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Closing the gap clearinghouse

Education programs for Indigenous Australians about sexually transmitted infections and bloodborne viruses

Resource sheet no. 14 for the Closing the Gap Clearinghouse
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Summary

What we know

- Undiagnosed and untreated sexually transmissible infections (STIs) and bloodborne viruses (BBVs) can have serious health consequences for the individuals involved and the broader community.
- Indigenous Australians are over-represented in STI and BBV notification data.
- Human immunodeficiency virus (HIV) continues to be diagnosed at similar rates to non-Indigenous Australians.
- Sexual health education programs can positively influence behaviour, and reduce STIs, BBVs and unwanted pregnancies.

What works

- International evidence shows that sexual health education can lead to delayed initiation of sex and increased condom use among young people.
- The best interventions are those based on a sound understanding of the behaviours, knowledge, beliefs and practices that they are trying to influence.
- There is some Australian evidence that sexual health education programs can increase knowledge and change attitudes to STIs and BBVs, but only a small amount of evidence shows changes in behaviour.
- In the Indigenous context, there is evidence that a multifaceted approach that includes community education and health promotion reduces rates of STIs.
- A well-trained and well-resourced workforce to implement sexual health education programs in the community, clinical and school settings is paramount to their successful implementation and maintenance.

What doesn't work

- Mainstream social marketing messages for sexual health education do not always reach or influence Indigenous communities.
- Short one-off education sessions that are not reinforced.
- Imparting sexual health knowledge without focusing on behaviours.

What we don't know

- There is limited evidence available to support the effectiveness of sexual health education programs for Indigenous Australians, including:
  - peer-led and peer-based sexual health education
  - targeted social marketing campaigns for sexual health education
  - text messages and other forms of electronic media as sexual health education tools
  - school-based sexual health education.
- The risk practices, knowledge and attitudes of Indigenous Australians regarding STIs and BBVs.
- How to access difficult-to-reach target populations, including highly mobile populations, to deliver health promotion and education.

Introduction

As a group, Indigenous Australians experience poorer health outcomes than other Australians, including in the area of sexual health. Indigenous Australians have substantially higher rates of STIs, BBVs and teen pregnancy than non-Indigenous Australians, particularly for chlamydia, gonorrhoea, infectious syphilis, hepatitis B and hepatitis C (Kirby Institute 2011c).

Efforts to reduce these high rates are compounded by the historical and social context of Indigenous Australians. Although many Australians may experience elements of shame and embarrassment when they access health services for STIs and BBVs, for many Indigenous Australians there also exists a mistrust of 'mainstream' (non-Indigenous specific) health services as a result of past injustices and racially differentiated treatment (Arabena 2006). Historically, Indigenous Australians diagnosed with an STI were segregated and placed into privately run hospitals ('lock hospitals') that were in poor condition (Hunter 1998).

Sexual health education programs are one way of promoting sexual health for Indigenous Australians. They are typically social and behavioural interventions that try to reduce the risk of exposure to the individual and community by using strategies such as counselling, education, health promotion activities and community development activities (Morris et al. 2004).

Interventions can include:

- community-based programs and strategies
- providing sexual health education in schools
- training the workforce, such as health workers, teachers, social workers, youth workers and other professionals, in sexual health (WHO 2010).

Sexual health education programs aim to:

- reduce misinformation
- increase knowledge
- provide positive values and attitudes

- increase people's skills in making informed decisions and acting upon them
- improve perceptions about peer groups and social norms
- increase young people's communication with parents, caregivers and other trusted adults (UNESCO 2009).

There is strong evidence available from international studies that increasing a person's level of sexual health knowledge does not result in increased sexual activity and has a positive effect on sexual health outcomes (Hargreaves et al. 2008; UNESCO 2009). This resource sheet examines available evidence for the effectiveness of sexual health education programs for Indigenous Australians.

