ACT Government Health

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Introduction

A message from the A/g Chief Health Officer, Dr Andrew Pengilley

This edition of the Population Health Bulletin focuses on some of the issues raised by Blood borne Viruses and Sexually Transmissible Infections (STIs) in the ACT. These conditions remain an important target of public health programs. Although effective treatments have been developed, supporting communities to prevent infections and provide access to treatment requires attention to the changing social context in which they occur. Australia recently hosted the world AIDS 2014 conference at which the need to re-invigorate society's awareness of HIV 30 years after the famous 'Grim Reaper' ad campaign was highlighted and a new national strategy was endorsed.

A common theme in the different conditions discussed in articles in this edition is the need for effective testing and surveillance to drive an informed response. The ACT has seen a worrying increase in new HIV diagnoses over the past two years and one element of this may be people being unaware of their risk. Similarly, many of the approximately half a million Australians living with Hepatitis B or C do not know that they carry these viruses. Without that vital information these people lose the opportunity to access treatment, information, support and to take measures to protect others. Finding ways to effectively communicate the need for testing to people at risk of these conditions will be major challenge in reducing rates of these illnesses.

Communicable diseases themselves continue to change. Antimicrobial resistance, an issue of broad concern in medicine, is having an impact on the capacity to treat some common sexually transmitted infections like Gonorrhoea. Vaccination against Human Papilloma Virus (HPV) infection, in which Australia was a world leader, has changed the kind of pre-cancerous changes being found by screening so much that recommendations about who should be screened and how often are being revisited.

The complexity of these conditions indicate the need for a 'team' approach which includes the clinical, population health and community sectors for the potential to improve health through better prevention and treatment to be achieved.

While the articles in this issue have highlighted HIV, Hepatitis, Gonorrhoea and Human Papilloma Virus, other important diseases like Chlamydia and Syphilis continue to impact individuals and communities. This issue also highlights the work done by ACT Health and other Non Governmental organisations to address STIs and other blood borne viruses in the ACT population.

Thanks to the guest editor, Dr Ranil Appuhamy, Laura McNeill for her editorial work and to all those who contributed articles and assisted in the editorial process.

Dr Andrew Pengilley, Editor

August 2014

Breaking News

2014 Chief Health Officer's Report

The 2014 Chief Health Officer's Report (the Report) was tabled in the ACT Legislative Assembly on 7 August 2014. This is the eighth edition of the Report and covers the period from July 2010 to the end of June 2012.

The Report provides a comprehensive look at the health status of ACT residents, including population measures of lifestyle and environmental risk factors, trends in specific diseases and measures of health service usage.

Data presented in the Report have been analysed from a range of sources including mortality and hospital records, notifiable disease data, screening program and immunisation registers, national census and local survey data, published statistical reports and journal articles.

The Report shows the ACT population enjoys good overall health and the highest life expectancy of all Australian jurisdictions. Improvements are being seen in lifestyle risk factors such as smoking, and drug and alcohol consumption in adolescents. In contrast there are still challenges in addressing the rise in obesity and associated chronic disease burden. There are also concerning trends including a decrease in safe sexual behaviour and subsequent rise in human immunodeficiency virus in men who have sex with men, an increasing rate of injuries due to cycling and falls in the elderly.

The Report is prepared by the Epidemiology Section with contributions from ACT Health, other government and non-government agencies. For the first time a useful summary report of the main results was published. Both the summary report and the full version are available on the ACT Health website: http://www.health.act.gov.au/c/health?a=&did=10062776

Articles

Acronyms

AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Treatment
BBV	Blood Borne Virus
CDC	Communicable Disease Control
CERG	Community and Expert Reference Group
CSHC	Canberra Sexual Health Centre
EIA	Enzyme immununoassay
HAV	Hepatitis A virus
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HIV	Health Immunodeficiency Virus
HPS	Health Protection Service
HPV	Human papillomvirus
IMD	Invasive meningococcal disease
LGBTI	Lesbian, gay, bisexual, transgender and intersex
MSAC	Medical Services Advisory Committee
MMR	Measles, Mumps Rubella
MSM	Men who have sex with men
NAAT	Nucleic acid amplifiction test
NCSP	National Cervical Screening Program
NESB	Non-English Speaking Background
NNDSS	National Notifiable Disease Surveillance System
NP	Nurse Practitioner
PEP	Post-exposure prophylaxis
PID	Pelvic Inflammatory Disease
PrEP	Pre-exposure prophylaxis
SEIFA	Socio-Economic Indexes for Areas
SHAHRD	Sexual Health, HIV/AIDS, Hepatitis C and Related Diseases
SHLiRP	Sexual Health, Lifestyle and Relationships Program
SHFPACT	Sexual Health and Family Planning ACT
SoNGS	Series of National Guidelines
START	Strategic Timing of Antiretroviral Treatment
STI	Sexually Transmissible/ Transmitted Infections
STIGMA	Sexually Transmissible Infections in Gay Men Action Group
UNAIDS	United Nations Programme on HIV and AIDS
WHO	World Health Organization

Articles

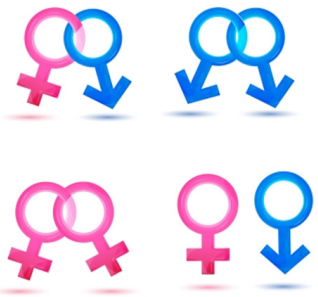
The ACT Ministerial Advisory Council on Sexual Health, HIV/AIDS, Hepatitis C and Related Diseases (SHAHRD)

Stephanie Marion-Landais, Chronic and Primary Health Policy Unit, Policy & Government Relations

The ACT Ministerial Advisory Council on Sexual Health, HIV/AIDS, Hepatitis C and Related Diseases (SHAHRD) was formed to provide advice to the ACT Minister for Health from community and consumer perspectives on issues related to health and well-being in the areas of sexual health and blood borne viruses.

Membership includes individuals selected for their experience, expertise and connection with relevant communities of interest. This approach values the participation of community organisations, affected communities and clinical communities in producing optimal health outcomes, and is based on a commitment to consultation and joint decision-making.

SHAHRD was established as a non-statutory committee in November 2000 to provide advice from consumer and community perspectives to the Minister for Health on issues related to the health and well-being of all ACT residents in the areas of sexual health and blood borne viruses. Formed by the then Minister for Health Michael Moore, SHAHRD is comprised of nine Ministerially-appointed members including a Chairperson. Several ex-officio members attend, such as the Chief Health Officer and the Executive Director of ACT Health's Policy & Government Relations Branch, as do observers from the ACT Health Justice Health Services and the Education and Training Directorate who are able to provide additional insight as necessary.



When considering issues, SHAHRD uses the World Health Organization's definition of sexual health: 'a state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.' This definition provides a framework for discussions that is grounded in internationally recognised human rights, and offers a rights-based approach to programming in sexual health.

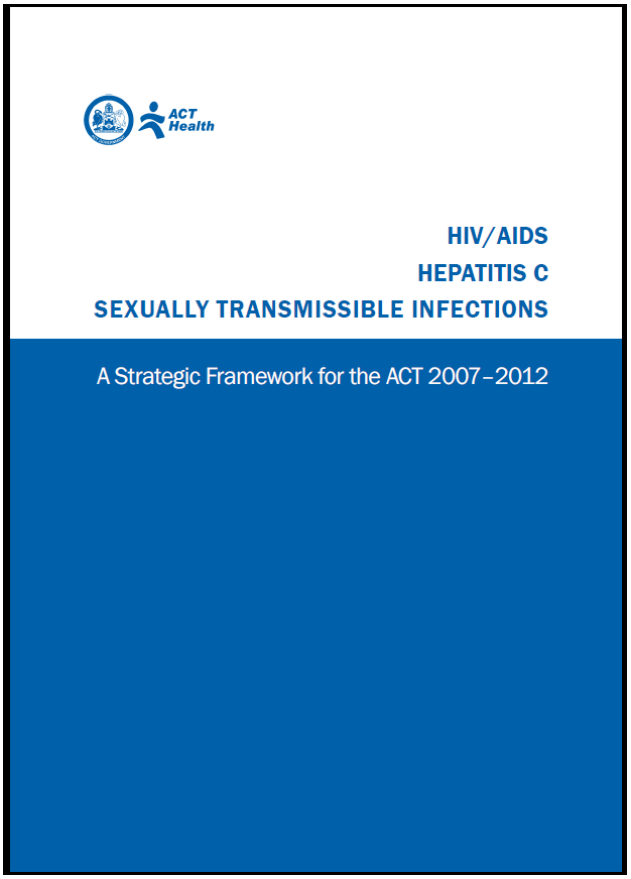
The Terms of Reference for SHAHRD are:

1. To inform itself about the epidemiology and emerging issues in the area of sexual health and blood-borne viruses; and
2. To make recommendations to the Minister for Health on strategies for minimising the transmission and harmful effects of sexually transmissible infections and blood-borne viruses with the aim of improving the health and well-being of all ACT residents in the areas of sexual health and blood-borne viruses.

SHAHRD prepares an annual work plan to identify work that may be required and to prioritise issues for action. These annual work plans are available publicly in accordance with the ACT Government's commitment to the principles of "open government". To ensure that SHAHRD is guided by strategic policy for the ACT, the various components of identified work have been linked closely to each of the seven priorities in the HIV/AIDS, Hepatitis C and Sexually Transmissible Infections: A Strategic Framework for the ACT 2007-2012, including:

1. Education and prevention;
2. An enabling environment;
3. Workforce development;
4. Surveillance and research;
5. Detection, including testing and diagnosis;
6. Clinical treatment and management; and,
7. Care and support.

A copy of the framework can be found at http://health.act.gov.au/c/health?a=dlpubpoldoc&document=915



In addition, SHAHRD actively seeks advice and reports from other experts and groups on issues relating to its work, including the views of people affected by, or living with, sexually transmissible infections and blood borne viruses, and the views of others involved within the community. SHAHRD is guided in its consultation processes by the ACT Government's Engaging Canberrans: A Guide to Community Engagement at http://www.timetotalk.act.gov.au/storage/communityengagement_FINAL.pdf.

The ACT Ministerial Advisory Council on Sexual Health, HIV/AIDS, Hepatitis C and Related Diseases *(continued)*

SHAHRD hosts policy fora twice yearly to encourage community discussion and dissemination of information between all interested parties. These policy fora provide an opportunity for individuals and groups to inform SHAHRD and ACT Health of areas of concern, emerging issues, gaps in service delivery, and other issues of interest. Some examples of SHAHRD's community participation and consultation forum topics include the following:

- SHAHRD hosted a Chlamydia Forum in May 2008, the focus of which was to provide education about the chlamydia profile of the ACT, promote the work of agencies tackling chlamydia in the ACT, and devise some tangible initiatives to help improve Chlamydia outcomes in the ACT. The forum was attended by more than 40 stakeholders including community groups, NGOs and health workers.

- An initiative of the SHAHRD Gonorrhoea and Syphilis Response Planning Group was the 'Coming Out in the Consult' forum held in February 2009. This forum was designed to examine, in the context of General Practice, the sometimes sensitive areas of sexuality, gay men's sexual health, and sexually transmissible infections. The event attracted over 65 GPs, practice nurses & professionals working in the area of sexual health from the ACT and surrounding region.

- In August 2009, SHAHRD held a stakeholder forum to inform ACT input into the five draft National Strategies for sexual health and blood borne viruses. The forum was well attended by 20 organisations in the sexual health and blood borne virus sector and related enterprises, and it developed comprehensive feedback which was fed into the initial stages of the drafting process.

- In September 2010, SHAHRD organised a stakeholder forum to canvas issues in relation to an evaluation of drug policies and services within the Alexander Maconochie Centre. The external component of the evaluation was conducted for the ACT Government by the Burnet Institute. The forum was an opportunity for key stakeholders and informants to express local views about relevant issues in the context of the Burnet Institute's evaluation process. The forum also provided an opportunity to present and discuss ideas to strengthen responses, support SHAHRD's development of evidence-based advice to the Health Minister, and provide an opportunity for networking in the sector.

- In 2012, one formal consultation forum was held with the aim of providing the ACT Minister of Health with further advice from SHAHRD on the management of blood-borne viruses in ACT custodial settings. The forum, held on 9 February 2012, brought together local organisations with a professional or advocacy interest in the issue to explore whether a consensus position could be established in relation to the broader management of blood-borne viruses in this setting. 26 representatives from 17 different organisations in the sexual health and blood-borne virus sector attended the forum. ACT Health's Population Health Division led this process with assistance and guidance from SHAHRD.

- In 2013, there were two formal consultation fora held sequentially on 22 May 2013 to encourage clinician and community discussion about "The Future of HIV Prevention in the ACT". The first forum was held in collaboration with ACT Medicare Local's HIV Clinical Care meetings, and was aimed at consulting with ACT clinicians. The second forum invited the broader community into the consultation. Researchers from the University of New South Wales presented results from the HIV Seroconversion Study and the Canberra Gay Community Periodic Survey, as well as discussing the current trial of HIV point of care testing (rapid testing) in New South Wales. Information gleaned from the fora has been used as a basis for providing further advice on potential future directions for HIV prevention in the ACT.

In addition to consultation fora, SHAHRD has conducted a range of other activities. Some examples of these activities include:

- providing policy advice in relation to the HIV/AIDS, Hepatitis C, and Sexually Transmissible Infections: A Strategy Framework for the ACT 2007-2012;
- advocating for the extension of the HIV/AIDS, Hepatitis C, and Sexually Transmissible Infections: A Strategy Framework for the ACT 2007-2012 to allow for a smoother alignment with the pending National Strategies;
- advocating for increased Chlamydia funding and support for ACT Chlamydia Week;
- engaging with the ACT Government Education and Training Directorate to better integrate the provision of sexual health and sexuality training in the ACT Government school system;
- reviewing of the *ACT Prostitution Act 1992*;
- monitoring and responding to epidemiology relating to sexual health and blood-borne viruses; and
- providing advice to the Minister for Health on the management of blood-borne viruses in ACT custodial settings.

Articles

Surveillance of Sexually Transmissible Infections (STIs) and Blood Borne Viruses (BBVs) in the ACT

Rebecca Hundy, Communicable Disease Control, Population Health Division

In the ACT, surveillance of STIs and BBVs is conducted by the Communicable Disease Control (CDC) Section at the Health Protection Service (HPS). Under the *Public Health Act 1997*, general practitioners, nurse practitioners and pathology laboratories are required to notify to CDC diagnoses of the following STIs and BBVs:

- Chlamydia
- Gonorrhoea
- Syphilis
- HIV
- Hepatitis B
- Hepatitis C

Notified cases of STIs and BBVs are followed up by Public Health Officers at CDC and the Canberra Sexual Health Centre, in line with National Guidelines.[1] This confidential follow-up includes ensuring appropriate treatment of cases, identifying contacts that may require testing and treatment, and provision of advice on preventing and avoiding the spread of infection.

Surveillance data is regularly reviewed by CDC to describe trends in the incidence of STIs and BBVs, and to identify risk factors for infection in the ACT population. This information is useful to appropriately target and inform disease prevention measures.

Chlamydia is the most commonly notified disease in the ACT, a trend that has been consistently observed over the last five years. In 2013 in the ACT, 1269 cases of Chlamydia were notified, and there have been 602 cases notified to 30 June in 2014. Gonorrhoea notifications have also been trending upwards in recent years, with 92 cases notified in 2012, 114 cases in 2013, and 77 cases notified to 30 June in 2014.

