases and named contacts.

1.2 Methodology

The Infections & Immunology Health Network was tasked with the development of an STI Model of Care. The Project Leaders were recruited from the Network's Executive Advisory Group (see Appendix 1) and a small working party was formed to develop a draft, which was circulated twice to key stakeholders throughout WA for input and comment. The final draft was endorsed by the Executive Advisory Group.

The proposed STI Model of Care is guided by the principles that informed existing policy documents - the *National Sexually Transmissible Infections Strategy 2005-2008* (DoHA 2005a) and the *Western Australian Sexually Transmitted Infections Action Plan 2006-2008* (DoH 2006a):

- **Evidence-based policy** – This ensures improved efficiency and effectiveness through adoption of and continuous evaluation of proven interventions and current knowledge.

- **Health promotion** – Based on the 1986 *Ottawa Charter for Health Promotion*, health promotion is defined as a process of enabling people to increase control over and thereby improve their health (WHO 1986). It includes equity in health, education, social mobilisation and advocacy. The five principles of the Ottawa Charter are building healthy public policy, creating supportive environments, strengthening community action, developing personal skills and reorienting health services from curative to prevention service delivery.

- **An enabling environment** – The success of the Model of Care is dependent on sustaining a supportive social, legal and policy environment that encourages health education and promotes access to appropriate services, and includes addressing stigma and discrimination as a necessary part of this strategy.

- **Early detection and intervention** – This reduces the morbidity and mortality associated with STIs. 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. Early intervention includes providing access to appropriate, affordable and non-judgemental care.

- **Access to appropriate health care** - This requires the physical presence of affordable, timely diagnosis and treatment services and also the provision of culturally and socially appropriate care.

- **The involvement of affected people and communities** - Participation by affected and at-risk people and communities ensures that policies and programs are responsive to needs, and are designed for maximum positive effect.

Development of the Model of Care also included reference to and integration of the following policies and reports:

- Declaration on patient-centred healthcare as adopted by the Health Consumers' Council (WA), which outlines five principles – respect, choice and empowerment, patient involvement in health policy, access and support, and information;

- WA Aboriginal Health Impact Statement and Guidelines (DoH)1;

- National Aboriginal and Torres Strait Islander Sexual Health and Blood-borne Virus Strategy 2005-2008 (DoHA 2005b);

- Western Australian Aboriginal Sexual Health Strategy 2005-2008 (DoH 2005);

- Review of Western Australian Metropolitan Sexual Health Clinical Services (unpublished).

[1] www.aboriginal.health.wa.gov.au

2. BACKGROUND

2.1 Burden of Disease in Western Australia

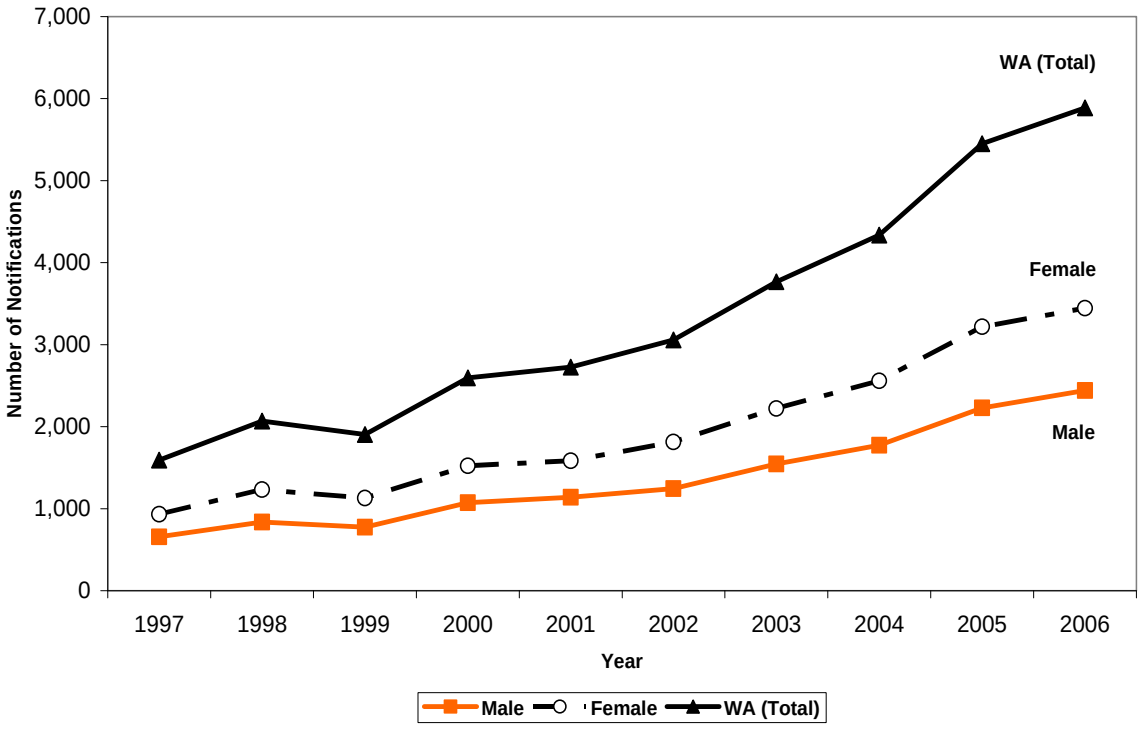
In Western Australia (WA), the incidences of notifiable STIs (chlamydia, gonorrhoea and infectious syphilis) have continued to increase. This section examines the number of notifications of specific infections and STI numbers and rates amongst some at-risk target groups.

2.1.1 Chlamydia

For the 10-year period from 1997 to 2006, the number of chlamydia infections reported to the DoH increased almost four-fold from 1,591 notifications in 1997 to 5,887 in 2006 (Figure 1) (DoH 2007a). In 2006:

- There was an eight per cent increase in notifications from 2005 (n = 5,450);
- The number of notifications was 52 per cent higher than the previous five-year average (3,867.8 notifications per year);
- The male to female ratio for chlamydia was 0.7:1;
- Eighty-three per cent of chlamydia notifications occurred in people aged less than 30 years;
- The peak age group for chlamydia was 20 to 24 years (36 per cent of total notifications), followed closely by 15 to 19 years (29 per cent of total notifications) (DoH 2007a).

Figure 1. Number of chlamydia notifications by sex, WA, 1997 to 2006.



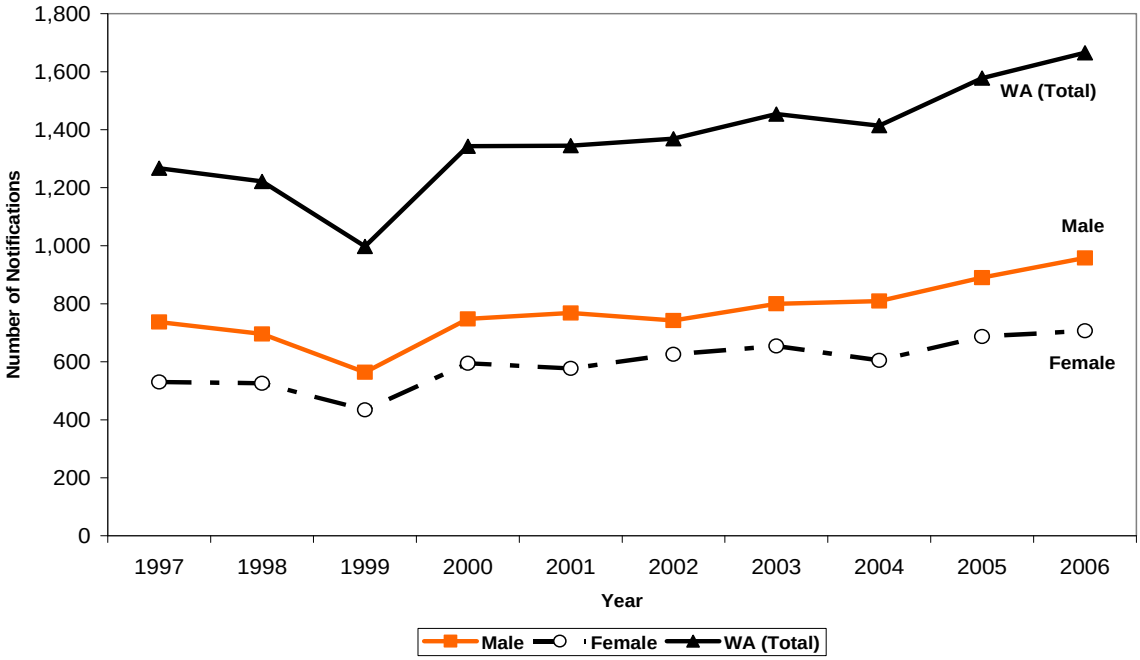
Source: *Epidemiology and Surveillance Program, CDCD, Department of Health*

2.1.2 Gonorrhoea

Gonorrhoea is the second most common notifiable STI in both Australia (NCHECR 2006) and WA (DoH 2007a). The number of gonorrhoea notifications increased by 31 per cent from 1,267 cases in 1997 to 1,665 cases in 2006 (Figure 2). In WA, in 2006:

- There was a six per cent increase in notifications from 2005 (n = 1,578);
- The number of notifications was 16 per cent higher than the previous five-year average of 1,432.0 notifications per year;
- The male to female ratio for gonorrhoea was 1.4:1;
- Seventy-two per cent of gonorrhoea notifications occurred in people aged less than 30 years;
- The peak age group for gonorrhoea notifications was 15 to 19 years (28 per cent of total notifications (DoH 2007a).