Background

Sexually transmissible infections and bloodborne viruses

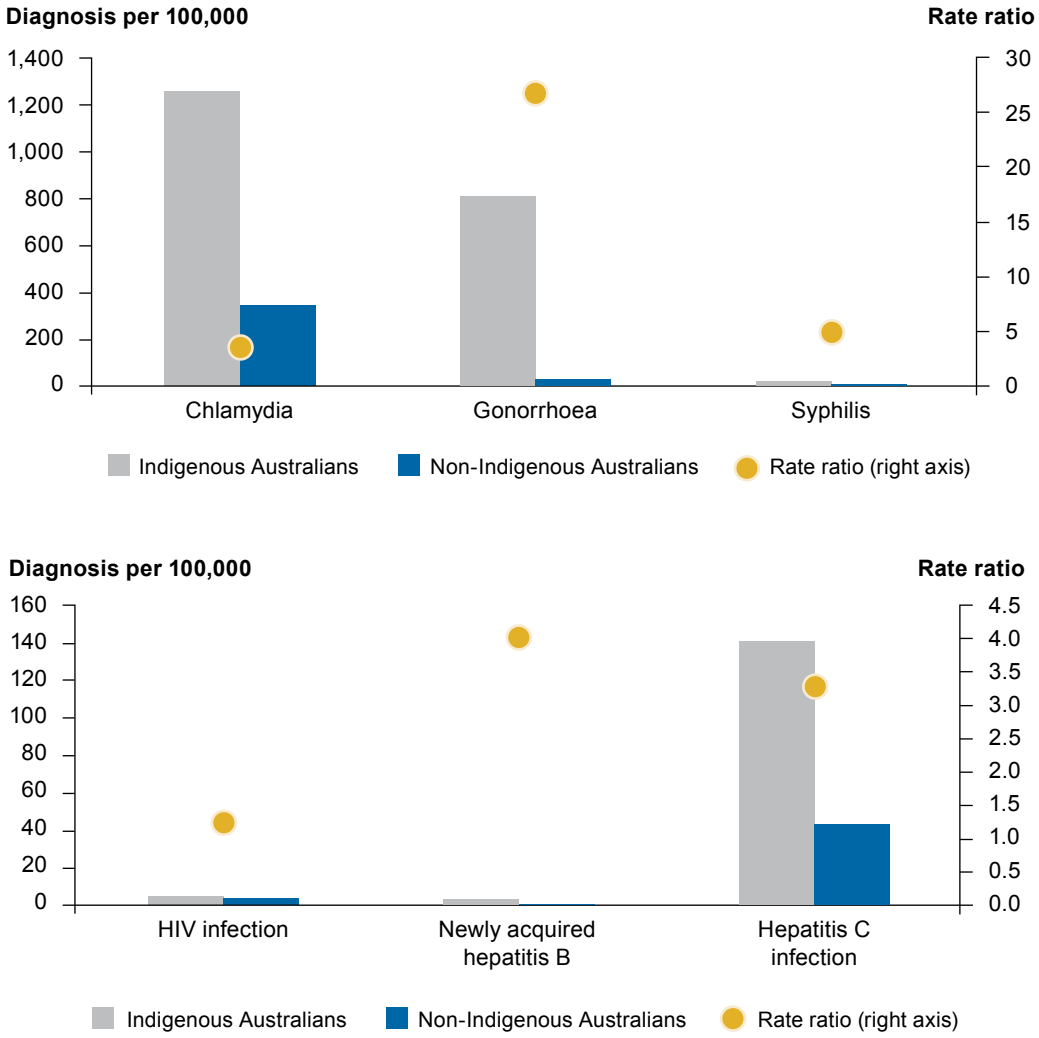
In Australia, notifiable sexually transmissible infections include chlamydia, gonorrhoea, trichomonas, infectious syphilis and donovanosis. Although there are a number of symptoms for each infection, all are curable with antibiotic treatment. However, if undiagnosed, STIs can result in poor outcomes in pregnancy, infertility for both men and women, an increased risk of HIV transmission and serious health consequences for newborn babies (WA Health 2005).

BBVs include HIV, hepatitis B and hepatitis C. HIV and viral hepatitis are significant public health issues for the Australian population at large, but Aboriginal and Torres Strait Islander peoples are especially vulnerable due to their generally poorer health.

The Kirby Institute—formerly the National Centre in HIV Epidemiology and Clinical Research (NCHECR)—has published comprehensive annual reports on the rates and trends of STIs and BBVs among Indigenous Australians (NCHECR 2007, 2008, 2009, 2010; Kirby Institute 2011c). These provide data on the increased rate of notifications for STIs and BBVs among Indigenous Australians compared with non-Indigenous Australians. In 2010, Indigenous Australians were diagnosed with:

- higher rates of chlamydia (4 times), gonorrhoea (27 times) and infectious syphilis (5 times)
- higher rates of newly acquired hepatitis B (4 times) and hepatitis C (3 times)
- similar HIV infection rates (Figure 1).

Due to considerable under-reporting of Indigenous status at diagnosis of STIs and BBVs, the reported rates are likely to be an under-estimate of actual rates. In 2010, Indigenous status was not reported in 51% of diagnosed cases of chlamydia, 35% of cases of gonorrhoea, 5% of cases of infectious syphilis, 20% of cases of newly acquired hepatitis B and 51% of diagnosed cases of hepatitis C (Kirby Institute 2011c).



(a) State/territory health jurisdictions in which Indigenous status was reported for more than 50% of diagnoses in each of the past 5 years.
(b) Includes notifications for non-Indigenous Australians and those for whom Indigenous status was not stated.

Notes

1. Population estimates by state/territory and year from *Experimental estimates of Aboriginal and Torres Strait Islander Australians* (ABS 2008).
2. Rate ratio Indigenous Australians: non-Indigenous Australians.

Sources: State/territory health authorities; National Notifiable Diseases Surveillance System (cited in Kirby Institute 2011c).