Syphilis notifications (both those of less than two years duration and those more than two years duration or unspecified) in the ACT have declined slightly in recent years, with 33, 28, and 21 cases notified in 2011, 2012 and 2013 respectively.

On average, 11.8 cases of newly acquired hepatitis C and 1.2 cases of newly acquired hepatitis B have been reported annually in the ACT from 2009 to 2013.

There were 24 notifications of HIV infection in the ACT in 2013, representing a 47% increase compared to 2012 when there were 17 cases notified. It is uncertain whether the increase in new diagnoses of HIV infections in ACT residents is attributable to an increase in the incidence of HIV in the community or an increase in testing of at-risk populations. The increase is consistent with national trends.[2]

Further surveillance data on STIs and BBVs in both the ACT and nationally can be accessed from the National Notifiable Disease Surveillance System (NNDSS) http://www9.health.gov.au/cda/source/cda-index.cfm.

HIV surveillance is conducted at a national level by the Kirby Institute, which reports data annually. This data can be found on the Kirby Institute's website http://kirby.unsw.edu.au/surveillance/annual-surveillance-report-2014-hiv-supplement.

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Canberra Sexual Health Clinic

Dr Sarah Martin, Clinical Director, Canberra Sexual Health Clinic
Ren del Rosario, Clinical Nurse Consultant, Canberra Sexual Health Clinic

The Clinic

Canberra Sexual Health Centre (CSHC) is a specialist clinic that focuses on the prevention, diagnosis and management of sexually transmissible infections (STI) and HIV. As well as nursing and medical consultations at the clinic, CSHC provides outreach STI and HIV testing to high-risk groups in non-clinical settings across the ACT. Services are free, no referral is needed and a Medicare card is not required. The provision of accessible and confidential care is consistent with a public health approach to STI prevention, early detection, prompt treatment and effective contact tracing.

CSHC, on the Canberra Hospital campus, offers daily walk-in clinics staffed by nurses, nurse practitioners and doctors complemented by booked appointments for follow-up or GP referral, and for people requiring HIV care. In 2013, CSHC also introduced M-Clinic, a once a month after hours clinic specifically designed to increase access to testing for men who have sex with men.

CSHC currently provides over 17,000 occasions of service each year, providing care to men and women of all ages. Gay and other men who have sex with men are a priority population and over 1000 attend the clinic annually. HIV care is now accessed by over 200 men and women from the ACT and surrounding region.[1]

Outreach programs

CSHC provides a range of clinical services in outreach settings to facilitate access to STI and HIV screening for groups most at risk. Many of the clinic's outreach services are provided in partnership with other organisations, including the AIDS Action Council ACT, Sexual Health and Family Planning ACT (SHFPACT) and the HIV Program of ACT Medicare Local. Outreach programs are tailored to population groups who may not readily access STI and HIV screening in mainstream clinic-based services.[2] Outreach settings include youth centres, youth residential care, sex-on-premises venues and brothels, as well as Saturday clinics at the AIDS Action Council.

Just over a decade ago, CSHC and SHFPACT piloted an innovative program of sexual health education combined with the option of individual clinician consultation in ACT Government colleges.[3] CSHC and SHFPACT continue to collaborate to provide the highly successful Sexual Health, Lifestyle and Relationships Program (SHLiRP) program on a biannual basis in each of the nine ACT Government colleges. Integral to the SHLiRP program is the concept of linking education about sexual health to the confidence to talk with clinicians and access appropriate sexual health care.

In other outreach settings, CSHC and SHFPACT have trialled innovative approaches to chlamydia screening using financial incentive models to increase participation rates.[4] Financial incentive models can produce significant cost-savings in clinician time and strengthens participation in screening amongst hard to reach priority populations.[5] This model has since been piloted with chlamydia screening in pharmacies in the ACT.[6]

Photograph: ACT Health file photograph

The CSHCTeam

The team at CSHC includes Sexual Health and Infectious Diseases specialists, sexual health nurse practitioners and nurses, and reception and administrative staff. Reception staff are often the consumer's first point of contact with the clinic and putting people at ease whilst responding to all sorts of queries is an essential skill. CSHC supervised the training of, and subsequently employed, the ACT's first nurse practitioner (NP) and first Sexual Health NP in Australia. A second nurse subsequently completed Sexual Health NP training at CSHC, and both continue to work at the clinic. NPs and nurses have clinical, teaching, leadership and research roles across the clinic's many programs, and contribute significantly to stability at the clinic as junior doctors move on to complete training.

Advances and challenges in sexual health medicine

Sexual health medicine in Australia has greatly evolved over the last thirty-five years, from the early development of venereology as a medical specialty in 1979-1981 to eventual recognition by the Australian Medical Council as a medical specialty in 2010.[7,8] The role of sexual health nurses continues to expand.[9] New technologies, most particularly the advent of nucleic acid amplification testing, have made screening and diagnosis easier for patients and clinicians.[10] In the next few years, point of care testing, including HIV rapid testing, is likely to further change approaches to screening.[11]

Across Australia and in the ACT, there are now increasing rates of HIV, gonorrhea and syphilis infection, and persistently high rates of chlamydia infection, the latter most particularly affecting young people. [12] The ongoing challenge in sexual health medicine is the provision of innovative, flexible and sustainable models of education, prevention and care to meet the needs of new generations of young people who are just becoming sexually active as well as those of other populations at ongoing risk. Skills-based, self-efficacy-based and motivation-based programs that link to broader social contexts[13] and informed, confidential and non-judgemental approaches will be central to effective sexual health education and care.

Photograph: ACT Health file photograph

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HIV in the ACT: local data and national perspectives

Dr Sarah Martin, Clinical Director, Canberra Sexual Health Clinic

The AIDS 2014 Legacy Statement (the Legacy Statement) was agreed by all Australian Health Ministers in June 2014.[1] The Legacy Statement includes a commitment from the Australian Government and the eight States and Territories to take all necessary action - in partnership with key affected communities and sector partners - to remove barriers to HIV testing, treatment, prevention, care and support, across legal, regulatory, policy, social, political and economic domains. This commitment includes working towards the virtual elimination of all new Australian HIV transmissions by 2020.

This commitment is echoed in the Seventh National HIV Strategy 2014-2017, which includes an immediate target of reducing sexual transmission of HIV by 50% by 2015.[2]

An understanding of the current patterns of HIV diagnoses is crucial if we are to work towards these goals.

New HIV diagnosis in 2013

The Kirby Institute provides detailed annual analysis of new HIV diagnoses in Australia.[3] In 2013, there were 1,236 new diagnoses of HIV in Australia – almost as many as in 2012, when the number of new Australian diagnoses was the highest since the early 1990s (Figure 1). This gradual increase in diagnoses has occurred despite impressive advances in medication options and confirmation that with effective treatment, the chances of passing on HIV are greatly reduced.[4,5] An estimated 26,800 men, women and children are now living with HIV in Australia (plausible range 24,500 to 30,900).[3]

Gay and other men who have sex with men (MSM) continue to represent over two thirds of new diagnoses in Australia and account for 88% of infections acquired within the last 12 months at the national level.[3] A further 26% of new HIV diagnoses in 2013 were attributed to heterosexual contact, almost half of which were in people from high prevalence countries or their partners.[3] HIV acquisition through injecting drug use accounts for only 2.4% of Australian diagnoses in 2013, and maternal-child transmission remains rare at 0.8%.[3]

Late diagnosis of HIV remains common: 29.6% of diagnosed cases in 2013 presented late (as defined by a CD4 count less than 350 cells/µl).[3] This is stable compared with previous years, suggestive of no substantial shift in the disease stage at which people are diagnosed despite recent initiatives to increase HIV testing.[3] Living with undiagnosed HIV means people are unable to access treatment to maintain their health, and are unable to protect their partners.

HIV diagnoses in the ACT have increased, most notably over the last 2 years (Figure 2). As a small jurisdiction, ACT data needs interpreting with some caution, but analysis by age standardized rates of infection confirms that ACT diagnoses of HIV per 100,000 adult population have increased and are now similar to neighbouring states (Figure 3). Further comparison between ACT and national data suggests a very similar distribution of diagnoses in terms of age, gender, sexual orientation, newly acquired infection and late diagnosis of infection (Table 1).

Figure 1: Newly diagnosed HIV infection by year. Source: State/ Territory health authorities

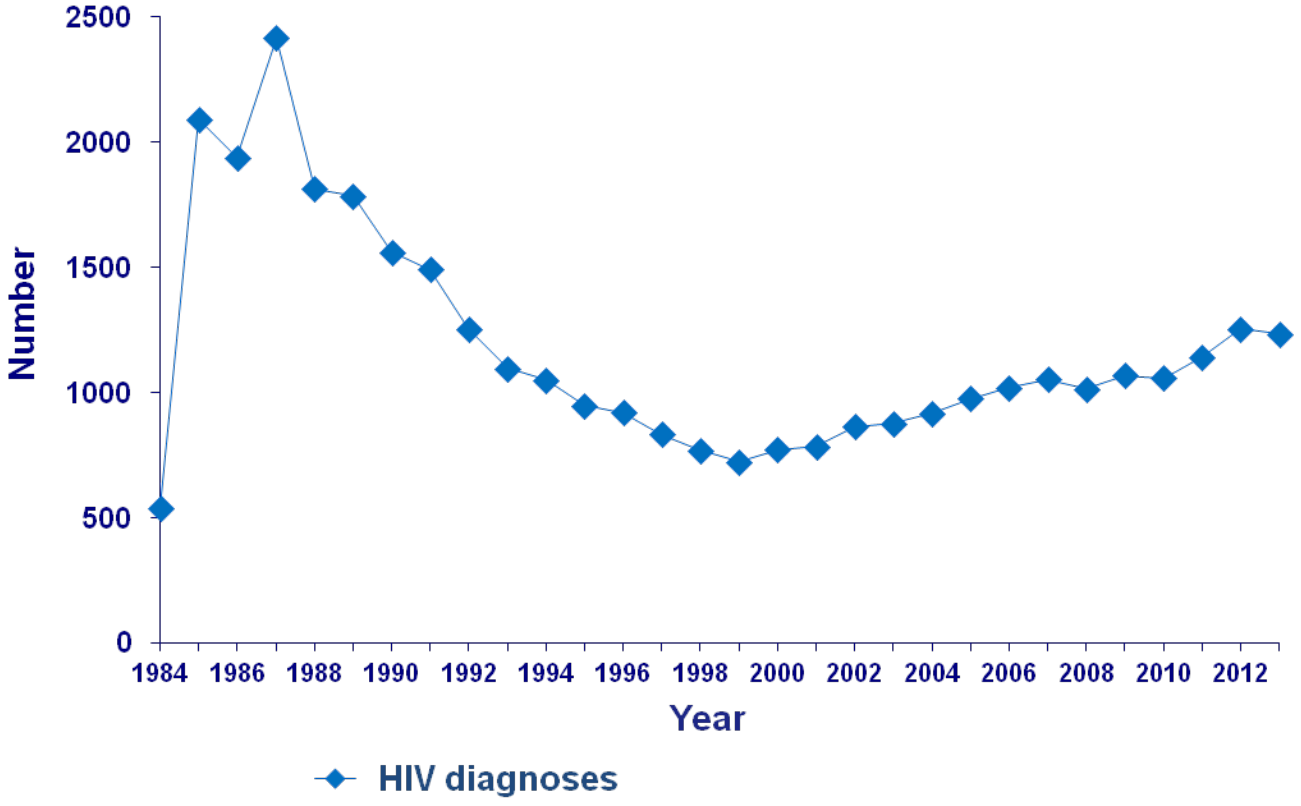


Figure 2: Newly diagnosed HIV infection in the ACT by year. Source: ACT Health notification data

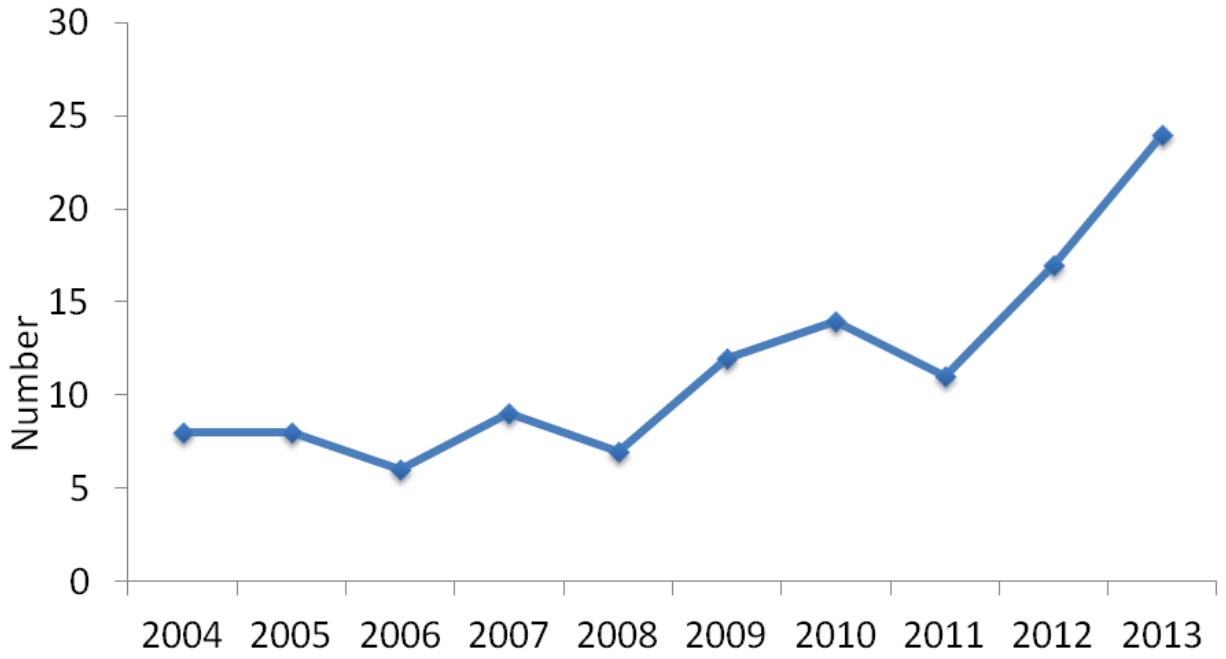
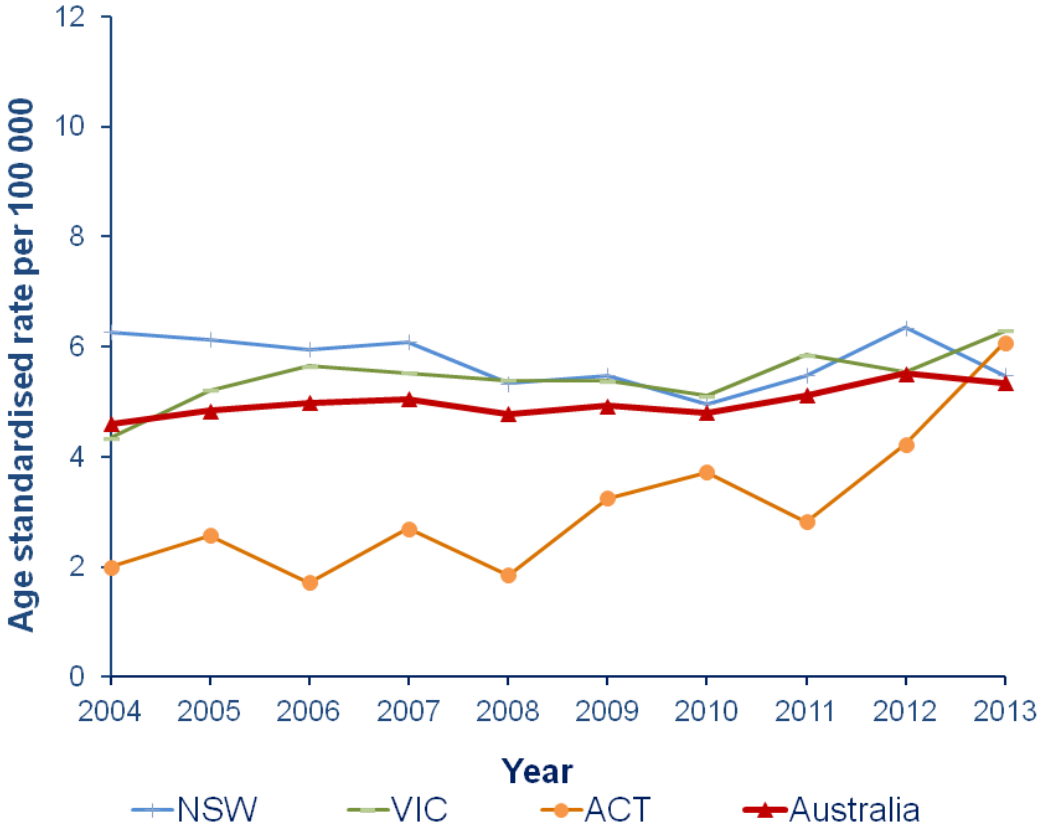