Figure 2. Number of gonorrhoea notifications by sex, WA, 1997 to 2006.



Source: *Epidemiology and Surveillance Program, CDCD, Department of Health*

2.1.3 Infectious syphilis

In WA, in 2006:

- Infectious syphilis notifications more than doubled from 19 in 2005 to 48;
- The number of notifications was 24 per cent higher than the previous five-year average of 38.6 notifications per year and was largely due to two outbreaks in the metropolitan area;

- The male to female ratio for infectious syphilis increased from previous years to 2.4:1 (due to the outbreak in non-Aboriginal men in the Metropolitan area who have sex with men) (DoH 2007a).

A similar increase in infectious syphilis has been seen in men who have sex with men (MSM) in the Eastern states starting in 2002 and in other developed countries in the late 1990s and early 2000s (Fairley *et al* 2005).

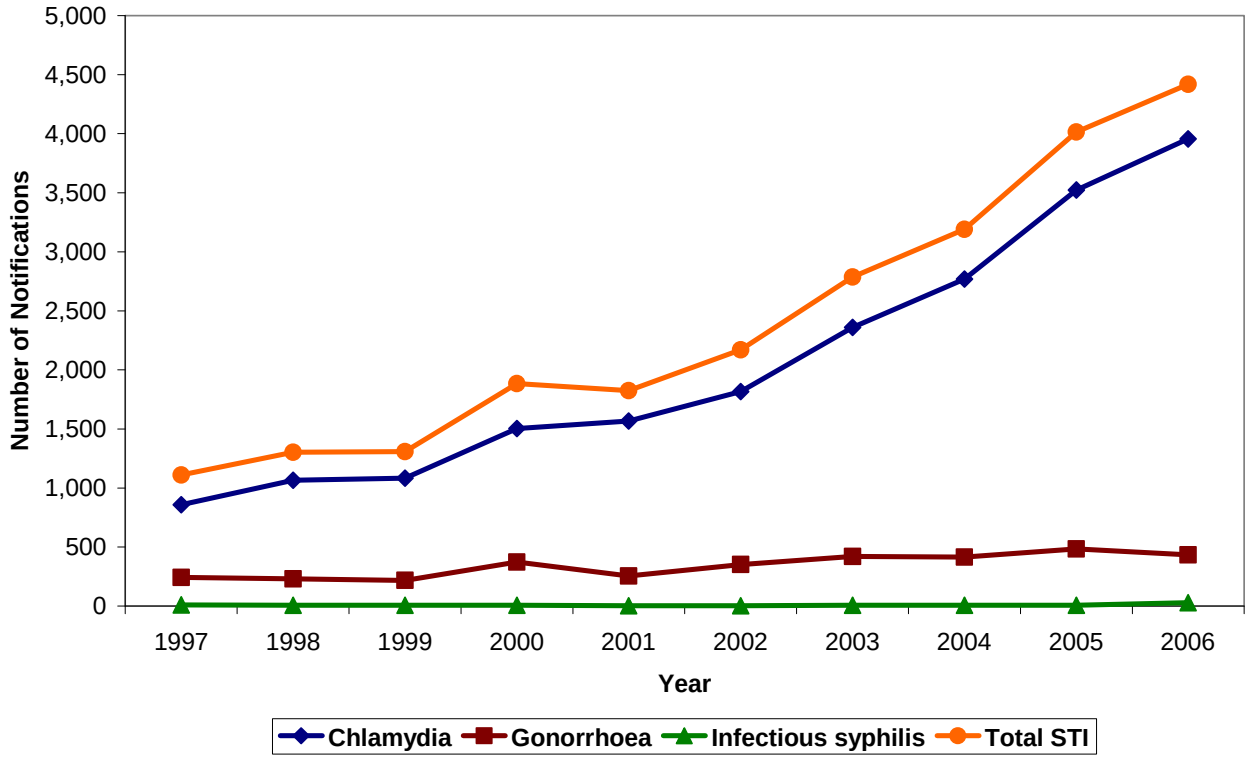
2.1.4 Non-notifiable STIs

Non-notifiable STIs such as genital herpes and genital warts are more common than those notifiable STIs on which surveillance data is collected.

2.1.5 STIs in the metropolitan area

The number of notifications of infectious STIs per year in the Perth metropolitan area increased almost four-fold from 1,111 notifications in 1997 to 4,419 in 2006 (DoH 2007a). This is almost all attributable to increased chlamydia notifications (see Figure 3). In 2006, 67 per cent of chlamydia notifications were from the metropolitan area.

Figure 3. Number of sexually transmitted infection notifications in the metropolitan area by infections and year, WA, 1997 to 2006



Source: *Epidemiology and Surveillance Program, CDCD, Department of Health*

2.1.6 STIs in Aboriginal communities

In WA, rates of notifiable STIs in Aboriginal people have been unacceptably high for many years. In 2006:

- Notifications for gonorrhoea were 85 times more likely than in non-Aboriginal people;
- Notifications for chlamydia were 10 times more likely than in non-Aboriginal people;

- Notifications for infectious syphilis were 17 times more likely than in non-Aboriginal people (despite the increase in non-Aboriginal cases)
- The peak age group for chlamydia notification among Aboriginal people was 15 to 19 years (46 per cent of Aboriginal notifications), compared to 20 to 24 years for non-Aboriginal people (DoH 2007).

STI notification rates are particularly high in Aboriginal people in remote areas of the State (e.g. the Goldfields, Kimberley and Pilbara regions). The high rates of STIs also increase the potential for an HIV epidemic in Aboriginal people (DoH 2005).

2.1.7 STIs in men who have sex with men

In Australia, STIs are common amongst men who have sex with men (MSM). According to the National STI Strategy (DoHA 2005a), rates of STIs in MSM 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, MSM are a priority population.

Surveillance data for gonorrhoea provides an indicator of unsafe sexual behaviour amongst MSM. In 2005, there were 12 cases of rectal gonorrhoea reported in men in WA (NCHECR 2006). See also "infectious syphilis" section above.

2.1.8 STIs in children aged 14 years or younger

From 2002 to 2006, the vast majority of STI notifications in children aged 14 years or younger have been reported among those aged 13 or 14 years. In 2005-2006, chlamydia and gonorrhoea notifications decreased in both this age group and that of children aged nine years or younger. In the same reporting period, notifications increased in children aged 10 to 12 years and notifications of all STIs in this age group increased at a higher rate per year over the previous five years in comparison to those in children aged nine years or younger and in children aged 13 or 14 years (DoH 2007).

2.1.9 STI-related costs

In Australia, costs of screening and treating chlamydia (defined as a single dose of azithromycin plus a GP visit) are relatively inexpensive (base case estimates are $42.95 and $52.82 respectively [Walleser *et al* 2006]). If left untreated chlamydia can cause pelvic inflammatory disease (PID), tubal factor infertility, ectopic pregnancy and chronic pelvic pain. It is estimated that $90-$160 million is spent annually by the Australian health care system as a direct cost of chlamydia (Nisyrios 2006) and the infection may be implicated in many infertility cases.

A recent US study has highlighted that the indirect costs of untreated chlamydia infection and its sequelae contribute substantially to the per-case economic burden of the disease (Blandford and Gift 2006). The authors state that effective programs to prevent chlamydia infection and effective screening, diagnosis and treatment of infected women may reduce productivity losses.

Investment in contact tracing services, as part of a comprehensive STI control and management approach, should impact upon the numbers of cases of chlamydia within the community and will result in significant cost saving to Area Health Services.

3. CURRENT SERVICE PROVISION

WA has always had a strong commitment to practical partnerships supporting the response to STIs. There has been a sustained relationship between the DoH, other state and local government organisations, community-based organisations, primary health care providers, the education sector, and medical, scientific and research sectors.

3.1 Primary Prevention

Primary prevention aims to limit the incidence of STIs in the population by measures that eliminate or reduce causes or determinants of departures from good health; control exposure to risk and promote factors that are protective of health.

In WA, a range of STI education and prevention programs exist, which:

- maintain health promotion through identifying risk factors and educating and empowering individuals with skills to avoid high-risk behaviours;
- target specific groups and reduce the risk amongst those people considered to be at high risk of STIs.

Targeted and universal health promotion and social marketing is essential to a comprehensive and integrated approach in the prevention of STIs. Youth, men who have sex with men, Aboriginal people and sex workers are identified as priority populations both at a National level and by the Sexual Health and Blood-borne Virus Program (SHBBVP). A diverse range of targeted prevention and education programs that use innovative multi-media, events or settings to promote safe sex messages with promotion of testing and treatment services are currently funded. This includes:

- Multi-media social marketing campaigns such as 'Chlamydia. Most people haven't got a clue';
- Production of health education resources such as brochures and pamphlets;
- School based sexual health and relationship curriculum materials, including investment in teacher and school nurse training in both the metropolitan, endemic areas and other rural regions.

The Department of Health through the SHBBVP funds non-government organisations such as the WA AIDS Council, FPWA Sexual Health Services (FPWA), Magenta, Sexuality Education Counselling and Consultancy Agency (secca), WA Substance Users' Association and some population health units (PHUs) to develop and provide specific activities targeting men who have sex with men, sex workers, people with disability, people who inject drugs, youth and Aboriginal people, including health education materials, workshops and outreach events. Targeted education and prevention programs for the general community and priority target groups are outlined in the *Western Australian Sexually Transmitted Infections Action Plan 2006-2008* (DoH 2006a).

3.2 Secondary Prevention and Early Detection

Secondary prevention and early detection aims to reduce progression of STIs through early detection, usually by screening at an asymptomatic stage and early intervention.

3.2.1 Testing

STI testing is available from GPs and other primary health care providers, at sexual health clinics at tertiary hospitals, outreach clinics, prison –based health centres across WA, selected PHUs and some commercial sex on premises venues (SOPVs). Kalgoorlie-Boulder Population Health Unit is currently offering STI screening in school for students aged 16 years and over.

Data from Medicare Australia[2] show that the number of diagnostic tests performed nationally for *Chlamydia trachomatis* continued to increase in 2004, but relative to 2003, the rate of increase in testing declined: 24 to 17 per cent in the 15–24 year age group, 24 to 15 per cent in males in the 25–34 year age group, but remained unchanged in females in this age group. Using the number of tests as the denominator and the number of notifications as the numerator, from 2000 through 2004 the percentage notified of the number tested in the 15–24 year and in the 25–34 year age groups remained stable in both males and females.

According to the Perth Gay Community Periodic Survey 2006, over half of the men surveyed (56.4 per cent) had had an STI test in the last 12 months (Zablotska *et al* 2007).

People in custodial settings may engage in behaviours that increase their risk of STI transmission. While testing for STIs can be accessed at any time whilst a person is in prison, there is a need to ensure that they have equitable access to health promotion, and treatment and care services.

Antenatal testing

The Department of Health has prepared an Operational Directive (DoH 2007b) to provide information about antenatal testing for STIs and blood-borne viruses and to recommend appropriate testing for pregnant women as part of their antenatal care. Antenatal testing must only be performed with the informed consent of the woman.

3.2.2 Surveillance

In WA, the provisions of the *Health Act 1911* and subsequent regulations require the attending medical practitioner to forward a notification of gazetted 'infectious' and 'venereal' diseases to the DoH. Several STIs (gonorrhoea, syphilis, donovanosis [Granuloma inguinale], chancroid [soft sore] and venereal warts) were defined as 'venereal' diseases in 1911, while infections such as genital chlamydia and HIV/AIDS that have emerged in more recent times have subsequently been gazetted as 'infectious' diseases.

Current legislation requires the responsible pathologist of all laboratories to forward a notification of gazetted 'infectious' and 'venereal' diseases to the DoH, including identifying information for both the patient and the patient's medical practitioner.

[2] http://www.medicareaustralia.gov.au/statistics/

Since the beginning of 2002, the Western Australian Notifiable Infectious Diseases Database (WANIDD), has been accessible on the DoH's Intranet, for registered users in the Communicable Disease Control Directorate (CDCD) and regional PHUs. A separate database for HIV/AIDS notifications is maintained at CDCD only.

STIs in children

All notifications (under the Infectious and Venereal Disease provisions of the *Health Act 1911*) of STIs in children under 14 years of age, which are verified by the public health disease control staff and result from, or are likely to result from sexual transmission, are reported by the Director of CDCD to nominated officers in the Department of Community Development (DCD) and the WA Police.

In addition, where public health disease control staff become aware that a notified STI in a child aged 14 years or above (but below 16 years of age) may be a result of sexual abuse, such cases are similarly reported.

The reporting protocol commenced on 1st July 2004 and provides direction to staff of the CDCD and PHUs across the state to ensure appropriate and timely reporting of children at risk of sexual abuse to DCD and the WA Police.

3.2.3 Contact Tracing

Currently, only two disease control/community health nurse positions are responsible for the provision of STI and HIV/AIDS contact tracing and other services for the entire metropolitan area, with the exception of a small proportion of cases diagnosed at Royal Perth Hospital (RPH) Sexual Health Service and Fremantle Hospital Sexual Health Service, which are responsible for their own client contact tracing. However, the vast majority of chlamydia cases are diagnosed and notified by GPs. In 2005, a survey of GPs' practices with regard to STI clinical management showed that only 25 per cent of urban GPs considered contact tracing to be their responsibility (Watson *et al* 2005). Thus, the cycle of re-infection continues, limiting the value and long-term effectiveness of chlamydia treatment. Despite the increasing number of STI notifications (including HIV/AIDS) in the metropolitan area, contact tracing services for sexual health have remained under-resourced for a number of years so there is an urgent need to address this.

In remote and rural areas there are no dedicated contact tracing staff. Contact tracing is mostly undertaken by community nurses or Aboriginal health workers. In the Kimberley (the only region with a systematic contact tracing program for all STIs including chlamydia, since 1997) where the infrastructure and commitment to contact tracing as part of an effective disease control program exists, chlamydia and gonorrhoea rates are **not** increasing at the same rates as in the metropolitan area - the average annual increase in chlamydia age-standardised rates (ASR) between 1997 and 2006 is one-third to one-half of any other region and there has been a 2.5 per cent decrease in gonorrhoea ASR. Since the establishment of the Pilbara and Goldfields regional STI teams in 2004, contact tracing of STI cases by regional PHUs, community health staff and Aboriginal health workers has been undertaken in a more systematic way. In the South-West region, the public health nurse/disease control coordinator performs the role of contact tracing in the vast majority of cases, in the absence of dedicated sexual health positions.

3.3 Disease Management and Tertiary Prevention

Disease management and tertiary prevention aims to improve function and minimise the impact of established STIs, and prevent or delay complications and subsequent events through effective management and rehabilitation.

3.3.1 Metropolitan Clinical Services

In metropolitan WA, sexual health services are currently provided by the Sexual Health Service at RPH and its outreach clinic at King Edward Memorial Hospital for Women; the Sexual Health Service (B2 Clinic) at Fremantle Hospital and its outreach clinics in Fremantle, Rockingham and Kwinana; FPWA Sexual Health Services (FPWA), WA AIDS Council, Magenta and WA Substance Users' Association (WASUA) (supported by RPH).

With the exception of FPWA, clinical services based in the metropolitan area have not received any additional funding since 1998. Therefore, it is not surprising that services are currently working beyond capacity. In order to decrease the prevalence of STIs and reduce the impact of their sequelae, investment must be made into sexual health clinical services.

3.3.2 Outreach services

Fremantle Hospital Sexual Health Service currently runs a number of youth-oriented outreach clinics in Fremantle, Rockingham and Kwinana (commenced in mid 2007). These have led to more young people being seen.

- *Quarry Youth Health Service Clinic, Fremantle* – The majority of clients (85 per cent) were aged 25 years or less.
- *Rockingham Clinic* – The median age of the patients was 16 years and all were less than 25.

RPH conducts an outreach service at King Edward Memorial Hospital for Women for one session per week and involves gynaecology registrar and resident training. RPH also supports the clinic at WASUA.

3.3.3 GP services

The six metropolitan Divisions of General Practice have a total of 460 general practices and approximately 1,800 doctors providing primary medical care to the majority of the metropolitan population.

In 2005, 87 per cent of metropolitan STI notifications, most of which were chlamydia, came from GPs (CDCD unpublished data). Metropolitan GPs have a central role in providing opportunities for STI testing, treatment, contact tracing and education.

3.3.4 Rural and remote clinical services

Specific sexual health clinical services run by dedicated health professionals with general public health training are currently available only through the PHUs in the Pilbara, Carnarvon and the Goldfields. A pilot STI clinic run by community nurses is currently underway in Albany. Clients can also access clinical services at some Aboriginal Community Controlled Health Services (ACCHS) around the state, at state health services such as Emergency Departments, and from GPs.

In June 2004, the Minister for Health announced a Regional STI Project, which has established three Sexual Health teams in the Pilbara, Kimberley and Goldfields Regions. These teams work closely with Regional PHUs, ACCHS and other government and community-based organisations to coordinate and augment existing sexual health services for Aboriginal people. They provide enhanced services and a comprehensive program approach to STI prevention and control.

3.4 Workforce Development and Training

PHUs, clinical services, GP Divisions, community-based organisations and professional health bodies, such as the Australasian Chapter of Sexual Health Medicine (ACSHM), have provided extensive workforce development and training for various target groups; e.g. health care providers, indigenous and other educators, youth workers, and disability support workers.

3.4.1 General Practice Training

FPWA has been funded by the WA General Practice Network and the SHBBVP to develop and implement training for practice nurses to provide opportunistic testing for chlamydia.

To increase the number of STI friendly GPs, the DoH through the SHBBVP has funded several three-day training workshops on STI management for GPs. After attending the training, interested GPs have the opportunity to undertake clinical placements at either of the two metropolitan hospital-based sexual health services.

3.4.2 Sexual Health Physicians

In WA, there are six fellows of the Australasian Chapter of Sexual Health Medicine and one trainee. However, only two fellows and the trainee are currently practising sexual health within the metropolitan hospital-based sexual health clinics. WA requires an increased number of sexual health specialists.

3.4.3 Clinical Guidelines

The SHBBVP continues to provide updated *Guidelines for the Management of Sexually Transmitted Infections* (DoH 2006b) and has recently published an STI/HIV Control Supplement for the endemic regions in WA – Goldfields, Kimberley and Pilbara.

3.5 Quality of Care

Current sexual health prevention, treatment and services are and must continue to be effective, accessible, patient-centred, and safe. They are supported by a dedicated workforce who provide evidence-based education, prevention, testing and treatment to people at risk of infection and people diagnosed with STIs along the continuum of care.

Some inequities and concerns which have been identified include:

- the need for improved services for rural areas;
- greater access to youth friendly services in outer metropolitan areas;
- the need for more specialists and primary health care providers trained in sexual health;

- that current metropolitan clinics have reached their capacity;
- how to address the needs of people with a disability.