Figure 3: Newly diagnosed HIV infection, 2004-2013, by age standardised rate in Australia, ACT, VIC, NSW (adapted) Source: State/ Territory health authorities



HIV in the ACT: local data and national perspectives

New diagnoses of HIV: ACT compared to whole of Australia			
Newly diagnosed HIV	Australia 2013 n=1236	ACT 2013 n=24	ACT 2011-2013 n=52
Male	1074 (87%)	20 (83%)	45 (87%)
Female	162 (13%)	4 (17%)	7 (13%)
Age range	0-60+ years (33 <20 years)	20-72 years	19-72 years
Median age	37 years	36.5 years	36.5 years
Transmission by: Sexual contact between men	70% (4% MSM + IDU)	67%	69%
Heterosexual sex	26.6%	34%	25%
Injecting drug use	2.4%	Not reported#	Not reported#
Aboriginal and Torres Strait Islander people	26	Not reported#	Not reported#
Newly acquired	28% (88% MSM)	38% (67% MSM)	38% (86% MSM)
Late diagnosis CD4<350	29.6%	38%	31%*
Age standardised population rate	5.6 per 100,000	6.0 per 100,000	NA

Table 1: New HIV diagnosis nationally and in the ACT.

Source: Data extracted from: The Kirby Institute. HIV, viral hepatitis and sexually transmissible infections in Australia Annual Surveillance Report 2014 HIV Supplement. The Kirby Institute, UNSW, NSW 2052 and from enhanced data collected by the Surveillance Section of the ACT Health Protection Service.

***Data only available for 49 of 52 cases**

 # Data not reported due to small numbers (<5)

Why are HIV diagnoses continuing to increase?

There is no easy or conclusive answer to this important question, and the reasons are almost certainly multifactorial and include lack of testing, ongoing risk behaviours, levels of treatment uptake amongst people living with HIV and ongoing stigma and discrimination. The Seventh National HIV Strategy has six objectives which acknowledge these factors:

- reduce the incidence of HIV;
- reduce the risk behaviours associated with the transmission of HIV;
- decrease the number of people with undiagnosed HIV infection;
- increase the proportion of people living with HIV on treatments with undetectable viral load;
- improve quality of life of people living with HIV;
- eliminate the negative impact of stigma, discrimination, and legal and human rights issues on people's health.[2]

As gay and other MSM represent the majority of new diagnoses and recently acquired infections, studies that explore community norms and behaviours are useful in considering why diagnoses are increasing and in informing prevention approaches.

Gay Community Periodic Surveys present a snapshot of behaviours of participating gay and other MSM and allow analysis of trends over time. The Gay Community Periodic Survey: Canberra 2013 demonstrates that in 2013, just under a third of men with casual partners reported any unprotected anal intercourse with those partners in the six month prior to the survey.[6] This is similar to statistics from other jurisdictions with a slightly increasing trend over time. The proportion of respondents reporting an HIV test in the 12 months prior to the survey has been relatively stable since 2009 and was 67.4% in 2013.[6] Ideally this proportion would be much higher. The Australian STI and HIV Testing Guidelines for Asymptomatic MSM recommend at least annual STI screening for all MSM.[7]

Whilst it is heartening that HIV is now a treatable chronic illness, this undoubtedly makes prevention more complex. With the focus on advances in HIV treatment, in particular increasing simplicity of treatment and the possibility of a normal life expectancy, it is possible that the many complex and often difficult aspects of living with HIV are overlooked. In light of this, it may be increasingly important for prevention initiatives to encourage more discussion about the potential impacts of an HIV diagnosis.

HIV in the ACT: local data and national perspectives

Responding to increasing HIV diagnoses: lessons from NSW

ACON, New South Wales' leading health promotion organisation specialising in HIV and lesbian, gay, bisexual, transgender and intersex (LGBTI) health, designed the Ending HIV campaign, endorsed by NSW Health and launched with a major campaign across Sydney in 2013.[8] The campaign rollout was followed by the first ever NSW HIV testing Week in July 2014, which focused on reminding and encouraging people to get tested for HIV.[9]

Ending HIV is an interactive social marketing and community education and engagement campaign which incorporates communication and community mobilisation initiatives aimed at ending the transmission of HIV among gay men.[8]

Ending HIV is based on three key messages: test more, treat early and stay safe.[8]

"Test more" includes promoting access to HIV rapid test trials targeting priority populations in Sydney. Nationally, an estimated 13.7% (plausible range 11.1-21.1%) of people with HIV in Australia remain undiagnosed.[3] It is hoped that rapid tests (point of care tests when initial HIV testing is done in a clinic or outreach setting while the client waits for the result in about 20 minutes), will expand the reach and accessibility of HIV testing, with the potential to encourage people at risk to have an initial test, noting that is it also important to increase as well as the frequency of testing amongst those at ongoing risk.[10,11]

"Treat early" emphasises the reduction of risk to partners when treatment reduces HIV viral load to below detectable, as well as the individual health benefits of early treatment. Treatment benefits, including prevention, are discussed in detail in another article in this Bulletin. In practical terms, the decision to start treatment now rests between patient and clinician, as the Commonwealth Government removed CD4 count-based restrictions on treatment commencement in April 2014, allowing anyone with HIV to start treatment as soon as they feel able to.[12] Despite this, individual readiness to start treatment remains crucial, given that all currently available treatments must be taken at least once daily, with little margin for error and the risk of drug resistance for those who struggle to take daily medication.

Ongoing engagement in HIV care and staying on treatment are also important. In 2014, the Kirby Institute introduced national estimates of the proportion of people with HIV receiving treatment, concluding that 57-84% of people with diagnosed HIV are on treatment and have undetectable viral load.[3] Reasons for not being on treatment are varied, and include short time since diagnosis, apparently slow disease progression, caution about commencing treatment and difficulties staying on treatment. Current Australian research aims to identify key reasons for adherence difficulties and treatment cessation.

"Stay safe" emphasises the importance of condoms with partners of unknown status, and acknowledges and discusses other risk reduction strategies. Strategies used by gay men include condoms, serosorting, strategic positioning and withdrawal before ejaculation.[13] Other prevention strategies include prompt access to HIV post-exposure prophylaxis (PEP) for those who may have been exposed to HIV (ideally as soon as possible after exposure and no later than 72 hours post exposure).[14] Although knowledge of and uptake of PEP appears suboptimal, clinical care at the time of PEP use is an opportunity for discussion of other prevention strategies.[15] HIV pre-exposure prophylaxis (PrEP) taken continuously or episodically before possible HIV exposure can also offer significant protection to those at most risk,[16] but HIV medications are not approved for this use by the Therapeutic Goods Administration and access in Australia is limited to participants in research trials.[17]

Gay and other MSM are not the only priority populations for HIV prevention. The Seventh National HIV Strategy identifies people living with HIV, Aboriginal and Torres Strait Islander people, people from high prevalence countries and their partners, travellers and mobile workers, sex workers, people who inject drugs and people in custodial settings.[2] Prevention efforts are ideally tailored to suit these different groups, although some may be harder to target or more easily overlooked.

Health professionals can play a key role initiating testing for HIV infection, but in the absence of easily identifiable risk factors, an HIV test may not be considered until late in the assessment of chronic unexplained illness. The Seventh National HIV Strategy stresses the role of primary care in the management of HIV and other sexually transmissible infections.[2] Encouraging doctors to exclude HIV early in the investigation of non-specific symptoms may help reduce missed opportunities for HIV diagnosis and provide a more timely answer to those who do test positive.[18]

Reducing stigma and discrimination

The Melbourne Declaration of AIDS 2014 - the major conference of the International AIDS Society held in Melbourne in July this year - reminded us that prevention is not only about testing, treatment and safety.[19] It is essential to continue efforts to reduce stigma and discrimination towards people living with HIV. Reducing stigma may allow people to live more openly with HIV, reducing barriers to diagnosis and supporting engagement in care for those with HIV.

What should we be doing about increasing HIV diagnoses in the ACT?

The increase in HIV diagnoses in the ACT demands our attention. It is appropriate to focus on increasing testing, supporting engagement with care and life-long treatment, improving access to information, supporting discussion of risk and safety, and reducing stigma and discrimination. It is time to talk and plan for the next few years, bringing together the thoughts of policy makers, clinicians, community organisations and most crucially those of people living with or at risk of HIV. The ACT needs to learn from other jurisdictions, try new approaches and adapt to the needs of the community. It is time to be courageous.

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Treatment as prevention for infection with the Human Immunodeficiency Virus (HIV)

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Since its emergence in 1981, infection with HIV has become a worldwide epidemic. Treatment of HIV infected people with anti-retroviral therapy not only has individual benefits, but also an important role in preventing transmission and reducing new diagnoses of HIV infection.

Introduction

Since the emergence of the Acquired Immunodeficiency Syndrome (AIDS) in 1981, Human Immunodeficiency Virus (HIV), retrovirus that causes AIDS, has grown to a worldwide epidemic. Globally it was estimated that 35.3 (32.2-38.8) million people were living with HIV in 2012.[1] Management of the epidemic is concerned both with engaging those diagnosed with HIV in care to reduce morbidity and mortality related to HIV, and in preventing new transmissions of HIV. Treatment with Antiretroviral Treatment (ART) has been shown to be effective in minimising complications of HIV, improving healthy life expectancy, and plays a significant role in reducing new diagnoses of HIV.

The Seventh National HIV Strategy for Australia was released in 2014 and outlines bold targets to reduce the sexual transmission of HIV by 50% by 2015 and to increase treatment uptake by people with HIV to 90%.[2] The success of both these strategies centres on the notion of HIV treatment (with ART) as prevention. Voluntary and appropriate testing for HIV is integral to engaging people with HIV in treatment, care and support. Rapid, point of care testing in non-laboratory settings offers an opportunity to increase the access to testing and rate of uptake of testing in priority populations.[2]

Individual Benefits of HIV Treatment

From a population health perspective, treatment with ART plays an important role in the reduction of HIV transmission. At the individual level its primary aim is to decrease HIV associated morbidity and mortality.[3]

Despite recent advances in ART, such as simplified regimens and decreased medication side effects, the strict adherence necessary for successful treatment and concerns over possible long-term toxicities[3,4] have made the question of 'when is the optimal time to start ART' difficult to answer. Current World Health Organization (WHO) treatment guidelines prioritise commencement of ART in individuals with CD4 T-cell (CD4) counts of <350 cells/μL or with symptomatic illness attributable to HIV infection, based on evidence supporting significant reduction in HIV-related morbidity and mortality.[5,6]

There is also evidence supporting the benefits of starting treatment at CD4 counts between 350 to 500 cells/μL.[5] However, the question of whether early treatment in asymptomatic individuals with CD4 counts >500 cells/μL leads to improved long-term benefits is still unclear. With the recent changes to the WHO ART treatment guidelines, which now encourage consideration of ART at CD4 counts >500 cells/μL,[5] and changes to the Australian PBS criteria now subsidising ART for individuals with CD4 counts >500 cells/μL, this question has become increasingly important.

Untreated HIV infection progresses with worsening immunosuppression, AIDS defining illnesses and death.[3] HIV infection is also associated with increased risk of cardiovascular disease, non-AIDS defining malignancies, liver and renal disease, and neurologic complications such as cognitive impairment.[3] Research has shown that these increased risks are not only related to immunosuppression, but also HIV associated chronic inflammation, persistent viraemia and viral replication itself.[3] In light of the increasing information about the association between HIV and these non-AIDS defining illnesses, the role of ART at higher CD4 counts as part of disease prevention may prove to be increasingly important.[3,7]

There is also increasing evidence supporting the view that earlier treatment leads to immune system preservation.[3] When ART is started at lower CD4 counts, poorer immune reconstitution is seen compared to individuals where ART is started at higher CD4 counts.[8] It is well established that viral load and CD4 count provide useful prognostic information about an individual's progression to AIDS[3] as do peak viral load and nadir CD4 count.[9] Early initiation of treatment during primary HIV infection may lead to a lower viral set point and decreased decline in CD4 count[3] and may be especially beneficial in patients with high viral loads and low nadir CD4 counts who are more likely to progress rapidly.[10]

The Strategic Timing of Antiretroviral Treatment (START) study is currently being conducted to investigate the risk and benefits associated with initiation of earlier ART with the results expected to provide further evidence in deciding whether early ART will be recommended in future.[4]

Photograph: by foto76 - FreeDigitalPhotos

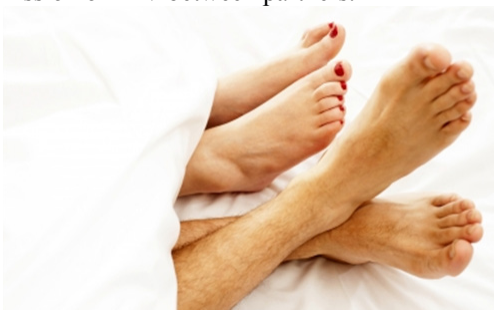
Treatment as prevention for infection with the Human Immunodeficiency Virus *(continued)*

Treatment as prevention for HIV

Early initiation of ART not only improves the health of people living with HIV and prevents progression to AIDS, it also significantly reduces new HIV infections. Mathematical modelling suggests that an approach that uses universal voluntary HIV testing and immediate access to ART is an effective strategy to reduce HIV transmission at a population level. [11]

As ART becomes easier and better tolerated there is an opportunity for sustained suppression of viral replication in individuals who are maintained on therapy. HPTN 052 is a randomized trial to evaluate the effectiveness of ART and effective primary care compared with primary care alone in the prevention of sexual transmission of HIV in sero-discordant couples. Promising results from the trial were released in 2011.

HPTN 052 included 1763 sero-discordant, heterosexual couples in Africa, Asia and North and South America.[12] This study found that with effective ART there is a 96% reduction in transmission of HIV between partners.



Photograph: by stockimages - FreeDigitalPhotos

This reduction in HIV transmission was confirmed in the Chinese National Observational Cohort study which looked at 38,862 sero-discordant heterosexual couples in China.[13] This study found a 26% relative reduction in HIV transmission. Information on treatment adherence, treatment outcomes and the availability of ongoing education and support was not available for this cohort, and these factors may contribute to the lesser magnitude of reduction in transmission.

So far published, peer-reviewed studies have been undertaken in predominantly heterosexual couples. With effective therapy, and suppression of viral load, it is likely that a reduction in transmission would similarly be observed for men who have sex with men (MSM). Interim results from the PARTNER study provide further support for the reduction in transmission of HIV with effective ART including in MSM.[14] This large study followed 1110 sero-discordant couples who engaged in condomless sex and for whom the HIV partner was established on ART. In the 894 eligible couple years of follow up (586 Heterosexual and 308 MSM) there were no phylogentically linked HIV transmissions recorded. A follow-up study enrolling gay couples will assess the replicability of these results in a larger sample of MSM.

Conclusion

ART is increasingly well tolerated. Available data suggests that initiating early therapy offers benefits to the health of the individual, including preservation of immune function, and a reduction in non-AIDS defining illnesses. In addition, effective ART and the resultant suppression of viral replication reduces new transmissions of HIV during condomless sex. Increasing the availability of testing and the uptake and maintenance on ART for people living with HIV in combination with continued efforts in prevention strategies that promote safe sex and harm reduction, offers an opportunity for us to turn the tide of the HIV epidemic and improve the health and wellbeing of those people who live with HIV today.

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Canberra Sexual Health Centre (CSHC) 'M-Clinic'

M-clinic is a once a month after hours clinic providing free, quick and convenient STI and HIV checkups for asymptomatic men who have sex with men (MSM).

Where?

Canberra Sexual Health Centre, Building 5, Canberra Hospital.

When?

First Business Monday of every month from 4.30 to 7pm.

Dates for the rest of 2014:

- Monday 1 September
- Monday 13 October (in lieu of Public Holiday 6 Oct)
- Monday 3 November
- Monday 1 December

No need to make an appointment – just drop in.

M-Clinic is part of our response to increasing HIV diagnoses in the ACT (as well as other STIs). Australian HIV and STI Testing Guidelines for Asymptomatic MSM recommend at least annual HIV and STI testing for all men who have sex with men, and more frequent testing (every 3-6 months) for men who have more than one partner or change partners http://stipu.nsw.gov.au/stigma/sti-testing-guidelines-for-msm/

M-Clinic patients can receive HIV results in less than 24 hours by phone or SMS, with full STI results available in one week.

Enquiries: CSHC 6244 2184

CSHC website: http://health.act.gov.au/sexualhealth/

STI Testing Guidelines for Men Who Have Sex with Men

Dr Belinda Jones, Sexual Health Registrar, Canberra Sexual Health Centre
Shannon Woodward, Nurse Practitioner, Canberra Sexual Health Centre

High rates of sexually transmissible infections (STIs) and a recent increase in the incidence of new HIV diagnoses in men who have sex with men (MSM)[1] has highlighted the importance of regular STI and Human Immunodeficiency Virus (HIV) screening within this group.[2] Routine screening is necessary as many STIs and primary HIV infections are asymptomatic.[2,3] Following a review of current literature, the Sexually Transmissable Infections in Gay Men Action Group (STIGMA) have updated their STI and HIV testing guidelines for asymptomatic MSM with the aim of promoting increased testing.[4]

The current STIGMA guidelines released in April 2014 recommend screening for asymptomatic MSM as follows:[4]

Site Specimen	STI	Technology	Comment
Pharyngeal swab	Chlamydia Gonorrhoea	Nucleic acid amplification test (NAAT)	Self or clinician collected
Anorectal swab	Chlamydia Gonorrhoea	NAAT	Self or clinician collected
First void urine	Chlamydia	NAAT	Alternative: self or clinician collected penile meatal swab
Serology	Syphilis	Enzyme immunoassay (EIA)	
	HIV	EIA	If HIV negative
	Hepatitis A virus (HAV)	HAV IgG EIA	Test if not vaccinated. Vaccinate if antibody negative
	Hepatitis B virus (HBV)	HBV core antibody, surface Antigen EIA	Test if not vaccinated. Vaccinate if no history or documentation of full vaccination course
	Hepatitis C virus (HCV)	HCV IgG EIA	Only in HIV-positive or history of injecting drug use

The guidelines state that routine testing of Mycoplasma genitalium, Trichomonas vaginalis, Herpes simplex virus serology and anogenital Human papillomavirus DNA testing are not recommended for asymptomatic men.[4]

The guidelines encourage all men who have had sex with another man in the past 12 months to have screening at least annually.[4] Men in higher risk categories such as those with multiple partners (>10 in a six month period), those engaging in unprotected anal sex, group sex, or using recreational drugs during sex are recommended to have screening more frequently, up to 4 times per year.[4]

The guidelines recommend that HIV positive MSM also undergo screening up to 4 times per year and that screening should be considered at presentations for viral load and T-cell count monitoring. [4]

Of note, during development of the guidelines, authors found current literature supported the use of SMS and email reminders to increase the rates of STI and HIV testing amongst MSM.[2, 5, 6] As a result, the STIGMA guidelines recommend the use of SMS and email as a method to encourage more regular testing.[4]

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Case Study

Women Living with HIV in Australia: hidden stories and unique challenges

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Dr Alexandra Tyson, Sexual Health Physician, Canberra Sexual Health Centre

Women living with HIV

Some 26,800 people live with HIV in Australia, including approximately 3,500 women. Of the 1236 new diagnoses in Australia in 2013, 13% were in women (161 new diagnoses, including one baby, six girls and eleven teenagers), a percentage that has remained relatively stable since 2004.[1]

Most women in Australia have acquired HIV from heterosexual contact, with only 4% acquiring HIV from bisexual partners, and very small numbers indicating injecting drug use as the most likely source of infection.[2] Probable transmission of HIV infection between female partners has been documented in overseas case reports but is extremely rare.[3] From 2008-2012, two-thirds of all Australian diagnoses through heterosexual contact were linked to being from or having a partner from a high HIV prevalence country; of these 60% were in women.[2]

While it is reassuring that HIV infection rates in women in Australia remain low, small numbers pose unique challenges. Despite detailed annual HIV surveillance reports from the Kirby Institute, women and children are not separately profiled so it is easy to overlook their specific needs, and most clinicians have more experience in providing HIV care for men than for women.

Isolation and fear of disclosure of status are common aspects of many individual stories of living with HIV, however these concerns may be even more marked for women. Women (and men) who are parents face additional tough decisions about if, when and how to tell their children and uncertainty about the consequences for their family should their status become known.

Photograph: by Sira Anamwong - FreeDigitalPhotos

Women's health and HIV

The clinical course of HIV is similar for men and women. Apart from treatment in pregnancy, there are no significant differences in recommendations for treatment commencement or expected virological or immunological response. Life expectancy for women who have a good response to HIV treatment and remain on treatment lifelong is near normal, as it is for men.[4]

However, women living with HIV have specific reproductive health needs, and clinicians caring for women with HIV need skills in safe and effective contraceptive prescribing, as well as being able to provide advice about reproductive options, management in pregnancy, and menopause related concerns.[5]

Women with HIV tend to have higher rates of abnormalities on Pap smears and despite advances in HIV treatment over the last decade, an annual Pap smear is still advised, rather than two-yearly as generally recommended.[5]

With effective treatment, appropriate delivery (including vaginal delivery when a women has an undetectable viral load) and exclusive bottle-feeding, the chances of HIV infection for a baby born to a mother who has HIV are very low, at <0.5%.[6]

Over the period 2004-2013, 372 babies were born to women with HIV infection in Australia. Thirteen of these babies have perinatally acquired HIV infection, and in over half of these cases, the woman was diagnosed with HIV after the birth of the child.[1]

For women living with HIV, decisions about parenthood and pregnancy require consideration of many, often unseen, issues.[8] Decisions can be complicated by the lack of Australian Guidelines on HIV care in pregnancy and the need to extrapolate from sometimes conflicting international guidelines.[9]

HIV infection is associated with increased rates of premature menopause (< 40 years of age), with early loss of ovarian function and childbearing capacity affecting about 7% of women compared to <1% women without HIV. Early menopause (between 40 - 44 years) is also more common, again affecting about 7% of women with HIV.[5] This is important information for women who are considering having children, who are experiencing changes in wellbeing that may be menopause related, and for reducing cardiovascular risk.[5] At present there are no published data on the safety and efficacy of hormone replacement therapy in relation to menopause symptoms, cardiovascular risk and bone health for women living with HIV, again complicating informed decision-making.[10]

HIV treatment itself is now often as simple as a daily tablet containing a combination of anti-retroviral medications. Yet life after HIV diagnosis is a new journey, and grief, anger, fear of stigma and discrimination, and uncertainty about the future have been travelling companions for almost all of the women for whom we have been privileged to provide care.

Case Study

Women Living with HIV in Australia: hidden stories and unique challenges *(continued)*

Hidden Stories

Three decades into the HIV epidemic in Australia, it is not unusual for someone living with HIV to hold their story tightly, telling very few people about their diagnosis. We are grateful to a young woman in the ACT for sharing her experience of diagnosis and living with HIV.

"I am just your average 32 year old woman, but I do have a secret, which is not something I feel comfortable telling everyone about because, unfortunately, there is still so much stigma for people living with HIV.

It is just over two years since my diagnosis. I still remember that afternoon when the whole world came crashing down, like it was yesterday. I knew that I had not always been careful, but you never think that this would happen to you. I cried and cried and cried. I don't think I slept much at all that night, or for months.

I spent the weeks after diagnosis in a complete daze. I threw myself into my work and tried my hardest not to think about my secret, but there was not a moment that it wasn't on my mind. For about six months it was the first thing I thought about when I woke up and the last thing I thought about when I tried to sleep.

Even though I know a cancer diagnosis is much more likely to be life-threatening, I sometimes found myself thinking if I had cancer it would be easier. At least I could tell my story.

While I keep being reminded that HIV is not the death sentence it used to be and it is no longer the first thing I think of in the morning and the last thing I think about at night, it never goes away and taking that one pill a day is a constant reminder.

HIV is the elephant in the room. When it comes to thinking about things many people take for granted like dating, relationships and potentially having children, HIV definitely complicates things.

While it is an unfortunate thing to have had happen to me, it does make you realise you are not invincible. One positive that has come from contracting HIV is the fact that I have been fortunate to meet some other extremely amazing and inspirational HIV positive people.

I keep telling myself that I am actually one of the lucky ones with this disease. I can afford to buy the medications I need and unless I stop taking these properly, I'm not at risk of contracting or dying from an AIDS related illness.

Unfortunately this is not so true for many others around the world. Only 34% of the 28.6 million people eligible in 2013 for antiretroviral drugs in low and middle-income countries actually have access to these medications. Approximately 1.6 million people around the world continue to die from AIDS related illnesses each year.

While my diagnosis is still too raw and fresh, I hope that in time I will be strong enough to speak out publicly about my status and become an advocate for other women."

Unique challenges

Women living with HIV in Australia are a minority within a minority. This poses particular challenges for HIV positive women and for service providers. The desire for privacy can be considerable, reducing confidence to access services. Gaps in clinical expertise can lead to conflicting advice, or the need to travel to specialist centres to receive care, especially in relation to pregnancy. More research and strong networks between clinicians with a commitment to the health and wellbeing of women living with HIV and between HIV positive women themselves are essential.

Women living with HIV who are interested in meeting other women from the ACT and region are encouraged to contact Pauline, counsellor at the AIDS Action Council ACT on 02 6257 2855.

Women Living with HIV in Australia: hidden stories and unique challenges *(continued)*

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Articles

AIDS 2014

Dr Alexandra Greig, Public Health Registrar, Population Health Division
Dr Alexandra Tyson, Sexual Health Physician, Canberra Sexual Health Centre

Introduction

AIDS 2014 opened on Sunday, 20 July 2014 in Melbourne. The conference gathered together some 12,000 delegates from all over the world for five days of sharing knowledge and increasing understanding of how we can work together to end the worldwide HIV epidemic. Delegates included people working in HIV prevention, treatment, policy and advocacy, people living with HIV and members of key affected populations including men who have sex with men (MSM), people who inject drugs and sex workers. Their voice and the ongoing dialogue between science and the community was the strength of this vast and diverse conference. The opening commemorated and paid tribute to the six delegates who tragically lost their lives in the MH17 plane crash while en route to the conference.

At the opening session on Sunday evening we were inspired by Michael Sidibe, Executive Director of the United Nations Programme on HIV and AIDS (UNAIDS), who called for an end to AIDS by 2030 and outlined a new, ambitious target: 90% of people tested, 90% of people living with HIV on treatment and 90% of people on treatment with suppressed viral loads. Michael Kirby, a leading Australian jurist and human rights advocate reminded us of where we have come from and highlighted some lessons learned along the way in managing the Australian epidemic. He reinforced the need to work with politicians and in the political sphere to advance the dialogue on HIV prevention, treatment and to reduce stigma and discrimination.

The rest of the week at AIDS 2014 contained numerous other highlights. We have included some key highlights from the plenary sessions we attended. AIDS 2014 was a large conference with multiple tracks and sessions each day. Full information on sessions and speakers is available at http://pag.aids2014.org/

Monday

The epidemiologist Dr Salim Abdool Karim reminded all that only three countries (South Africa, Nigeria and India) account for 30% of all HIV cases. He emphasised the importance of knowing your local epidemiology and the socio-sexual dynamics operating with an example from rural South Africa. In a study of school students, 24% of girls over 20 were found to be HIV positive but only 1.8% for boys of the same age. DNA linkage studies suggest infrequent transmission between peers, with older men the source of infection.

A cure for HIV infection was discussed in relation to the reported success of early treatment in the Visconti trial[1] and Mississippi child.[2] In particular, the need to avoid development of long-lived CD4 cells and to access latent reservoirs of HIV. Immunologist Dr Jintanat Ananworanich emphasised that cure is likely to require multiple strategies including broadly neutralising antibodies, reactivation followed by killing of latently infected cells, modifying immune responses and further novel interventions. Whilst the success of the anticancer drug Romidepsin in activating latent cells shown by Dr Ole Sogaard is promising, a cure is still many years away. Presentations on vaccine development were optimistic for B cell vaccines delivering broadly neutralising antibodies or multiple monoclonal antibodies.

Tuesday

Olive Shisana from South Africa addressed the importance of Health Systems Strengthening in the context of the HIV epidemic. She highlighted the importance of integrated care which offers opportunities to strengthen our ability to respond to the dual burden of non-communicable diseases alongside infectious diseases such as HIV in a way that makes good use of financial resources, reduces stigma and enhances the capacity of health systems and the role that universal health care plays in this ambitious aim. Mark Dybul from the Global Fund talked about innovations in science and delivery. He reminded us not to forget the "oldies and goodies" such as condoms, which are 80-95% effective in preventing HIV, amidst the development and promotion of new technologies such as treatment as prevention and that a combination of treatments is required to attain low-level endemicity.