The Department of Health disseminates current policies and protocols that provide best practice guidelines for primary health care providers for the management of STIs.

There are a range of activities in place to ensure quality of care including the development and distribution of clinical guidelines for managing STIs and workforce development opportunities for health professionals.

Evaluation of programs and resources is essential to improve the quality of services and to provide the evidence-base to develop best practice.

4. FUTURE MODEL OF CARE

A new STI model of care must:

- Address ways to improve access to targeted education and prevention, testing and intervention and other services along the continuum of care;
- Ensure that the quality of care is maintained and improved;
- Enhance and maintain active partnerships between government agencies, community-based organisations, health care providers and other key stakeholders;
- Ensure care and support services are appropriate and accessible for people from different culturally and linguistically diverse (CALD) backgrounds, Aboriginal people, youth, men who have sex with men (MSM), sex workers, people who inject drugs, people in custodial settings; and people who have a disability and their significant carers;
- Acknowledge the different requirements of metropolitan and rural and remote area models
- Be patient-centred and focus on the following principles of respect, choice and empowerment, patient involvement in health policy, access and support, and information; and
- Be evidence-based.

4.1 Primary Prevention

Continue and enhance state-wide and targeted social marketing of healthy sexual behaviour

- Implement community wide, multi-media social marketing to reach the 16-24 year age group. This includes youth press, radio, TV commercials, SMS texting, Internet, viral e-mails and specific health promotion literature and brochures. A sustained presence, such as an annual or biennial social marketing campaign is required to address the increasing prevalence of chlamydia.
- Complement broad social marketing campaigns with targeted prevention and education interventions for high risk or difficult to reach target populations. This includes the development of specific programs and resources for Aboriginal people, MSM and sex workers.
- Develop a youth-focussed sexual health website.
- Develop and implement a sexual health awareness week throughout WA using a partnership approach.

Continue legislative and policy reform to ensure an enabling environment

Enactment and/or reform of the following legislation will help to address STI prevention education and health promotion, as well as treatment:

- New Public Health Act;
- Prostitution Control legislation and Sex Industry Code of Practice;
- Poisons Act.

Continue to develop and provide quality school-based health/life skills education and prevention

- Continue to work with the Department of Education and Training (DoET) to ensure that schools are encouraged and supported to provide school sexual health education and teacher professional development.
- Develop innovative models (such as self-directed on-line learning) to support the roll-out of existing teacher professional development. School-based sexual health and relationships education should be compulsory and supported by high quality workforce development for teachers, Indigenous education officers and school health nurses and staff at Education Support Centres and Units.
- Continue to develop appropriate sexuality education in schools and include protective behaviour content for primary school aged children. This must be underpinned by high quality professional development for teachers, school health nurses and health promotion officers.
- Develop Aboriginal health promotion and education resources for Aboriginal parents on healthy and developmentally staged sexuality development, including information on protective behaviour and responding to children who disclose abuse.
- Recognise sexual health as an important public health issue when identifying priorities for the development of local service agreements between the Department of Health and the DoET and increase the number of Memorandums of Understanding between the DoET and regional PHUs to enable increased STI prevention and testing in schools.
- Increase training provided to teachers and school health nurses to enhance competence and confidence in the delivery of comprehensive sexual health education. In regional areas this role could be carried out by regional STI teams.
- Develop and implement an education resource aimed at all parents.

Continue to develop and provide out of school health/life skills education and prevention programs and resilience enhancement programs

- Provide more training opportunities, such as PASH and Mooditj training, for non-health professionals (e.g. youth workers) to ensure:
  - That the provision of programs is not reliant on health professionals alone;
  - Increased access to knowledge and referral for young people.

Invest in existing, new and emerging prevention and education programs

- Continue to provide and increase access to health hardware, i.e. condoms, dental dams, needles and syringes, using best-practice and innovative methods.

- Integrate multi-level, sustained education and prevention programs with clinical services. Targeted and universal interventions are also needed as one approach will not be applicable for all priority populations.
- Provide a diverse range of health promotion hardware and health education programs for at-risk hard to reach groups, which utilise community-based, outreach methods or the use of new mediums such as Internet chat rooms and on-line services.
- Continue to fund non-government organisations to develop and provide specific activities targeting at risk groups.

Enhance education and prevention strategies for the Aboriginal community

- Provide Aboriginal health education and prevention using appropriate resources and regionally based community education programs.
- Ensure closer partnerships with Aboriginal Community Controlled Health Services.

Enhance education and prevention strategies for men who have sex with men

- Provide health education and prevention for gay and other homosexually active men using appropriate resources and targeted education programs.

4.2 Secondary Prevention and Early Detection

Improve early detection and intervention, particularly for high-risk populations

- Increase opportunistic screening for STIs through general practice settings with the involvement of GPs, trained practice nurses and advanced sexual health nurses.
- Increase opportunistic screening for STIs through ACCHS settings with the involvement of GPs and Aboriginal health workers.
- Implement a population-based screening program for chlamydia (driven by general practice) whereby young people under the age of 25 years could be tested for STIs and then entered into a recall system.
- Based upon the successful model at Ngaanytjarra, implement and evaluate STI screening programs in appropriate remote communities (i.e. Western Desert and Kutjungka).
- Increase support for providing opportunistic STI screening when consumers present at the Emergency Departments of rural and remote hospitals.
- Investigate the feasibility of establishing sexual health clinics within rural and remote hospitals. It may be possible to operate a one or two day per week sexual health clinic staffed by STI specialist nurses within hospitals to provide STI screening and treatment.
- Promote the importance of STI testing amongst MSM under the age of 25 years.
- Investigate and implement alternative STI screening processes:
  - Utilise allied and non-health care providers to collect specimens, such as youth workers who have access to high-risk groups;

- Pharmacy based testing;
- On-line STI testing.

- Establish better ways to test and follow-up people moving in and out of custodial settings (particularly short-stay).
- Continue to promote antenatal testing for STIs and BBVs.

Remove barriers to testing

Most Australians diagnosed with STIs are managed in the private sector. Medicare rebates heavily subsidise patient services provided by the private sector. To minimise misuse of this system, Medicare imposes conditions, including: rebating only three pathology tests ordered by a GP on any one patient on any one day (the "three-test rule"). The three-test pathology testing rule was reported to be the most common perceived barrier to gonorrhoea screening (Donovan *et al* 2001). Screening tests for bacterial STIs (gonorrhoea, chlamydia and syphilis), and viral conditions (HIV, hepatitis B and C) as well as other associated conditions (thrush and vaginosis) particularly if required for several patients a day, inevitably strains the relationship between the ordering doctor and the pathology service.

Continue and enhance disease notification and surveillance systems

- Implement a web-based system to allow GPs to notify STIs more efficiently and to nominate who will provide contact tracing. Research indicates that over 88 per cent of GPs in Australia are computerized (Henderson et al 2006).
- Maintain and improve reporting of STIs in children less than 14 years of age.
- Introduce data collection that will identify people who have a disability and will enable statistics to be analysed. Currently, the information about this group is anecdotal.
- Establish STI sentinel surveillance at sexual health clinics.
- Consider establishment of a statewide syphilis register to enable better management of chronic syphilis.
- Consider enhanced surveillance for chlamydia.
- Establish a secure patient-focussed STI patient database to enhance patient management in hospital clinics and by general practitioners with adequate support and funding by the Department of Health.
- Actively improve Aboriginal identification data.

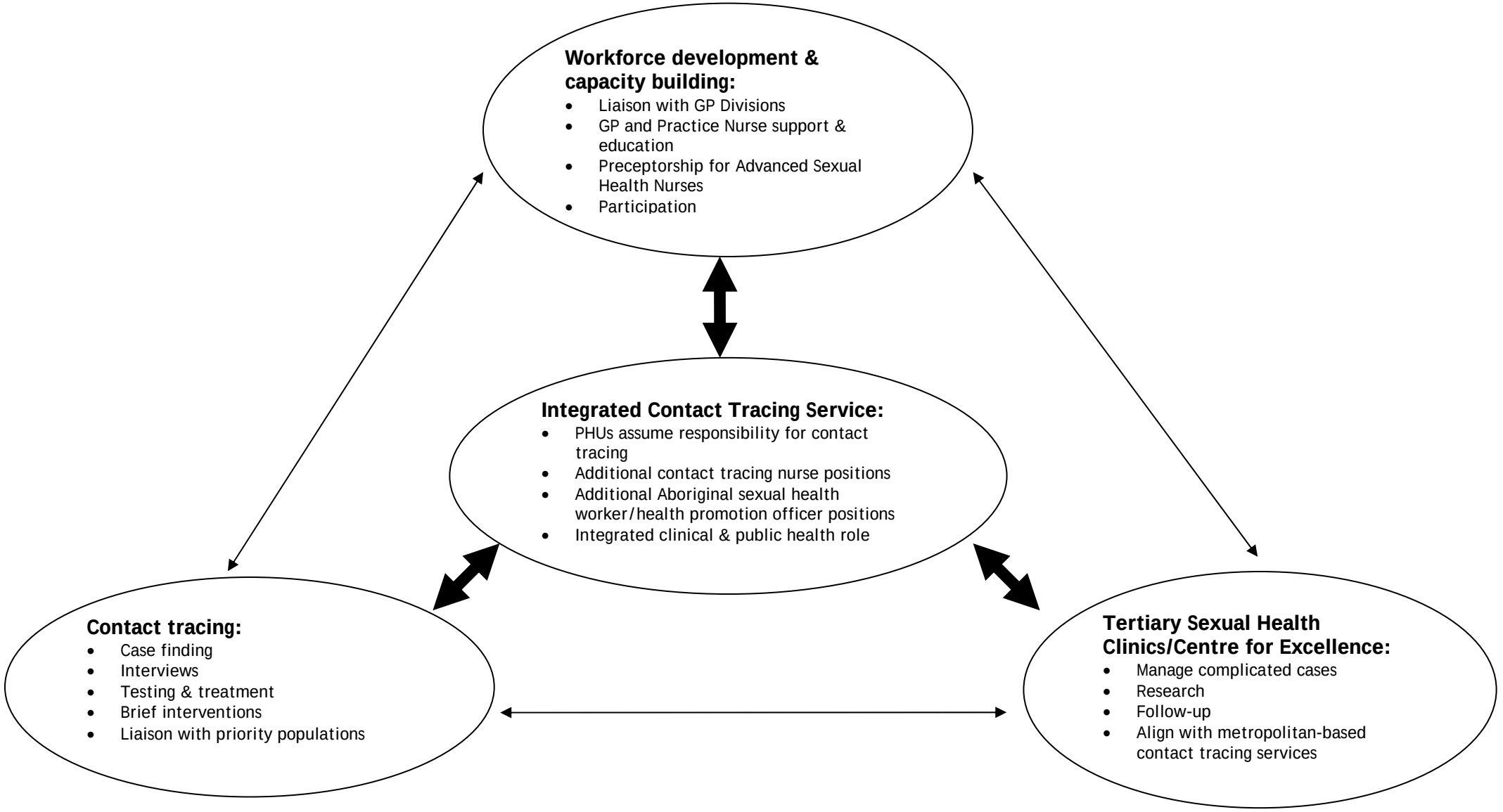
Expand contact tracing services in the metropolitan area and throughout WA