Wednesday

The plenary sessions on Wednesday focused on how we can improve outcomes for marginalised populations. Dr Khuat Oanh was inspiring as she discussed the transformation in the policy and treatment of people who inject drugs in Vietnam. She described their harm reduction strategy and the opioid substitution therapy and needle and syringe programs that have been established in that country. This was an inspiring story of the transformation from a policy of incarceration and/or enforced treatment to one that included community organisations that represent people who inject drugs in managing the epidemic. We heard from Daisy Nakato who works for Wonetha, a sex-worker led organisation in Uganda and James Ward, from the Baker Institute in Australia who talked about perspectives and experiences from these communities.

Photograph: by Ambro - FreeDigitalPhotos

Thursday

Sessions on prevention strongly advocated for pre-exposure prophylaxis, especially for MSM, with cost seen as manageable with generic drugs. The importance of human rights in the global management of HIV was pointedly made by Laurindo Garcia whose research agenda included: the intolerance vaccine for politicians, bureaucrats and religious leaders; the violence condom that a persecuted person could climb inside to protect themselves; and the post-hate exposure prophylaxis pill to protect mental health from attack at work, by strangers or from family.

Closing

At the close we were reminded of the importance of removing stigma, discrimination and criminalisation on the basis of gender, sexuality or HIV status, and the ways in which these act as a barrier to accessing HIV care and treatment. This is central to making sure "no one is left behind" in the marathon to end HIV. Sharon Lewin powerfully reminded people to exercise their voice in relation to these issues, including as a signatory to the Melbourne declaration http://www.aids2014.org/Default.aspx?pageId=734 .

Photograph: by digitalart - FreeDigitalPhotos

AIDS 2014 was a fantastic conference. The dialogue created and the energy and passion of delegates restored hope in our ability to meet these ambitious targets and work together to end HIV.

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Are we there yet? An ACT event marking World Hepatitis Day 2014

John Didilick, Executive Officer, Hepatitis ACT

Hepatitis ACT – Raising Awareness, Building Knowledge, Preventing Infection, Changing Attitudes, Advocating for Affected Communities, Making a Difference.

Hepatitis ACT is Canberra's community hepatitis organisation. We are funded by ACT Health and we maintain a priority focus on at-risk and affected communities. A key event for us each year is World Hepatitis Day. This is an important opportunity marked globally to raise awareness, and influence real change in disease prevention and access to testing, monitoring and treatment. Our 2014 event was titled "Are we there yet?"

With all the advantages of a first world economy and a first world health system, the casual observer could be excused for thinking we'd be doing okay with viral hepatitis in Australia. It follows then, in our comparatively affluent and well-educated city-state, that the ACT should be leading the way on viral hepatitis prevention, diagnosis, monitoring, treatment, and care. Are we there yet?

World Hepatitis Day

The World Hepatitis Alliance first coordinated World Hepatitis Day in 2008 in response to the concern that chronic viral hepatitis did not have the level of awareness, nor the political priority, seen with other communicable diseases such as HIV/AIDS, tuberculosis and malaria.

In 2010 the World Health Assembly endorsed July 28 as World Hepatitis Day and it became one of only four 'World Health Days' recognised by the World Health Organization.

On a global scale, World Hepatitis Day on 28 July each year provides a focus for individuals, community groups, clinicians and other supporters to run awareness-raising events. The thousands of events which take place each year help to raise awareness and influence action on viral hepatitis at both a local and a global level.

Marking the Day in Australia

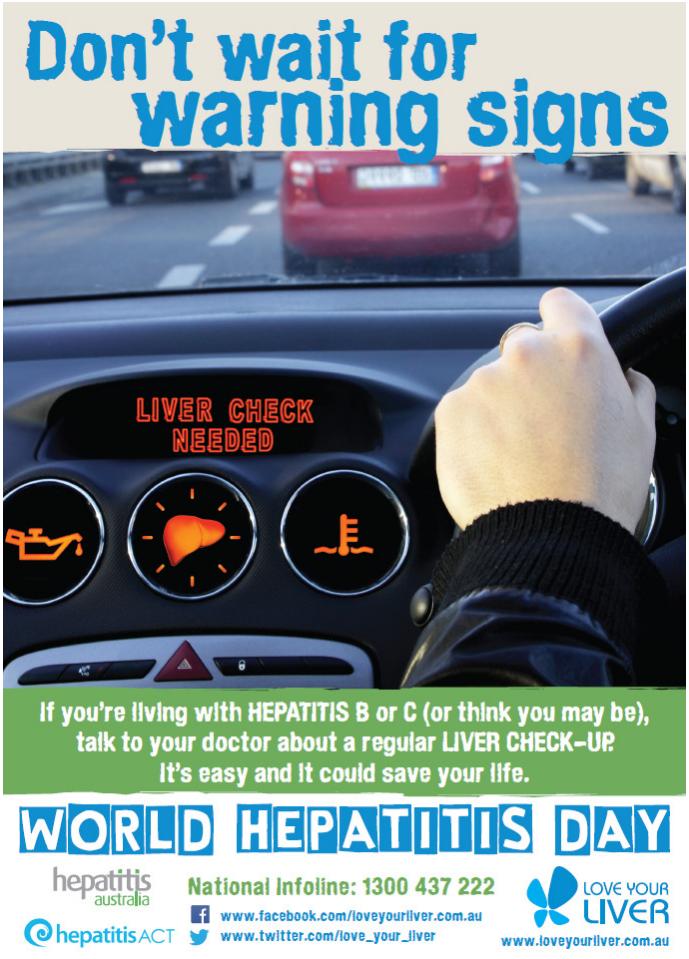
World Hepatitis Day in Australia is conducted under the umbrella of the Love your Liver campaign. This five year campaign focuses on raising awareness of viral hepatitis within the context of liver health. The aim of the campaign is to improve knowledge of liver health and viral hepatitis within the general community and create more positive attitudes toward those living with viral hepatitis.

In 2014 the focus of the national campaign moved from the broader community towards affected communities. That change was reflected in the 2014 World Hepatitis Day theme: "Liver health check-ups. Love your Liver – Know your Liver."

Across Australia community hepatitis organisations are aiming to engage people at risk of, or living with hepatitis B and hepatitis C, in conversations about liver health and the value of liver health check-ups. We are also aiming to push for the changes needed within the health system to ensure easier access to regular liver health assessments as a standard part of the care plan for people living with hepatitis B or hepatitis C.

Are We There Yet?

It is estimated that there are almost a half a million Australians living with hepatitis B or hepatitis C, however many are not yet diagnosed, relatively few are having a regular liver health check-up, and treatment rates remain inexcusably low.[1] These factors are leading to an increasing number of people developing complications of serious liver disease such as cirrhosis, liver cancer and liver failure. If regular liver health check-ups were a routine part of care for all people with viral hepatitis – including ~ 4,000 Canberrans with hepatitis C and 3,600 with hepatitis B – action could be taken earlier to help avert many of these complications.[2]



Are we there yet? An ACT event marking World Hepatitis Day 2014

Are We There Yet? *(continued)*

To mark World Hepatitis Day in Canberra and to raise awareness and the profile of viral hepatitis, Hepatitis ACT held a local event with an audience of politicians, influencers, clinicians, stakeholders, partners, policy makers, and members. The event was opened and a Hepatitis Report Card launched by Mr Shane Rattenbury MLA, ACT Minister for Corrections and Aboriginal and Torres Strait Islander Affairs. Key speakers included Mr Fred Monaghan (Ngunnawal Elder), Mr John Didlick (Executive Officer, Hepatitis ACT); Professor Michael Levy AM (Director, ACT Justice Health), and Mr Sione Crawford (Manager, the Canberra Alliance for Harm Minimisation and Advocacy). These presentations provided community and clinical perspectives, and the critical insights of lived experience. The event was also attended by the President of Hepatitis Australia Mr Terence Higgins, former Chief Justice of the Supreme Court of the ACT, Ms Nicole Lawder MLA, and President of the Public Health Association of Australia Mr Michael Moore.

The Hepatitis Report Card quantifies the burden of viral hepatitis and presents the case for regular liver assessments. The report card reveals the number of Australians with hepatitis B or C in the liver danger zone (i.e. the age-point where the impact of viral hepatitis accelerates, and the risk of cirrhosis, liver cancer and liver failure increases). The Report Card also includes a blueprint for action outlining what is required to ensure that regular liver check-ups become part of the standard of care for the half a million Australians living with chronic hepatitis B and C.[3]

World Hepatitis Day in our Community

Through the provision of small local grants and the distribution of promotional materials, Hepatitis ACT supported partner organisations in the ACT to conduct their own World Hepatitis Day events. These events helped raise awareness of viral hepatitis among priority populations and the workers who deliver services with them. Events were conducted by the Canberra Sexual Health Service, the ACT Opioid Treatment Service, Ainslie Village Accommodation Service, Inanna House crisis accommodation and support service, Directions ACT NSP network, and Southside Community Services. These events were assisted by hepatitis educators from Hepatitis ACT.

Through a broader community promotional initiative, Hepatitis ACT also distributed World Hepatitis Day campaign materials to general practitioners and pharmacists for public display. These materials included the fabulous World Hepatitis Day "Don't wait for the warning signs" posters, and liver health assessment fact sheets.

More Information

The Hepatitis Report Card is available at http://www.liverdangerzone.com.au/report. For information about viral hepatitis or the services and support available from Hepatitis ACT, please contact Hepatitis ACT:

Phone:	(02) 6230 6344
	1300 301 383
Email:	info@hepatitisACT.com.au
Address:	36 David St, Turner
	(Opposite the O'Connor shops)
Post:	PO Box 6259
	O'Connor ACT 2612

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Articles

Increasing gonorrhoea rates in the ACT and the importance of ongoing antimicrobial sensitivity screening

Dr Miranda Sherley, Registrar, Canberra Sexual Health Centre

The rise in gonorrhoea and the threat of resistance

Gonorrhoea is a sexually transmissible infection caused by *Neisseria gonorrhoeae*. It infects various body sites depending on sexual practices, and the likelihood of symptoms depends on the body site involved. Asymptomatic infection creates an opportunity for a community reservoir of infection.

Gonorrhoea rates have increased Australia-wide since 2008, with the majority of cases in men who have sex with men (MSM).[1] Gonorrhoea notifications by Canberra Sexual Health Centre (CSHC) increased two-and-a half fold from 2009-2010 to 2011-2013, with figures from Jan-May 2014 suggesting a further increase will be seen in annual notifications in 2014 (Figure 1).

Molecular testing has improved the sensitivity of gonorrhoea screening. However, microbiological testing for antibiotic sensitivities remains important. This year has seen decreasing sensitivity to ceftriaxone, the recommended treatment, in gonorrhoea isolates from CSHC and reports of an Australian isolate with the highest resistance to ceftriaxone ever reported in Australia (MIC of 0.5 mg/L) and multi-drug resistance (strain A8806).

Gonorrhoea - a diverse disease

N. gonorrhoeae is a bacterial pathogen capable of sexual transmission via a range of sexual practices. It can cause infections of the surface of the eye, throat, urinary tract, cervix and rectum.

Local spread may lead to complications such as inflammation of the prostate, testes or epididymis in men, or pelvic inflammatory disease (PID) in women. Dissemination can lead to infection of joints, the heart valves, the blood stream, and other serious complications. Infection may be asymptomatic, particularly where non-genital sites are involved.[2,3]

The existence of asymptomatic infection leads to the potential for a large reservoir of asymptomatic carriers. Of particular concern is the potential for the development of a reservoir of strains with decreased susceptibility to antimicrobial agents. In Australia, gonorrhoea rates have been rising since 2008, with men aged 15-29 most affected.[1] One strategy for addressing asymptomatic carriage of *N. gonorrhoeae* is to offer routine screening to high-risk groups including men who have sex with men (MSM).

Photograph: Public Health Image Library, Centres for Disease Control and Prevention

Nucleic Acid Amplification Testing – the most sensitive way to screen

Nucleic-acid amplification testing (NAAT) methods offer convenient, rapid, high-sensitivity testing of samples from multiple body sites.[3] The current Sexually Transmissible Infections in Gay Men Action Group (STIGMA) guidelines recommend NAAT-based screening of the pharynx, urine and rectum for *N. gonorrhoeae* for MSM.[4] However, gonorrhoea NAAT has some important limitations. There have been examples of both false negatives and false positives with NAAT related to target site mutations, gene transfer and cross reactivity.[5,6] For this reason, multiple amplification target sites with confirmatory testing at an additional target are essential. Furthermore NAAT does not provide any detail regarding antimicrobial sensitivity.

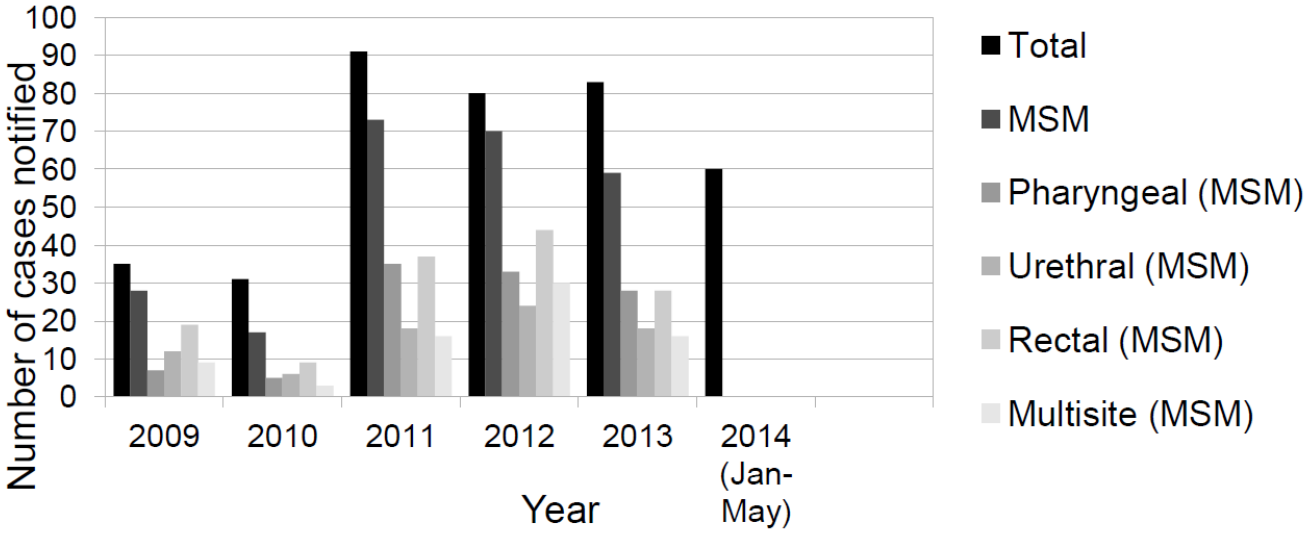


Figure 1: The total number of cases of gonorrhoea notified by Canberra Sexual Health Centre 2009-May 2014, and by anatomical site in MSM. All cases of gonorrhoea in men who identified as having 1 or more male sexual partners are included in MSM data.

Increasing gonorrhoea rates in the ACT and the importance of ongoing antimicrobial sensitivity screening

Microbiological testing – an important source of resistance data

The major benefit of traditional microbiological screening methods is that once a species-level identification has been made, cultures can be assessed for antimicrobial susceptibilities. This is important both for the management of individual patients and from a public health surveillance perspective.