Expansion of the current contact tracing services (see Figure 4) has been identified as a strategic priority by the WA Committee on HIV/AIDS and STIs (WACHAS).

- Establish well resourced Metropolitan-based contact tracing teams under the auspices of PHUs, which are aligned with tertiary clinical services and supported by policy guidelines and training

- Increase the number of GPs who identify contact tracing as part of their role and who can provide contact tracing.
- Increase the number of practice nurses who can assist GPs with contact tracing.
- Embed contact tracing within the sexual health practice of all STI endemic regions.
- Facilitate the use of Aboriginal sexual health staff to coordinate contact tracing for Aboriginal clients.
- Expand outreach services in rural and remote areas to include additional staff for contact tracing as there are few or no staff employed as general community health nurses who are able to carry out contact tracing in the community. This role is usually performed from the PHU.
- Enable better integration of prison health services and contact tracing services.

Figure 4: Model for Expansion of Contact Tracing Services in the Metropolitan Area



4.3 Disease Management and Tertiary Prevention

With the continued rise in STI notifications there will be an increasing demand for appropriate and efficient sexual heath clinical services in the future. Current services in WA are under-resourced for the population size compared with other parts of Australia and the United Kingdom.

Enhance metropolitan-based tertiary sexual health clinical services

- In the short-term, continue to provide a tertiary clinical service in both the North and South Metropolitan areas. The roles of the services will be to:
  - Provide clinical management of complex cases;
  - Provide a primary care ambulatory service;
  - Provide clinics at metropolitan outreach services;
  - Address succession planning by providing specialist training opportunities;
  - Support and advise primary health care providers throughout WA;
  - Drive research and academic teaching; and
  - Provide workforce updates and on site supervised training placements for GPs, medical students and registered nurses.
- In the long-term, replace the two clinic model with an expanded service, a Centre for Excellence in Sexual Health based at one of the major tertiary hospitals. Combining the two services would produce a critical mass of expertise and resources. The roles of the Centre will be similar to the services above.
- Consider having inner city clinics combining sexual health, HIV and hepatitis services.
- Regardless of the actual model, ensure that clinical services have adequate physical space and resources to meet the demand.

Ensure that clinical services are more accessible and meet the needs of clients

- Maintain and as required expand outreach sexual health clinics for at risk groups; e.g. at sex on premises venues (SOPVs), Magenta and the WA Substance Users' Association.
- Establish additional outreach/"shop-front" clinics in outer metropolitan areas of high growth and high need, and where possible co-locate clinics with other youth-friendly services. These should be GP-supported, advanced sexual health nurse-managed/nurse practitioner-run clinics targeting at-risk populations (e.g. youth, Aboriginal people, MSM) and providing prevention/education and testing.
- Ensure that mainstream services are confidential, friendly, culturally safe and accessible to Aboriginal people, people with disabilities, and people from CALD backgrounds.
- Improve integration of prison health services and clinical services.
- Where possible, provide services in attractive surroundings, which are welcoming and have a non-clinical atmosphere. Make education materials and other resources available for patients.

- Ensure that sufficient parking and easy access by public transport are available.
- Accommodate clients by providing walk-in appointments and flexible appointment times, e.g. after hours including some evenings and where possible, Saturday morning.

Expand rural and remote clinical services

- Expand PHU clinical services and other clinical services in rural and remote areas based on need, accessibility, and staff availability.
- Establish STI teams consisting of a medical officer, STI specialist nurse and a health promotion officer to assist in providing services throughout rural areas. STI teams would address issues relating to the accessibility of STI screening and treatment, such as confidentiality, access to bulk billing, contact tracing, and lack of GPs.
- Increase support for practice nurses to provide additional services and support for GPs through their positions within GP practices and major regional centres.
- Continue to support the role of ACCHS and Aboriginal health workers in the delivery of clinical services
- Investigate the feasibility of establishing sexual health clinics within rural and remote hospitals. It may be possible to operate a one or two day per week sexual health clinic staffed by STI specialist nurses within hospitals to provide STI screening and treatment.
- Use Telehealth for the management of complex cases by local rural staff in partnership with tertiary centres.

Utilise information and communication technology to improve service delivery

Establish a secure patient-focussed STI patient database to enhance patient management in hospital clinics and by GPs with adequate support and funding by the Department of Health. The database should have built-in capacity for continuous service evaluation with measurement and reporting of key agreed clinical quality indicators.

Support improved research into sexual health issues

4.4 Workforce Development and Training

A new STI Model of Care must address workforce development and training needs and ensure that there are sufficient and experienced health professionals working in sexual health to cope with an increasing WA population and increasing numbers of STI cases.

In 2006, the Sexual Health and Blood-borne Virus Program (SHBBVP) conducted a *Review of Sexual Health, HIV/AIDS and Hepatitis C Workforce Training Needs*. The key recommendations derived from this review are that the SHBBVP:

- Take a coordinated approach to the promotion and provision of sexual health and blood-borne virus (BBV) training and education;
- Continue to provide funding for a range of workforce training and development opportunities;

- Expand the training opportunities available to staff, with a focus on regional and practice nurses, teachers, those in regional areas and those working with marginalised groups (particularly Aboriginal people and people with disabilities;
- Explore and expand on the use of flexible training and education modalities (such as video conferencing, online materials, self-directed learning packages, workshops, forums and mentoring); and
- Develop mechanisms to provide management with the capacity to encourage and support staff to attend workforce development training and education opportunities.

Consideration also needs to be given to:

- ways to increase expertise in the field of sexual health and BBVs; and
- succession planning by ensuring that sexual health training is incorporated into workforce development and business continuity planning.

Continue to provide opportunities for primary health care providers to undertake sexual health/STI training

- Provide ongoing sexual health training workshops for GPs, Public Health Physicians and trainees.
- Implement GP practice nurse training programs throughout WA.
- Provide clinical placements for GPs, Public Health Physicians and trainees at sexual health services.
- Provide training opportunities for GPs, practice nurses and nurse practitioners at all clinical services.
- Provide training opportunities for Aboriginal health workers.
- Provide sexual health information refresher days for primary health care providers.
- Ensure that regionally-based sexual health education programs are provided to meet the needs of rural and remote primary health care providers.
- All training programs should address effective communication methods.

Enhance medical student training

- Increase the amount of time allocated to educating medical students on sexual health issues.

Ensure that the *Poisons Act 1964* is amended as a matter of urgency to enable the creation of Advanced Sexual Health Nurse positions in WA

Advanced Sexual Health Nurses would play a key role in the prevention, testing and treatment of STIs in WA. Changes to the *Poisons Act 1964,* which have already been drafted and are due to be considered by Parliament, would provide the necessary legislative basis to allow Advanced Sexual Health Nurses to supply drugs under protocols and hence practice in WA.

- Ensure creation of Advanced Sexual Health Nurse positions in the metropolitan area (e.g. to manage outreach services) and throughout WA
- Support the implementation of proposed changes to the Poisons Act 1964 to enable Advanced Sexual Health Nurses to practice in WA.

Establish training and provide ongoing support for Advanced Sexual Health Nurse positions in WA

Access to clinical services can be improved by expanding the role of appropriately trained registered nurses. Accredited training is offered in Queensland. On completion of the competency based course, the registered nurse is able to take a sexual history, complete an examination and initiate treatment based on approved clinical guidelines and protocols.

The course could be recognised and articulated with advanced sexual health nurse training currently offered within WA. In collaboration with the WA Nurses Board and Australian Medical Association (WA), the Department of Health could support the expanded role of registered nurses in sexual and reproductive health by establishing positions and a career structure within area health services.