The major limitation of microbiological testing is that the Neisseriaceae are fastidious in their growth requirements. As such, the probability of successful culture in NAAT-positive cases is influenced by the delay from initial diagnosis to microbiological sample collection, the site affected, and the rapidity with which specimens are processed.[7-11]

Photograph: PHD file photograph

The best testing approach is one that achieves maximum screening sensitivity in combination with antimicrobial sensitivity data. CSHC uses NAAT-based screening of high risk groups and microbiological testing in symptomatic individuals, people reporting that they are contacts of gonorrhoea and people with positive NAAT results.

Gonorrhoea notifications at CSHC 2009-2014

Since January 2011, asymptomatic MSM presenting to CSHC for screening have been offered NAAT of the pharynx, urethra and rectum. Prior to this, the same group were offered pharyngeal microbiological-testing, urine PCR-testing, and rectal microbiological and PCR-testing. Symptomatic individuals, those who present as a contact of gonorrhoea, and those with a positive NAAT result are, and were, also offered microbiological testing. There was a substantial increase in gonorrhoea notifications by CSHC in 2011, affecting all three body sites, which has continued into 2013 and looks likely to increase again in 2014 (Figure 1).

In 2009 to 2013 resistance to ceftriaxone and azithromycin (scored as resistant, intermediate or sensitive as per ACT Pathology) did not change significantly (Pearson's chi-squared test) whereas resistance to penicillin, ciprofloxacin and tetracycline decreased (Pearson's chi-squared test; $p < 0.05$, 0.001, 0.0005 respectively). Azithromycin sensitivity was only reported for 2010 onwards (Figure 2).

However, 2014 has so far seen more than 15 isolates with a ceftriaxone MIC >0.016 mg/L , all of which had intermediate sensitivity or resistance to penicillin, all but one of which had intermediate sensitivity or resistance to tetracycline, and all of which had resistance to at least one other antimicrobial. One of these strains had a ceftriaxone MIC of 0.047mg/L, was resistant to ciprofloxacin, azithromycin and tetracycline, and had intermediate sensitivity to penicillin. This isolate was from a urethral infection in a man in his late 20s, who has male sexual partners, who presented as a contact of gonorrhoea, and who did not identify any overseas sexual contacts.

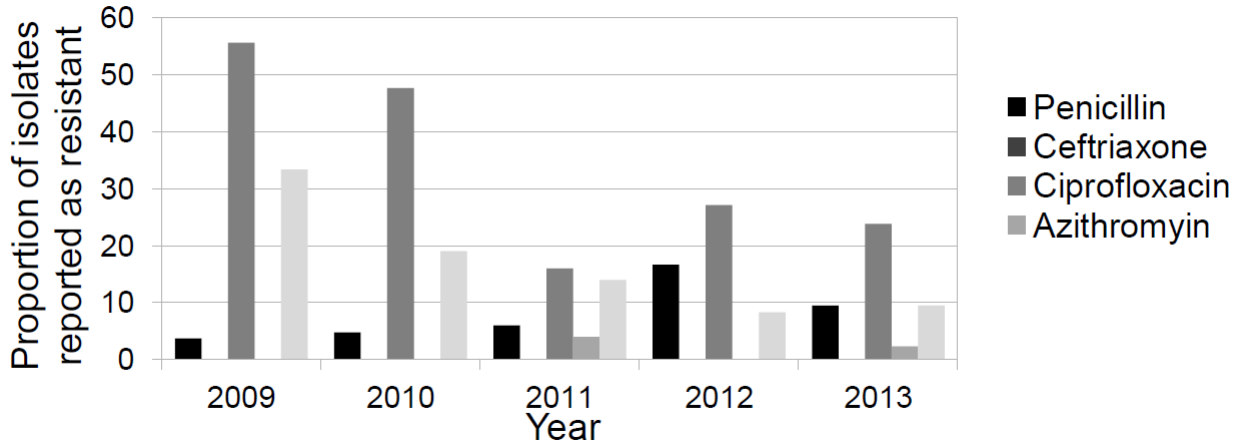


Figure 2: The proportion of culturable isolates of gonorrhoea notified by CSHC that were reported to be antimicrobial resistant, by antibiotic 2009-2013. Includes all isolates reported as "resistant" on pathology reports, not including isolates reported as intermediate or sensitive.

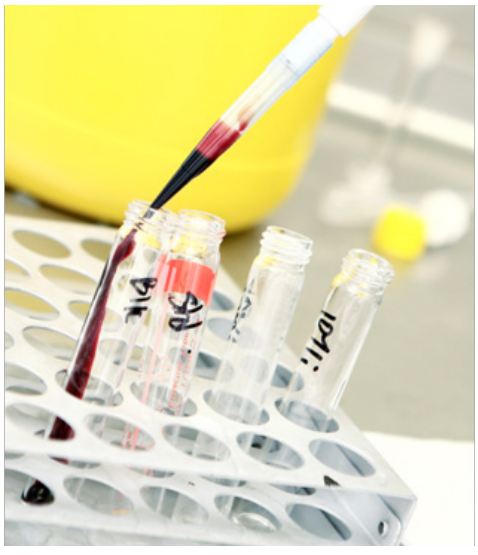
Increasing gonorrhoea rates in the ACT and the importance of ongoing antimicrobial sensitivity screening

The way forward

Multiply resistant gonorrhoea is likely to pose a significant problem in the future. *N. gonorrhoeae* utilises multiple genetic mechanisms to facilitate the spread of antimicrobial resistance.[12] Resistance has developed rapidly to a wide range of previously used antimicrobial regimens, and is developing now to cephalosporins broadly.[13] As a result, there are concerns that the widely used regimen of ceftriaxone plus azithromycin will not remain effective long-term, with gentamicin plus high dose azithromycin and gemifloxacin plus high dose azithromycin both proposed as possible alternative regimens. A range of other antimicrobials and antimicrobial combinations are also under investigation.[13]

It is the policy of CSHC that microbiological testing should always be completed prior to, or at the time of treatment (no antimicrobials to be given for known or suspected gonorrhoea without culture). This allows for a review of the treatment given in the context of the sensitivities reported. Patients treated for gonorrhoea at CSHC are routinely treated with Azithromycin 1g PO and ceftriaxone 500mg IM initially (except in the case of reported allergies or other contraindications). Patients with isolates reported to have reduced sensitivity or intermediate sensitivity to ceftriaxone are recalled for additional treatment as appropriate according to the sensitivity profile, and are requested to return for a test of cure at 2 weeks post treatment. Patients with pharyngeal gonorrhoea and those treated with any non-standard antibiotic regimen are also recalled for a test of cure at 2 weeks. All patients treated for gonorrhoea are also recalled at 3 months to test for reinfection.

NAAT offers a rapid and sensitive method for diagnosing gonorrhoea, and an opportunity to reduce the burden of disease in the community through rapid detection and treatment. Confirmatory microbiological testing at the time of treatment may confirm the diagnosis, but more importantly, allows for the collection of antimicrobial susceptibility data and appropriate treatment modification.



Photograph: PHD file photograph

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Human papillomavirus Vaccination

Shannon Woodward, Nurse Practitioner, Canberra Sexual Health Centre
Jodie Huet, Immunisation Coordinator, Communicable Disease Control, Population Health Division

In 2007, the Australian Government implemented a national program to vaccinate young women aged between 12-26 years against human papillomavirus (HPV), an associated cause of cervical cancer. Since inception of this program, the incidence of HPV has reduced in young females who have received the vaccination, and also young men via herd immunity. The program is now continuous with both males and females receiving the vaccination in the first year of high school.

Introduction

Human papillomaviruses (HPV) are a group of human-specific DNA viruses of which there are over 150 types.[1] Approximately 40 types of HPV colonise the genital tract and are sexually transmitted, with some types largely asymptomatic and naturally cleared within 6-24 months, while other types persist resulting in an increased risk of developing HPV related cancer.[1] HPV infection is a significant cause of cervical cancer, with oncogenic HPV types 16 and 18 most strongly associated.[1] HPV16 is also strongly associated with other types of HPV related cancers including cancers of the anus, oropharynx, vagina, vulva and penis.[1]

Human papillomavirus Vaccination

There are currently two vaccines for human papillomavirus (HPV) registered in Australia. The quadrivalent vaccine (4vHPV; Gardasil) which contains virus-like particles of HPV types 6, 11, 16 and 18, and the bivalent vaccine (2vHPV; Cervarix) which contains virus-like particles of HPV types 16 and 18.[2,3] 4vHPV vaccine has been shown to protect against high grade vulval and vaginal lesions and genital warts in women, and genital warts and high grade anal lesions in men.[2] Clinical trials and widespread use of the vaccines internationally have proven them to be safe, with the most commonly reported side effects including injection site reactions, headache, fatigue and dizziness.[1] HPV vaccine can be administered with other vaccines and is not contraindicated in immunocompromised individuals. Vaccination is contraindicated in pregnancy as a precautionary measure.[1]

Between 2007 and 2009, Australia became the first country in the world to introduce a government-funded national program for 3 doses of the quadrivalent vaccine for young women aged 12-26 years.[1]

The HPV vaccination program has become routine for girls aged 12-13 years, and in a world first in 2013, was extended to include males in this age group. In the ACT, the vaccine is provided free of charge to:

- 12 and 13 year-old males and females (in year 7) through schools on an ongoing basis, and
- males aged 14 and 15 years of age during 2014 (in year 9), through schools on a catch up basis.[4]

The ACT School Health Immunisation Program uses the 4vHPV vaccine which is delivered in a 3 dose schedule at 0, 2 and 6 months. If scheduled doses have been missed it is not necessary to repeat the doses. The missed doses ideally should be given within 12 months.[3] In the ACT doses that have been missed in the schools program are given via a General Practitioner at the end of the school year.

Photograph: by Sura Nualpradid - FreeDigitalPhotos

Neither the 4vHPV or 2vHPV vaccine is recommended for children aged less than 9 years of age.[3] The optimal age for administration of the vaccine is between 11-13 years, as most individuals in this age group have not commenced sexual activity. The HPV vaccine is most effective when the course is completed before the individual has their first sexual contact.[3] HPV vaccination is recommended for females and males aged 9-18 years, however it is not routinely recommended for those over 18 years who may have already commenced sexual activity.[3] The decision whether to vaccinate those outside of the recommended age range should include an assessment of the benefits and future risks of exposure to the virus. Men who have sex with men (MSM) should receive the 4vHPV vaccine after taking into account the possibility of previous or future risks of exposure, as they are at an increased risk of infection and may not benefit from herd immunity from HPV vaccinated females like their heterosexual counterparts.[3]

National Human papillomavirus Register

There is a National HPV Register (the HPV Register) which supports the HPV vaccination program by collecting information on HPV vaccinations administered throughout Australia.[4] The HPV Register is used to ensure that an individual completes the full course of vaccinations through the following mechanisms:

- providing a statement of completion when all 3 vaccinations have been received;
- providing reminders to those with an incomplete course within the schools program;
- notifying providers of patients who have not completed the course, and
- allowing providers to check the vaccination status of their patients (by phone or online).[4]

The HPV Register also monitors the effectiveness of the HPV vaccination program impact and uptake in both schools and primary health care settings. Notification of vaccination to the HPV Register also reduces the risk of administration of excess vaccine doses or, conversely, insufficient doses being given.[4] It is imperative that immunisation providers contribute to the HPV Register to maximise its success.

Vaccine Uptake in the ACT

Vaccine uptake in the ACT is above the national average. The latest available data shows that in the ACT, 74.1% of females turning 15 years of age in 2012 have completed a 3 dose course of HPV vaccination. This compares favourably to the national figure of 70.9%.[4] Preliminary data shows a similar uptake rate for males since the program was extended in 2013.

Vaccination Benefits

Since the introduction of the vaccination program, surveillance data has shown a significant reduction in the number of vaccine-eligible women diagnosed with genital warts at sexual health services across the country, and there has also been a reduction in genital warts incidence in young heterosexual males suggesting herd immunity.[1,5] The rate of in-patient treatment of genital warts has also reduced in private hospitals.[5]

Since the HPV vaccination program commenced in Australia, rates of high-grade cervical abnormalities have decreased in young women across the nation.[1] Current data shows that the rates of disease are decreasing in both women less than 20 years of age and women aged 20-24 years, and that the reduction is due to vaccination.[1] This reduction in disease is being mirrored across the world, with similar reductions seen in England and other countries that commenced the vaccination program early.[1] Due to the success of the current HPV vaccination program, the falling rate of high-grade cervical anomalies in young women and the subsequent decline in the positive predictive value of Pap tests, Australia is now reviewing its cervical screening recommendations.[1]

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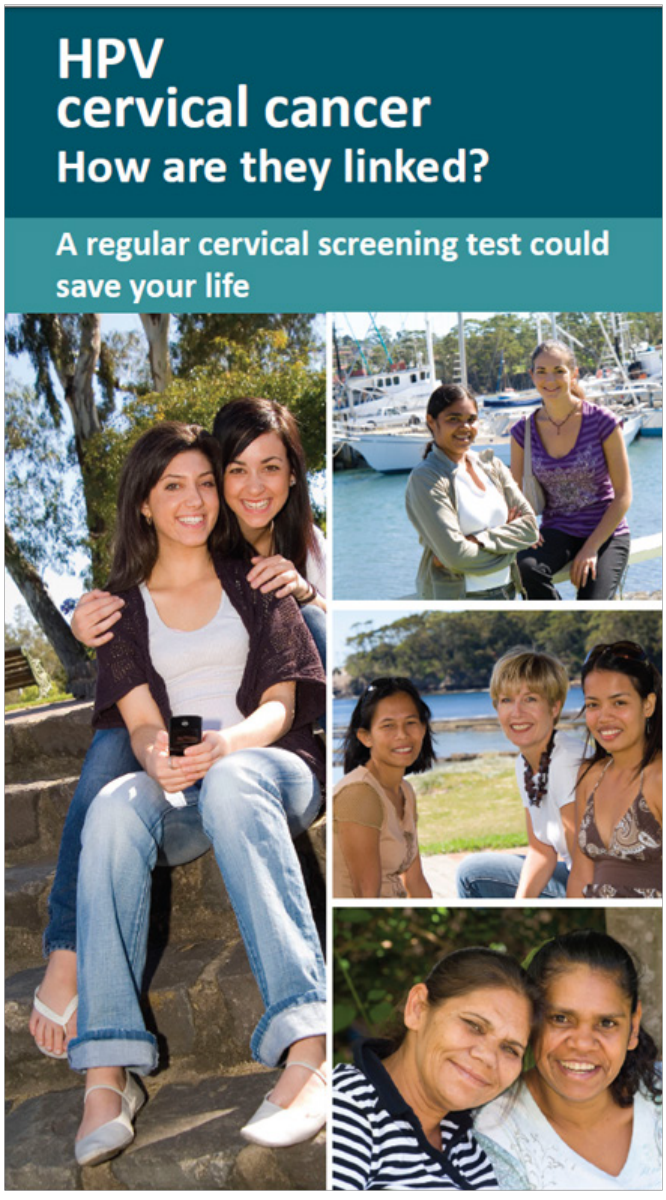


Cervical Screening in the ACT - Who to target?