Establishment of training would have a beneficial flow-on within WA and support current practice of rural and remote nurses. Endorsement of the expanded role for nurses would have benefits within the metropolitan area for practice nurses, non-government health services and tertiary centres. It would also allow a tertiary centre of excellence to provide nurse-managed outreach services within the metropolitan area.

- Establish and provide ongoing training and workforce development opportunities for Advanced Sexual Health Nurses.

Increase the number of positions and training opportunities for clinicians specialising in sexual health medicine

- Increase the number of training positions available for sexual health physician registrars and other trainees in sexual health.
- Increase the number of sexual health physicians to meet the demands of an increasing population.
- Increase the number of nurse practitioners specialising in sexual health.

As HIV medicine has evolved, new care models are developing and high resolution anoscopy, to detect high-grade anal intraepithelial lesions, is developing and has been taken up by the tertiary sexual health services. This work is highly skilled and requires considerable training. There are currently not enough skilled specialists to deal with the workload posed by this newly emerging area of work.

- Increase the number of specialists trained in high resolution anoscopy.

An increase in specialist clinical staff will in turn increase the capacity for educating and training peers and students.

Increase the number of sexual health promotion officers throughout WA

- Provide additional sexual health project officer positions in regional areas.
- Create more Aboriginal sexual health promotion officers by providing structured training opportunities (e.g. on the job training with block release, supported by Perth-based experts).

Continue to update and disseminate best practice guidelines for primary health care providers involved with the management of STIs

- Evaluate the current Guidelines for the Management of Sexually Transmitted Infections and continue to provide updated evidence-based STI guidelines for primary health care providers in a format that is accessible and user friendly.

For workforce development and training for teachers see section 4.1 "Continue to develop and provide quality school-based health/life skills education and prevention".

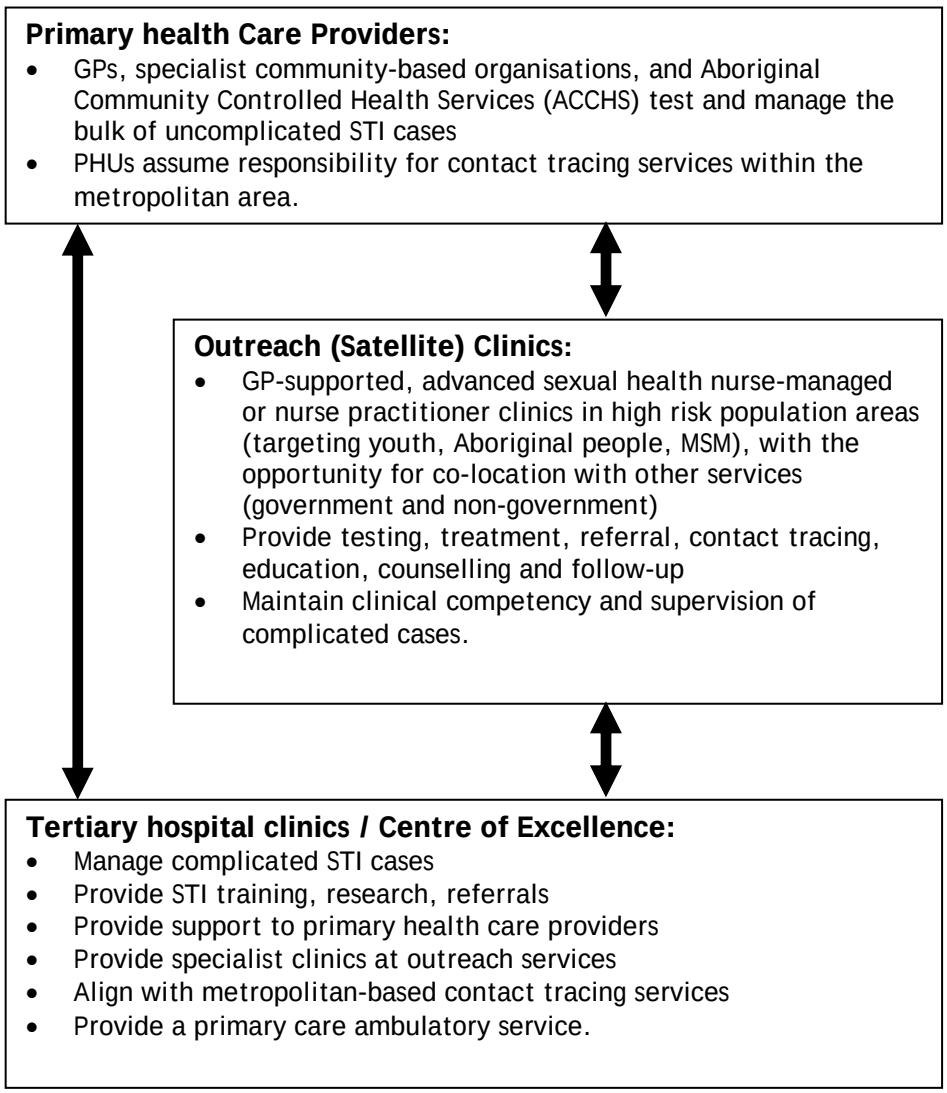
4.5 Models

4.5.1 Integrated Metropolitan Sexual Health Clinical Services Delivery Model

A three-tiered integrated clinical service model across the continuum of care is proposed (Figure 5). The strategic priorities of targeting risk groups, workforce development, contact tracing and outreach satellite clinics will be the driving force of all prevention, primary care and tertiary care activities. However, the model proposed is mindful of the need for vertical and horizontal integration of these activities due to the special needs of the priority populations.

Sexual health needs should also be integrated with reproductive health, Aboriginal services and youth services to provide holistic health care. Improved coordination and integration of specialised clinical services with non-government organisations, PHUs and GPs is needed, especially in the areas of education and training of health professionals and community, and contact tracing.

Figure 5. Diagram of the Proposed Three-Tiered Metropolitan Clinical Service Model



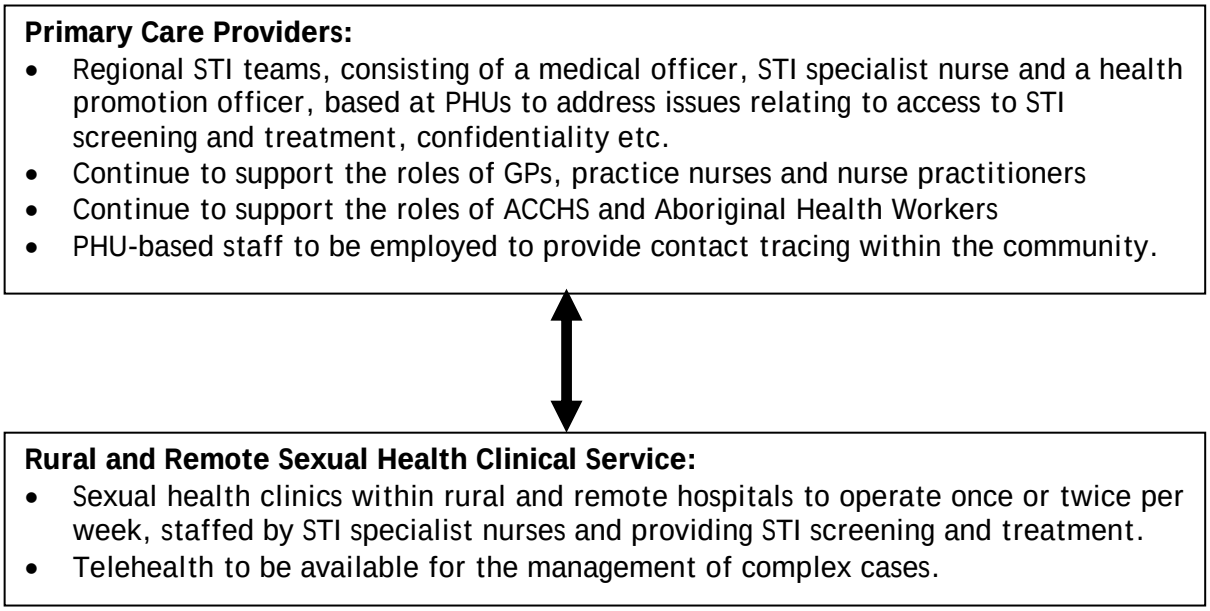
4.5.2 Rural and Remote Sexual Health Clinical Services Delivery Model

A model is required to better support clients and health care providers in rural and remote areas.

Regional STI teams and STI programs

- Regional Directors and PHUs to recognise that Regional STI teams and programs are a priority and must be resourced.
- Expand Regional STI programs to the Midwest–Murchison-Gascoyne Region and to other areas as indicated (based upon epidemiological data).

Figure 6. Diagram of the Proposed Regional Clinical Service Model



4.6 Evaluation

Suggested key performance indicators to assess the effectiveness of the proposed STI Model of Care are:

- Number of GPs and practice nurses undertaking sexual health training
- Number of GPs taking up training placements at sexual health services
- Number of Advanced Sexual Health Nurses trained in WA
- Number of sexual health physicians and trainees
- Number of specialists in high resolution anoscopy
- Number of Aboriginal health workers trained in sexual health
- Number of nurse practitioners working in sexual health
- Number of contact tracers and level of service provided
- Number of GPs undertaking contact tracing
- Number of index cases identified and number of named contacts
- Average follow-up time for index cases and contacts
- Number of STI tests carried out
- Number of STI notifications per year by age, gender, ethnicity, region
- STI morbidity (PID, infertility data)

- Number of outreach services established
- Number of clinical services in rural and remote areas
- Number of social marketing campaigns etc
- Number of teacher inservices conducted
- Number of regional STI teams established.