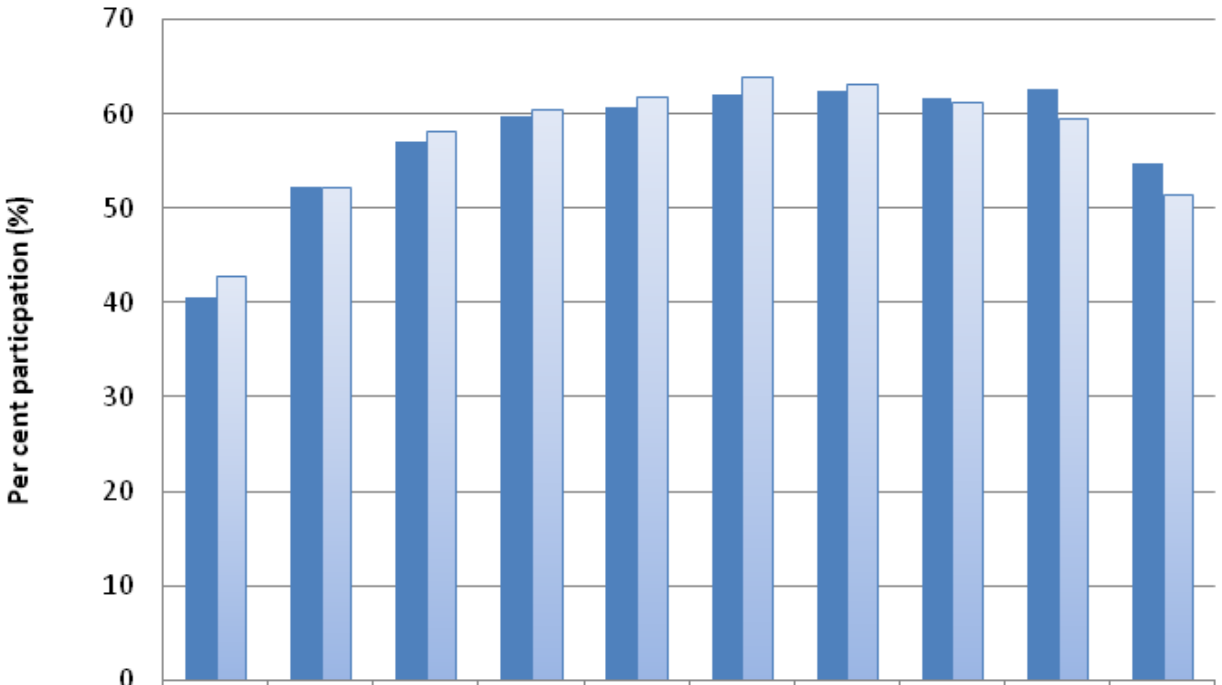
Leah Newman, Alexandra Raulli and Joanne Greenfield, Health Improvement Branch, Population Health Division

Declining participation rates for women having Papanicolaou (Pap) tests in the ACT in recent years (particularly in the youngest age groups) and the introduction of the Human Papillomavirus (HPV) vaccine for young women in 2007, has prompted the ACT Cervical Cytology Register to investigate where and how to best target their recruitment efforts to ensure the program continues to reduce cervical cancer incidence and mortality in the ACT population.

Pap tests in the ACT – who is participating?

The first step was to reflect on participation rates in the ACT compared to Australia and participation rates by age groups. In 2011-12, 57.2% of women in the ACT aged 20-69 years had a pap smear. This was similar to the national rate of 57.7%.[1] However, participation in two-yearly Pap smears in the ACT has progressively declined from 62.1% in 2004-05 to 57.2% in 2011-12, a reduction of 4.9 percentage points.[2] In 2011-2012 women aged 60-64 years had the highest participation rates at 62.5%, followed by women aged 50-54 years at 62.4% (Figure 1).

Participation was lowest in young women aged 20-24 years at 40.5% and has been progressively declining since 2007. However, Australia is one of the few countries that screen in this age group. The decline may be associated with the introduction of the National Human Papillomavirus (HPV) Vaccination Program in 2007 with HPV vaccinated women believing they do not have to undergo cervical screening because of their vaccinated status. However, a Victorian population-based telephone survey in 2009 found that 96% of women aged 18-28 years knew that Pap tests were still needed after vaccination, although 8% agreed that having been vaccinated made the less likely to have Pap tests in future.



	20–24	25–29	30–34	35–39	40–44	45–49	50–54	55–59	60–64	65–69
ACT	40.5	52.3	57.0	59.8	60.6	62.1	62.4	61.6	62.5	54.7
Australia	42.8	52.2	58.2	60.6	61.9	63.9	63.3	61.2	59.5	51.5

Figure 1: Participation in the National Cervical Screening Program, by age, ACT and Australia, 2011-2012

Notes

1. Number of women participating is the number of women screened in the 2-year reporting period.
2. Age-standardised (AS) rates are the number of women screened as a proportion of the eligible female population and age-standardised to the Australian population at 30 June 2001.
3. These data exclude women who have opted off the cervical cytology register.
4. Numbers may not sum to the total due to age not stated records.

Source: AHIW analysis of state and territory cervical cytology register data.

Cervical Screening in the ACT - Who to target?

Who is being diagnosed with cervical cancer in the ACT?

Looking at the pattern of screening-detected cervical cancers and those arising in the population may assist in where to focus recruitment efforts. In women having Pap tests, a total of five invasive malignancies were detected in 2011 in women aged 30-34, 40-44, 50-54, 55-59, and 60-64 years. This pattern of increasing number of cervical cancers detected with increasing age is reflected in the Australian statistics.[1]

The incidence of cervical cancer in the ACT is low. Population-based data from the ACT Cancer Registry shows that incidence of cervical cancer has declined markedly since the late 1980s; and again from 1997 following the introduction of the NCSP in the ACT in 1995 (Figure 2). In the period 2004-08, 50 women were diagnosed with cervical cancer and 11 died. The highest incidence rate occurred in older women aged 80-84 years (17.3 per 100,000), which is outside the target age group for Pap test reminders. However, spikes of incidence also occurred in women aged between 30 to 49 years (10.6 to 12.7 per 100,000) and women aged 60 to 69 years (up to 13.6 per 100,000). Mortality rates followed a similar pattern.

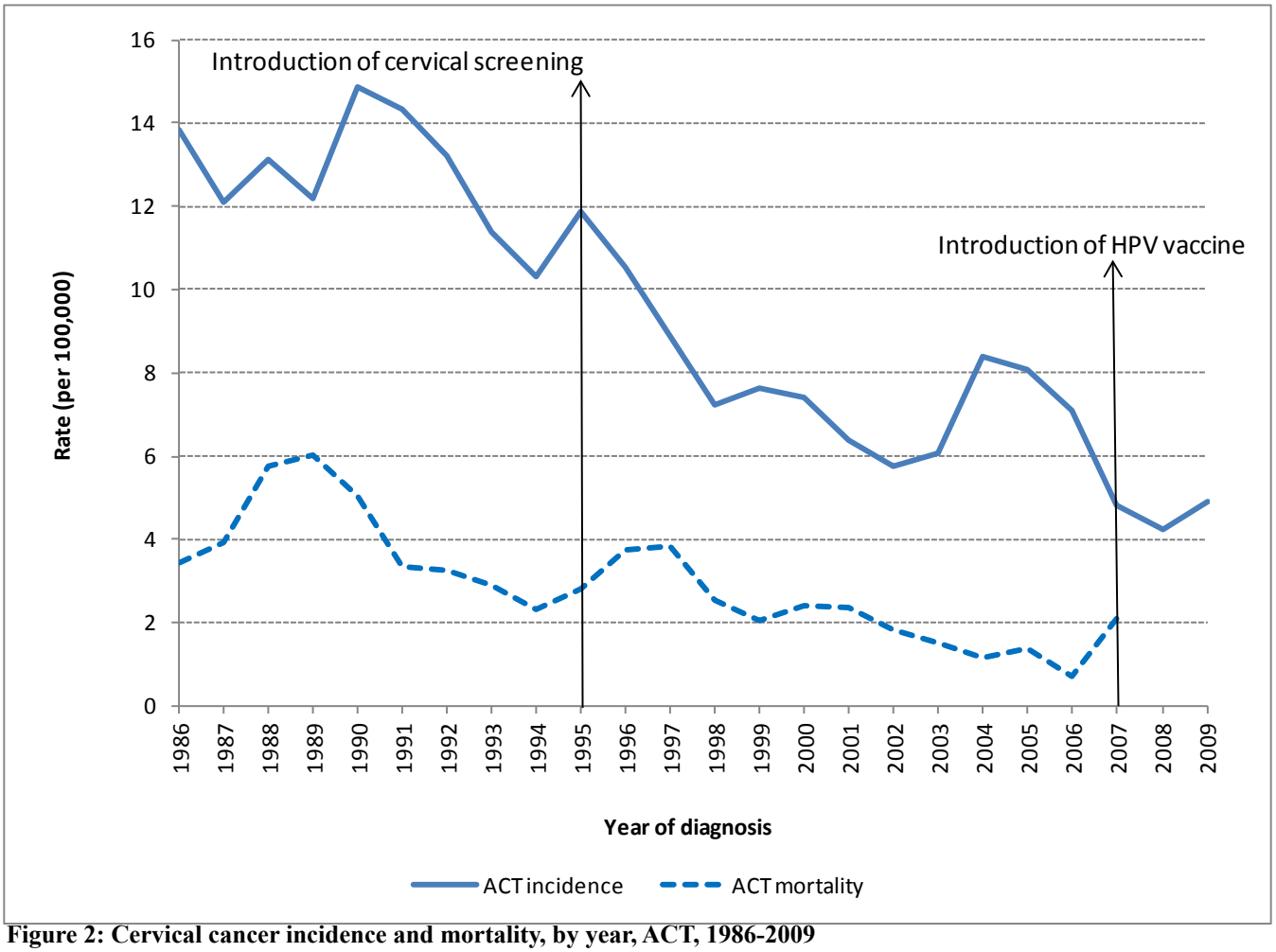


Figure 2: Cervical cancer incidence and mortality, by year, ACT, 1986-2009

Notes

1. Age-standardised rates are presented as three-year leading averages.

Source: ACT Cancer Registry

Cervical Screening in the ACT - Who to target?

Under-screened populations

A review of the literature identified characteristics of under-screened populations in Australia. These include women with low socioeconomic status, women from non-English speaking backgrounds (NESB), Aboriginal and Torres Strait Islander women, and women in rural and remote areas (which is not relevant to the ACT as the ACT is not considered a rural or remote area).

The association between socio-economic status and participation in cervical screening is reflected in cancer diagnosis, with the highest incidence of cervical cancer in Australia in women aged 20-69 occurring in women residing in areas of lowest socioeconomic status (9.6 per 100,000) and the lowest incidence in women residing in high SES areas at 6.9 per 100,000 during 2006-2010.[1]

The ACT has by far the highest Socio-Economic Indexes for Areas (SEIFA) score of any Australian state or territory but this overall score hides areas of hidden disadvantage. The ACT has the highest proportion of 'diverse' suburbs, where the most and least disadvantaged live side by side. This makes it harder to find and target women of low socioeconomic status.

The ACT has relatively low levels of non-English speaking women with 2011 Census data showing that 1.9% of females aged 20-69 years speak English not well or not at all.

Data on Pap test participation by Aboriginal and Torres Strait Islander women is not routinely collected by the ACT Cervical Cytology Register because it is dependent on, and limited to, information on pathology forms, which do not currently include Aboriginal and Torres Strait Islander status. Researchers in Queensland and the Northern Territory (NT) have reported that, on average, participation by Aboriginal and Torres Strait Islander women is nearly 18 percentage points below the expected rate compared to all women eligible for screening in the Queensland and the NT populations, respectively. The usual resident Aboriginal and Torres Strait Islander population was estimated as 1.5% of the total ACT population in 2011.[7]

Conclusions

While recent trends indicate that participation in the National Cervical Screening Program (NCSP) is progressively declining in young women since the introduction of the HPV vaccine, the incidence of cervical cancer in this age group remains a rare event. In comparison, women aged 30 years and over are much more likely to develop (and die) from cervical cancer and continue to gain the greatest benefit from the early detection and treatment of abnormalities as a result of attending routine screening. Women in this age group from low socioeconomic, Aboriginal and Torres Strait Islander and NESB backgrounds are known to be under-screened and would particularly benefit from targeted campaigns to attend regular Pap screening. However, the current HPV vaccine does not provide protection against small percentage of strains which can cause cancer (1%-8%), and therefore young women should still be encouraged to participate in routine screening until an alternative pathway is established.

- On balance, the evidence suggests that screening is most effective at preventing cervical cancer when targeted at women aged 25 to 65 years.
- While middle age women have the highest participation rate they are still the most likely to get the disease and therefore should continue to be aggressively targeted for recruitment.
- Women with low socioeconomic status, poor English language skills and women who identify as Aboriginal and Torres Strait Islanders may be less likely to screen and therefore should be targeted to attend screening.
- Communication research has identified motivators and barriers to screening that can inform recruitment strategies (see box on page 32).
- The findings from the NCSP Renewal program will inform the future activities of the ACT Cervical Cytology Register, laboratories and Health Practitioners, particularly in regards to the screening pathway of young HPV immunised women.

NOTE: This article is an extract of an Information Paper on cervical cancer trends in the ACT.

Cervical Screening in the ACT - Who to target?

Results of Communications Research

In 2013, the Health Improvement Branch of the Population Health Division commissioned a survey of ACT women to understand the perceptions, knowledge and attitudes towards risk factors for cervical cancer, and the motivators and barriers that influence whether a women has a Pap test every two years.

Overall, all participants had heard of cervical cancer and were aware that it affected women. Most participants also had good awareness of the current recommendations about how often Pap testing should be undertaken and when it should begin. However, many participants were less aware of detailed information about the cancer, including symptoms, prevalence, severity and risk factors—this was particularly the case amongst irregular testers. The research also identified several misconceptions, in particular amongst irregular testers, about cervical cancer and/or Pap testing. In some cases these misconceptions had led participants to believe that they were not required to have a Pap test.

Participants also felt that there was less media attention and advertising about cervical cancer in comparison to other types of cancer. This led some participants to assume that it was less common and/or serious than other cancers. The research found that regular testers generally had external triggers that motivated them to undergo Pap testing (e.g. received reminders from GPs / health clinics when testing was due). These participants also understood the importance of undergoing regular testing. Participants who were irregular testers generally did not have external triggers to prompt regular testing and / or had a number of barriers towards testing. The screening Program intends to use identified barriers in advertising and educational activities. Two avenues that are quickly apparent is to highlight the Register and the benefits of the Register and secondly to target GP clinics more intensely with promotional and educational material for both screening and participation.

Source: ORIMA Research. ACT Health. Cervical Cytology Communications Research. 26 May 2014

Motivators	Barriers
• Receiving external prompts / reminders (i.e. consultation with doctors and reminder letters) • Perception of importance • Experiencing pain/ symptoms of cervical cancer • Previously having cervical cancer or abnormal results • Knowing others affected by cervical cancer • Having a baby/ planning to fall pregnant • Ensuring future fertility • Exposure to advertising	• Feeling embarrassed • Feeling discomfort • "Forgetting" to get tested • Having limited time • Concern about cost • Limited availability/ difficultly finding preferred doctor • Lack of awareness of why Pap testing was conducted • Being misinformed • Belief that "unlikely" to be affected.

Source: ORIMA Research. ACT Health. Cervical Cytology Communications Research. 26 May 2014

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The ACT Cervical Screening Program

Peter Couvee, ACT Cervical Screening Program, Population Health Division

The Cervical Screening Program commenced in the ACT in 1995. The program set up a register as part of the National Cervical Screening Program. The National Cervical Screening Program aims to reduce morbidity and deaths from cervical cancer, in a cost-effective manner through an organised approach to cervical screening. The program encourages women in the target population to have regular Pap smears.