5. KEY RECOMMENDATIONS

Primary Prevention

- Continue and enhance state-wide and targeted social marketing of healthy sexual behaviour
- Continue legislative and policy reform to ensure an enabling environment
- Continue to develop and provide quality school-based health/life skills education and prevention
- Continue to develop and provide out of school health/life skills education and prevention programs and resilience enhancement programs
- Invest in existing, new and emerging prevention and education programs
- Enhance education and prevention strategies for the Aboriginal community
- Enhance education and prevention strategies for men who have sex with men.

Secondary Prevention and Early Detection

- Improve early detection and intervention, particularly for high-risk populations
- Remove barriers to testing
- Continue and enhance disease notification and surveillance systems
- Expand contact tracing services in the metropolitan area and throughout WA.

Disease Management and Tertiary Prevention

- Enhance metropolitan-based tertiary sexual health clinical services
- Ensure that clinical services are more accessible and meet the needs of clients
- Expand rural and remote clinical services
- Utilise information and communication technology to improve service delivery
- Support improved research into sexual health issues.

Workforce Development and Training

- Continue to provide opportunities for primary health care providers to undertake sexual health/STI training
- Enhance medical student training
- Ensure that the Poisons Act 1964 is amended as a matter of urgency to enable the creation of Advanced Sexual Health Nurse positions in WA

- Establish training and provide ongoing support for Advanced Sexual Health Nurse positions in WA
- Increase the number of positions and training opportunities for clinicians specialising in sexual health medicine
- Increase the number of sexual health promotion officers throughout WA
- Continue to update and disseminate best practice guidelines for primary health care providers involved with the management of STIs.

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NPHP – see National Public Health Partnership

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ACRONYMS

ACCHS	Aboriginal Community Controlled Health Services
ACSHM	Australasian Chapter of Sexual Health Medicine
AHW	Aboriginal Health Worker
AIDS	Acquired Immune Deficiency Syndrome
ASHM	Australasian Society for HIV Medicine
ASR	Age-Standardised Rate
BBV	Blood-borne Virus
CALD	Culturally and Linguistically Diverse
CDCD	Communicable Disease Control Directorate
DCD	Department of Community Development
DGP	Division of General Practice
DoCS	Department of Corrective Services
DoET	Department of Education and Training
DoH	Department of Health
DoHA	Department of Health and Ageing
FH	Fremantle Hospital
FPWA	FPWA Sexual Health Services
GP	General Practitioner
HIV	Human Immuno-deficiency Virus
MSM	Men who have Sex with Men
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NGO	Non-government organisation (also referred to as community-based organisation)
NNDSS	National Notifiable Diseases Surveillance System
NPHP	National Public Health Partnership
PHU	Population Health Unit
PID	Pelvic Inflammatory Disease
RPH	Royal Perth Hospital
secca	Sexuality Education Counselling and Consultancy Agency
SHBBVP	Sexual Health and Blood-borne Virus Program
SOPV	Sex on Premises Venue
STI	Sexually Transmitted Infection
UWA	University of Western Australia
WA	Western Australia/Western Australian
WAAC	Western Australian AIDS Council Inc.
WACHAS	Western Australian Committee on HIV/AIDS and Sexually Transmitted Infections
WACHS	Western Australian Country Health Service
WAGPN	WA General Practice Network
WAISHAC	Western Australian Indigenous Sexual Health Advisory Committee
WANIDD	Western Australian Notifiable Infectious Diseases Database
WASUA	Western Australian Substance Users' Association
WHO	World Health Organization

APPENDICES

Appendix 1: Infections and Immunology Health Network Executive Advisory Group

The Model of Care was endorsed by the Infections and Immunology Health Network Executive Advisory Group which comprises:

Dr James Flexman	Network Co-Lead; Consultant Clinical Microbiologist, PathWest and Royal Perth Hospital; Clinical Associate Professor, Microbiology and Immunology, UWA
Dr Lewis Marshall	Network Co-Lead; Sexual Health Physician, Fremantle Hospital; Clinical Senior Lecturer, Sexual Health Medicine, UWA
Dr Wendy Cheng	Head of Liver Service, Royal Perth Hospital
Ms Crystal Connelly	Clinical Nurse and Clinical Trial Coordinator, Royal Perth Hospital
Dr Charles Douglas	Public Health Physician, WA Country Health Service, Goldfields
Mr Michael Doyle	Hepatitis C Project Officer, Aboriginal Health Council of Western Australia
Prof Martyn French	Head of Clinical Service, Clinical Immunology, Royal Perth Hospital; Consultant Immunologist, PathWest Immunology, Royal Perth Hospital; Clinical Professor, School of Surgery and Pathology, UWA
Ms Michele Kosky	Executive Director, Health Consumers' Council
Ms Trish Langdon	Executive Director, WA AIDS Council
Dr Richard Loh	Head of Department, Clinical Immunology, Princess Margaret Hospital; Clinical Associate Professor, Centre for Child Health Research, UWA
Dr David Speers	Head of Infectious Disease Service, Sir Charles Gairdner Hospital; Clinical Microbiologist, PathWest; Clinical Senior Lecturer, Microbiology and Infectious Diseases, UWA
Dr Paul Van Buynder	Director, Communicable Disease Control Directorate, Department of Health.

Appendix 2: Model of Care Matrices

PRIMARY PREVENTION (refer to page 14 for more detail)

	POLICY LEVEL	ORGANISATIONAL LEVEL	INDIVIDUAL LEVEL
WHAT	Continue to promote and monitor the primary prevention actions outlined in the STI Action Plan 2006-2008 and subsequent Plans Promote an enabling environment through supportive legislation and the development of policy, which addresses STI prevention education and health promotion, e.g. STI antenatal testing, sex industry code of practice, harm reduction strategies (provision of condoms and other health hardware, hepatitis A and B vaccines)	Continue and enhance community and targeted social marketing Continue to develop and provide quality school-based health education and prevention Continue to develop and provide out of school health education and prevention programs Invest in existing, new and emerging prevention and education programs Provide appropriate education and prevention strategies for the Aboriginal community	Deliver primary prevention strategies to priority target groups and other groups within the wider community: • Campaigns • Resource production • Peer-based education • School-based and out-of-school health education • Professional education • Condom availability
WHO	Department of Health – CDCD WACHAS Government of Western Australia	SHBBVP Government agencies, e.g. DoET, Department of Corrective Services, DoH) PHUs NGOs – WAAC, WASUA, secca, FPWA GPs Professional training providers, e.g. ACSHM	SHBBVP Government agencies PHUs NGOs - WAAC, WASUA, secca, FPWA, ACCHS GPs Professional training providers, e.g. ACSHM
WHERE	State-wide	Within general community NGOs/Community-based organisations Tertiary services/Centre of Excellence	Community General practice Outreach clinics Community based organisations Schools

SECONDARY PREVENTION AND EARLY DETECTION (Refer to page 15 for more detail)

	POLICY LEVEL	ORGANISATIONAL LEVEL	INDIVIDUAL LEVEL
WHAT	Continue to promote and monitor the secondary prevention and early detection actions outlined in the STI Action Plan 2006-2008 and subsequent Plans Continue to develop policy that addresses STI secondary prevention and early detection Endorse and implement recommendations of the metropolitan sexual health review Endorse and implement the business case for expansion of contact tracing services within the metropolitan area Remove barriers to testing	Improve early detection and intervention, particularly for high risk groups Continue and enhance disease notification and surveillance systems Expand contact tracing services in the metropolitan area and throughout WA	Deliver secondary prevention and early detection programs to high-risk groups and other groups within the wider community: • Continue to promote and provide accessible, culturally appropriate testing and treatment services ▪ Provide GP supported, advanced sexual health nurse managed outreach services co-located with other services • Provide contact tracing services
WHO	Department of Health – CDCD Department of Corrective Services WACHAS, Royal Australian and New Zealand College of Obstetricians and Gynaecologists Metropolitan Area Health Services	Government agencies NGOs – FPWA, WAAC PHUs WAGP Network Professional training providers, e.g. ACSHM Area Health Services	Government agencies PHUs NGOs – SOPV clinics, Magenta clinic, WASUA Clinical services GPs and practice nurses Nurse practitioners Advanced Sexual Health Nurses PathWest
WHERE	Statewide	Community Tertiary clinical services/Centre of Excellence	Community Outreach clinics in outer metropolitan areas Clinical services located within venues (SOPV, Magenta) accessed by at risk groups General practices