History of the Program

In 1988, the Australian Health Ministers' Advisory Council established the Cervical Cancer Screening Evaluation Steering Committee to examine cervical screening. In light of their findings, the Committee recommended health authorities establish an organised approach to screening which would provide better protection against cervical cancer. In 1991, the Organised Approach to Preventing Cancer of the Cervix was established as a joint initiative of the Australian and state and territory governments. In 1995 it was renamed the National Cervical Screening Program.[1]

What we do

The Cervical Screening Program seeks to achieve the aim of reducing morbidity and mortality from cervical cancer through

- targeting our cohort of women resident in the ACT, who have been sexually active at some time in their life aged between 20 and 70 years of age regardless of HPV Vaccination status;
- maximising participation by eligible women and the adoption of regular screening habits;
- encouraging and supporting practitioners to promote cervical screening, and the collection of cervical smears containing adequate samples of cervical cells;
- maintaining , upgrading and modernising a Cervical Screening Register capable of capturing and interpreting data from new or emerging technologies;
- instituting a uniform and reliable reporting system;
- utilising and following appropriate management protocols and guidelines for women with screen-detected abnormalities;
- promoting effective treatment and follow-up for women with screen-detected abnormalities, and
- promoting the Cervical Screening Program and Register to under-screened and non-screened women in order to obtain and sustain personal wellness.

The ACT Cervical Screening Register is a central and confidential list of ACT women's Cervical Screening test results. Women have a choice about whether or not to have their results stored on the register. Information on the Register supports the Screening Program by providing data for the reminder and follow up of women participating in the Screening Program., The Program also provides de-identified data for research purposes as well as monitoring screening and disease trends in the National Program.

Strict guidelines which determine who has access to results are contained in Part 3 of the *ACT Public Health Regulation 2000*.

The National Cervical Screening Program Renewal

The Renewal is a strategy for reviewing the policy and operation of the National Cervical Screening Program (NCSP). The aim of the Renewal is to ensure that all Australian women, human papillomavirus (HPV) vaccinated and unvaccinated, have access to a cervical screening program that is acceptable, effective, efficient and based on current evidence.[2]

Why a program "Renewal"

The science of cancer is one of the most rapidly changing areas in health and while the success of the NCSP cannot be disputed, the environment in which the program operates has changed.

Significant developments since the introduction of the NCSP in 1991, include: new evidence about the optimal screening age range and interval; availability of the HPV vaccine; and developments in new technologies for the early detection of cervical cancer.

Human Papillomavirus and cervical cancer

HPV is a virus that is a very common cause of infection in humans, similar to the common cold. Most women get it at some point in their lives. There are many types of HPV infections, and most of them clear up by themselves without causing any problems. However, HPV is the virus that causes more than 99 per cent of cervical cancer.

HPV is transmitted through sexual activity. HPV infections are very common in young women and men in the early years of sexual activity. HPV infections are transient and will usually clear by themselves within 1-2 years. If the infection is not cleared, there is an increased risk of developing cervical cancer. Persistent HPV infections can cause abnormal cell changes that may lead to cervical cancer. However, this usually takes a long time, often more than 10 years.

The HPV vaccine protects against the most common strains of HPV, accounting for approximately 70% of cervical cancers.

The ACT Cervical Screening Program

The HPV test

The procedure for collecting the sample for HPV testing is the same as the procedure for having a Pap smear.

If HPV is found (HPV positive), further testing (cytology) would automatically be done on the same sample to check if any abnormal cells are present (like the current Pap test), with no need to go back for a second test. If a woman doesn't have the virus (HPV negative), she would be invited to rescreen in five years.

Clinical trials have demonstrated that screening with a HPV test every five years is more effective than screening with a Pap test every two years, and is just as safe.

Medical Services Advisory Committee Recommendations

The Medical Services Advisory Committee (MSAC) has recommended to the Australian Government that a new 'cervical screening test' should replace the current Pap smear. The new cervical screening will test for HPV infection, which we now know to be the first step in developing cervical cancer.

Following a comprehensive review of the current evidence for cervical screening, MSAC has recommended for both HPV vaccinated and unvaccinated women that:

- a HPV test should be undertaken every 5 years;
- cervical screening should commence at 25 years of age;
- women should have an exit test between 70 and 74 years of age;
- women with symptoms (including pain or bleeding) can have a cervical test at any age.

Additionally, MSAC advised that:

- a HPV test every 5 years is more effective than, and just as safe as, screening with a Pap test every 2 years.
- HPV testing every 5 years can save more lives and women would need fewer tests than in the current 2 yearly Pap test program.

Pending policy decisions, it is anticipated that changes would not be implemented prior to 2016.

HPV vaccinated women would still require cervical screening as the HPV vaccine does not protect against all the types of HPV that cause cervical cancer. Until any changes are implemented women will continue to be encouraged to have a Pap test every two years.

Women younger than 25 years of age

The recommendation to commence cervical screening at 25 years of age is based on evidence that shows:

- cervical cancer in young women is rare;
- screening women younger than 25 years of age has not changed the number of cases of cervical cancer or deaths from cervical cancer in this age group;
- commencing screening at 25 years of age would prevent investigation and over treatment of common cervical abnormalities in young women that usually resolve spontaneously;
- HPV vaccination has already been shown to reduce cervical abnormalities among women younger than 25 years of age and will continue to reduce the risk of cervical abnormalities in this age group.

Until any changes are implemented, women younger than 25 years of age should discuss their individual circumstances with their cervical screening provider prior to making a decision to screen.

Women over 69 years of age

Women between 70 and 74 years of age who have had a regular screening test will be recommended to have an exit HPV test before leaving the cervical screening program. Women older than 69 years of age who have never been screened or have not had regular screening tests should have a HPV test if they request screening.

When are changes to the screening program expected?

The Australian and state and territory governments will consider the operational changes that will be required prior to making policy decisions. It is anticipated that any changes would not be implemented prior to 2016.

References

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Area Highlight

Cervical Screening Program

The Cervical Screening Program and Register is part of the Health Improvement Branch, Population Health Division, ACT Health. The Program and Register provides support for women, medical practitioners and laboratories through:

- **Follow-up on screen detected abnormalities to women and practitioners;**
- **Overdue reminder letters to women participating in the Program;**
- **Previous screening histories to laboratories reading current tests;**
- **Accreditation data for laboratories;**
- **De-identified data to federal agencies for statistical and research; and**
- **Providing information and education on the importance of screening with a view to preventing cervical cancer.**

If you wish to contact the Cervical Screening Program you can contact us on (02) 6205 1545.

Notifiable Disease Report

Number of notifications of selected notifiable conditions received in the Australian Capital Territory between 1 January and 30 June 2014.

	Number of notifications 1 Jan to 30 Jun 2014	1st QTR 2014	2nd QTR 2014	Annual Total 2013	5 year average 1 Jan to 30 Jun (2009-2013)
VACCINE PREVENTABLE CONDITIONS					
INFLUENZA A	108	44	64	349	119.2
INFLUENZA B	10	6	4	219	13.8
MENINGOCOCCAL DISEASE (INVASIVE)	1	0	1	3	1.4
MUMPS	1	0	1	1	0.6
PNEUMOCOCCAL DISEASE (INVASIVE)	7	3	4	14	11.4
GASTROINTESTINAL DISEASES					
CAMPYLOBACTERIOSIS	277	142	135	373	247.6
CRYPTOSPORIDIOSIS	26	22	4	39	32.0
GIARDIA	74	38	36	122	64.0
HEPATITIS A *	3	2	1	4	1.2
HEPATITIS E	1	0	1	1	1.0
SALMONELLOSIS	126	58	68	279	133.0
SHIGELLOSIS	8	8	0	10	4.6
YERSINIOSIS	3	1	2	2	2.2
SEXUALLY TRANSMITTED INFECTIONS					
CHLAMYDIA	602	298	304	1269	615.2
GONOCOCCAL INFECTION	77	49	28	114	46.6
VECTORBORNE & ARBOVIRUS					
DENGUE FEVER	11	4	7	10	8.6
MALARIA	4	2	2	13	5.4
RESPIRATORY CONDITIONS					
TUBERCULOSIS #	13	8	5	18	7.0

All Diseases except Tuberculosis are reported by onset date or closest known test date. Tuberculosis is reported by notification date.

* This condition includes cases that meet the probable and confirmed case definitions. Both probable and confirmed cases are nationally notifiable.

For the relevant year, Q1 refers to 1 January to 31 March, Q2 refers to 1 April to 30 June, Q3 refers to 1 July to 30 September, Q4 refers to 1 October to 31 December.

N.B. Data reported are the number of notifications received by ACT Health. Data are provisional and subject to change.

The number of notifications received for all notifiable diseases in the ACT is available at http://www9.health.gov.au/cda/source/cda-index.cfm

HIV data are reported annually by the Kirby Institute: http://www.kirby.unsw.edu.au/surveillance/Annual-Surveillance-Reports

Notifiable Disease Report

Number of notifications of selected notifiable conditions received in the Australian Capital Territory between 1 January and 30 June 2014.

Notes on notifications

Influenza notifications

Between 1 January and 30 June 2014, there were 108 cases of influenza A notified in the ACT, slightly less than the five year year-to-date (YTD) average of 119.2 cases. In the same period, there were 10 cases of influenza B notified in the ACT, which again is less than the five year YTD average of 13.8 cases. These figures suggest a later start to the influenza season in the ACT this year. Seasonal influenza vaccination is recommended for anyone aged 6 months and over, and is funded for certain at risk groups. Influenza notifications are summarised in more detail in the fortnightly influenza report during the influenza season, available at: http://health.act.gov.au/alerts/

Invasive meningococcal disease

There was one case of invasive meningococcal disease (IMD) notified between April and June 2014. The infection was caused by *Neisseria meningitidis* serotype B. In the last five years, there were 9 cases of IMD notified in the ACT, with serotype B causing infection in 8 of those cases. On average, there are 1.8 cases of IMD notified each year in the ACT. Under the National Immunisation Program, vaccination against meningococcal disease serotype C is available for children at 12 months of age.

Vaccine preventable diseases

One case of mumps was notified in the 2nd quarter of 2014. Confirmed cases of mumps are rare in the ACT – there have only been nine cases notified between 2009 and 2013. Protection against mumps is achieved by receiving two doses of a mumps containing vaccine. Under the National Immunisation Program, Measles Mumps Rubella (MMR) vaccine is given at 12 months of age, with a second dose given as the MMR Varicella (chickenpox) vaccine at 18 months of age.

Hepatitis E

There was one case of Hepatitis E notified in the 2nd quarter of 2014. Hepatitis E is a viral infection that affects the liver. Infection usually occurs after drinking faecally-contaminated water. The overall incidence of Hepatitis E in Australia is low. There have been only 7 cases of Hepatitis E notified in the ACT since 2009, including this case. All acquired their infections overseas.

Hot topics

Loose Fill Asbestos

Asbestos is the name given to a group of naturally occurring mineral fibres that were used extensively in many products due to their strength, insulating features and resistance to fire.

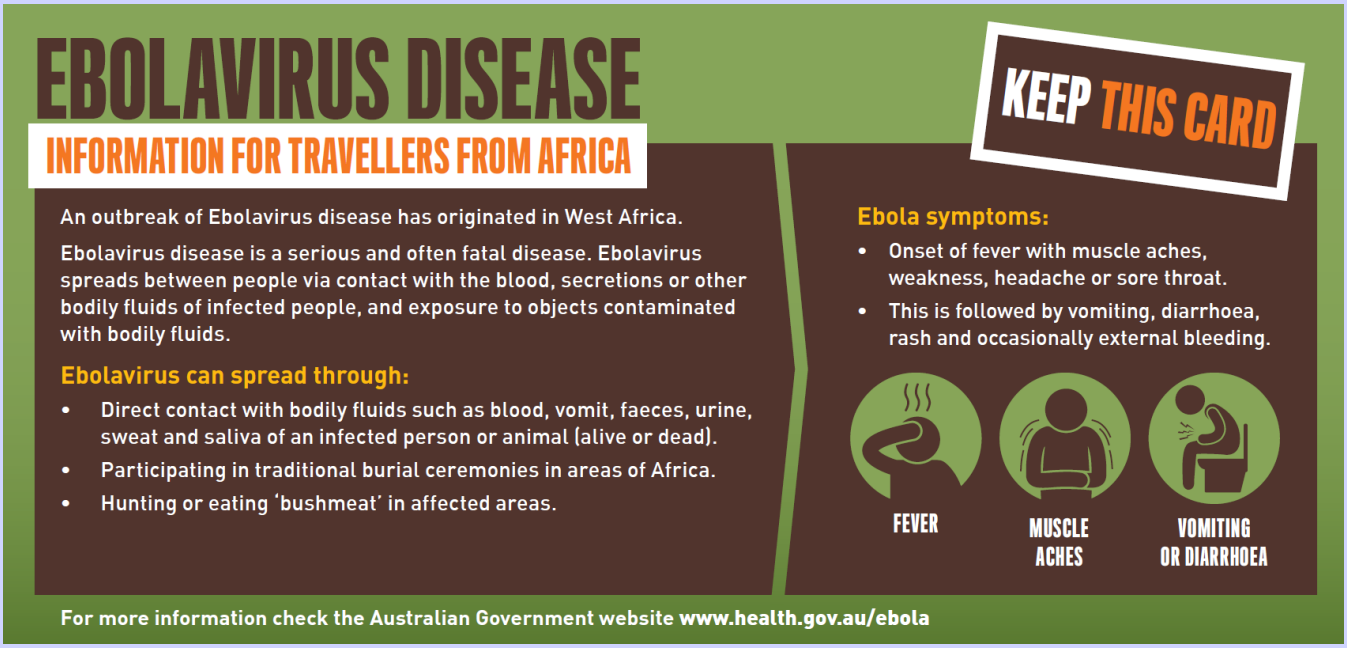
Exposure to asbestos is a health risk when fibres are inhaled. There are a number of medical conditions that can potentially be caused by inhalation of asbestos fibres. These include: pleural plaques, asbestosis, lung cancer and mesothelioma. The chance of developing an asbestos related disease increases with the cumulative exposure to asbestos fibres a person breathes in during their life time. Most people who develop an asbestos related medical condition have been exposed to a significant quantity of fibres, that is, to either a large amount of fibres or frequent exposure.

In the 1960's and 1970's, loose fill asbestos insulation, was installed in more than 1000 Canberra homes by a local company ('Mr Fluffy'). A remediation program undertaken between 1989-1993 aimed to remove visible and accessible asbestos insulation in affected residences. It has been found that loose fill asbestos insulation material remains in these residences, including in places such as internal and external wall cavities, subfloor spaces and underneath cornices. In some cases, fibres have also penetrated into living areas of homes.

To provide assistance and support to those impacted by loose-fill asbestos insulation and to provide advice to the ACT Government on the long term management of houses affected by loose-fill asbestos, the Asbestos Response Taskforce was established by the ACT Government in June 2014. ACT health joined with the Taskforce to conduct two health forums for the community in July and August 2014 and is part of the ACT Asbestos Response Taskforce's Community and Expert Reference Group (CERG).

More information is available through Asbestos Response Taskforce website www.act.gov.au/asbestostaskforce. An ACT Health Asbestos Fact Sheet is available at: http://www.act.gov.au/__data/assets/pdf_file/0004/617701/Asbestos_fact_sheet-ACT-Health.pdf

Ebolavirus Disease



Information card provided to returned travellers from Africa.