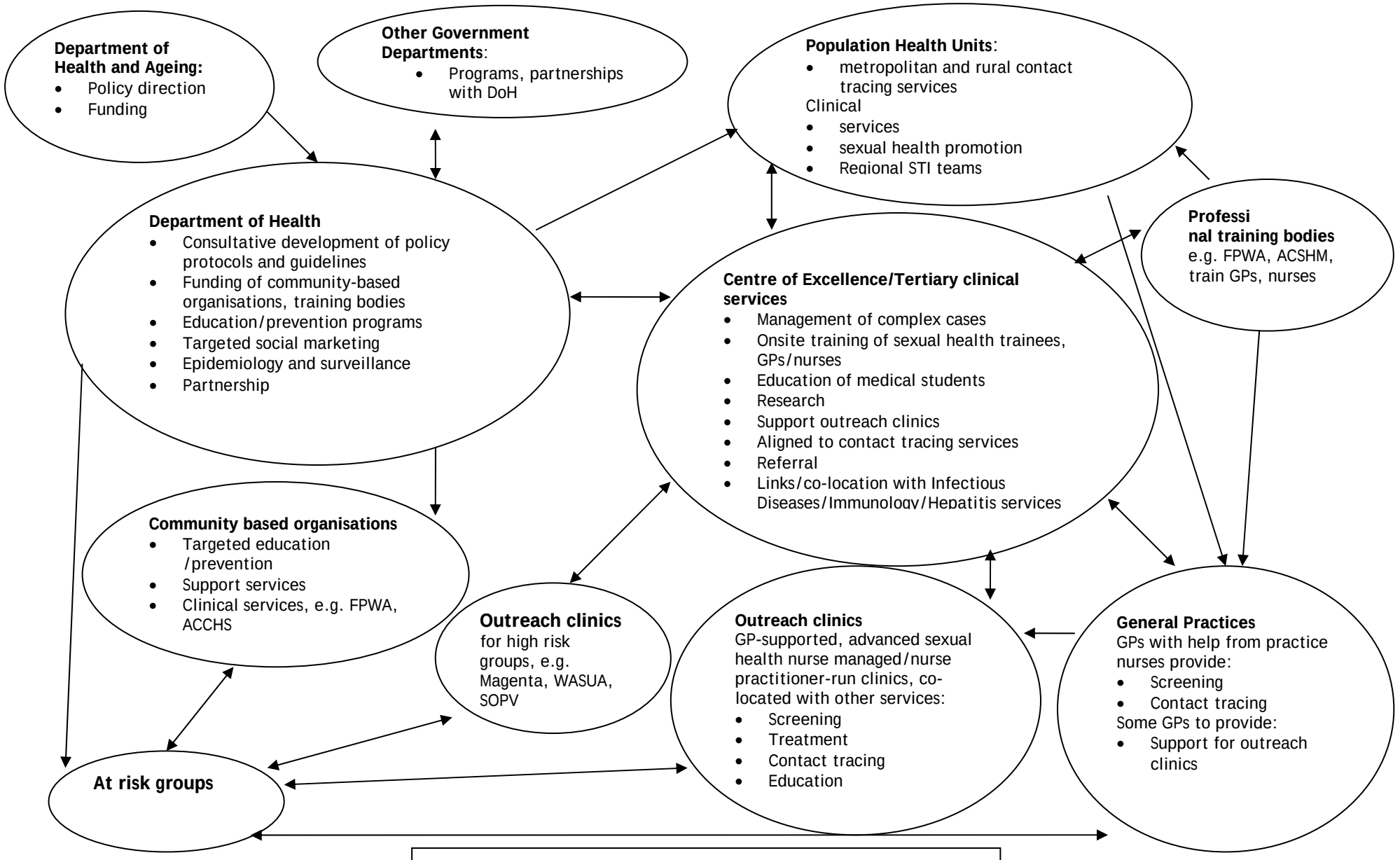
DISEASE MANAGEMENT AND TERTIARY PREVENTION (Refer to page 19 for more detail)

	POLICY LEVEL	ORGANISATIONAL LEVEL	INDIVIDUAL LEVEL
WHAT	Continue to promote and monitor the disease management and tertiary prevention actions outlined in the STI Action Plan 2006-2008 and subsequent Plans Produce and/or update evidence-based clinical guidelines Continue to develop and support an integrated system of care Provide policy support for regional and local planning and integration of services	Enhance metropolitan-based tertiary sexual health clinical services Ensure that clinical services are more accessible and meet the needs of clients Expand rural and remote clinical services Utilise information and communication technology to improve service delivery Support improved research into sexual health issues	Provide care and support to people with STIs Improve access to care for people with STIs
WHO	Department of Health – CDCD, PHUs WACHAS	Government agencies NGOs Professional training bodies, e.g. ACSHM, FPWA RPH and FH sexual health services Area Health Services WAGP Network Telehealth	Government agencies Tertiary services/Centre of Excellence and other specialist clinical Services PHUs NGOs – FPWA GPs Telehealth
WHERE	Statewide	Community Tertiary clinical services/Centre of Excellence Rural and remote areas	Community

WORKFORCE DEVELOPMENT AND TRAINING (refer to page 20 for more detail)

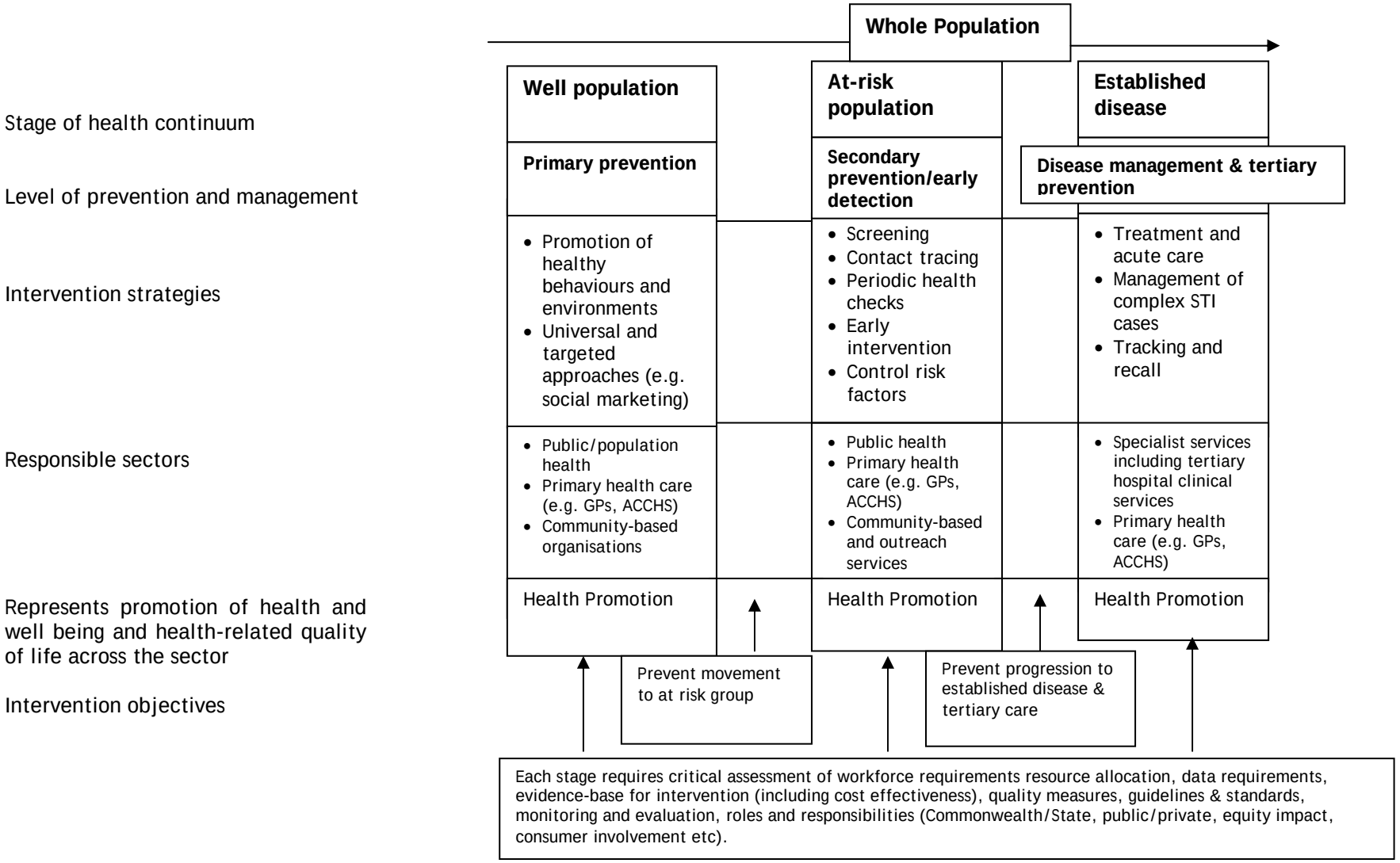
	POLICY LEVEL	ORGANISATIONAL LEVEL	INDIVIDUAL LEVEL
WHAT	Continue to promote and monitor the implementation of the STI Action Plan 2006-2008 and subsequent Plans Continue to update and disseminate best practice guidelines for primary health care providers involved with the management of STIs Ensure that the *Poisons Act 1964* is amended as a matter of urgency to enable the creation of Advanced Sexual Health Nurse positions in WA	Continue to provide opportunities for primary care providers to undertake sexual health/STI training Enhance medical student training Establish training and provide ongoing support for Advanced Sexual Health Nurse positions in WA Increase the number of positions and training opportunities for clinicians specialising in sexual health medicine Increase the number of Sexual Health Promotion Officers throughout WA	Undertake professional development in sexual health STI clinical training Continue to put evidence-based clinical guidelines into practice.
WHO	Department of Health – CDCD WACHAS	Government agencies Area Health Services NGOs PHUS WAGP Network Sexual Health Physicians University medical schools Professional training providers, e.g. ACSHM	Government agencies PHUs NGOs GPs and other primary health care providers
WHERE	Statewide	Community Outreach clinics Tertiary clinical services/Centre of Excellence Tertiary education institutions	Community Outreach clinics General practice

Appendix 3: Diagrammatic Models of Care



STI MODEL OF CARE

COMPREHENSIVE MODEL OF STI CARE (adapted from National Public Health Partnership 2006. *The language of prevention*. Melbourne: NPHP; Ref: Preventing Chronic Disease: A Strategic Framework plus input from Infections and Immunology Network.).



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