Figure 1: Age–specific notifications per 100,000[(a)] of notifications for STIs and BBVs by Indigenous status[(b)], 2010

Policy environment

There are five national strategies for STIs and BBVs that aim to reduce morbidity, mortality and social effects in Australia, and these have all identified Indigenous Australians as a priority population. The Third National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2010–2013 contains a set of guiding principles and identifies priority populations, priority action areas and issues relating to surveillance, research and workforce development. Its target priority action areas for Indigenous Australians include 'health promotion, community awareness and health literacy' (DoHA 2010:40). As well as national strategies to address STIs and BBVs, there are also various strategies at the state and territory levels.

Sexual health education programs

There are three broad types of education programs:

- *Community-based*: These are usually implemented outside the clinical setting within a community. They can be particularly effective as they are distributed across a large population and can include many at-risk individuals (O'Reilly & Piot 1996). They can include population targeted programs, peer education, and social marketing programs, and the use of text messaging aimed at specific groups.
- *Combined clinical and behavioural*: These involve clinical approaches to STI and BBV control and management combined with education to promote behaviour change.
- *School-based*: These provide sexual health education within the school environment and are an important avenue for improving sexual health outcomes for young people who bear the greatest burden of STIs (WHO 2006).

Although many different types of sexual health education programs have been implemented across Australia, only a small number of evaluations have been done. Of these, most were process evaluations or examined changes in levels of knowledge and attitudes, but did not measure outcomes such as behavioural change.

There are even fewer evaluations of sexual health education programs that target Indigenous Australians. In 2004, a systematic review of literature from 1990 to 2004 on programs for Indigenous Australians found a significant lack of evaluated programs, specifically those that focused on social and behavioural interventions (Morris et al. 2004). The following sections outline the available evidence on the different types of programs.

Community-based programs

Population targeted

Two sexual health education programs that target Indigenous Australians have been evaluated:

- Mooditj—a sexual health and positive lifestyle program for Indigenous youth aged 11–14 in rural and remote communities
- Chopped Liver—an Indigenous written and performed play aimed at raising awareness and knowledge of hepatitis C (see Box 1 for more details).

Box 1: Indigenous-specific sexual health education programs that have been evaluated

The Mooditj program, Family Planning Association of WA (FPWA) Sexual Health Services, Western Australia

The Mooditj program was developed in consultation with more than 200 people involved in Aboriginal sexual health and uses art, role plays and informal discussions to explore a range of sensitive topics, such as relationships and sexual issues. The program was adapted for use in each community to ensure it was culturally appropriate in the local area. Mooditj Leaders held discussions with the community, parents and Elders about the topics to be covered and the most appropriate way to deliver the information. Local Aboriginal language and customs were also incorporated in the program. Mooditj successfully delivered sexual health and positive lifestyle messages to youths, it can be delivered over 10 sessions and adapted to the school setting (Powell 2008).

Chopped Liver, Ilbijerri Theatre Company

The Indigenous written and performed play *Chopped Liver* was evaluated in 2008 and found to be successful in engaging individuals and communities, both Indigenous and non-Indigenous, and in educating and providing information about hepatitis C. The play was originally performed in prisons where there was a large percentage of prisoners with hepatitis C. It has since been performed in schools and communities, showing its versatility. The evaluation found that the play had provided the opportunity for health workers in Aboriginal cooperatives and organisations to discuss issues and increase their knowledge and confidence about addressing hepatitis C among themselves and with their clients (Keating 2009).

Although the quality of the evidence from the evaluations of these two programs was not strong, both are still running throughout Australia, and have large community, government, health services and school support. Key factors identified as contributing to their strong support included:

- engaging and creating partnerships between two or more organisations within a community
- having community control and decision-making for the project
- engaging with key people within a community
- having culturally appropriate methods of marketing to promote programs
- employing culturally appropriate activities to discuss issues and enhance knowledge (Keating 2009; Powell 2008).

Peer educators

Peer education involves training and supporting individuals to educate and encourage behavioural change among their peers. Evaluating peer education programs can be challenging as it can be difficult to determine whether the influence of the educators (over and above other factors like making condoms readily available, for example) resulted in behaviour change (Goren & Wright 2006). A meta-analysis of the effectiveness of using peer educators for HIV prevention in developing countries found that it reduced the sharing of equipment among injecting drug users, and increased HIV knowledge and condom use (Medley et al. 2009).

Peer educators are used in a number of sexual health education programs for Indigenous Australians. They focus on the promotion of safe sex, distribution of condoms and education in schools (FPWA Sexual Health Services 2011; Rayne et al. 2005).

Only one evaluation was found of an Indigenous–specific peer education program for sexual health—a retrospective qualitative evaluation of the Indigenous Peer Education Program that trained 22 Indigenous youths to become sexual health peer educators (Mikhailovich & Arabena 2005). The program was found to be effective in recruiting, training and retaining peer educators, and both peer educators and participants reported a positive experience. However, there was no evidence of longer–term outcomes, such as sustainable networks and employment.

Social marketing programs

Social marketing aims to promote voluntary behaviour change at both an individual and/or community level through the use of commercial marketing concepts (Thornley & Marsh 2010).

A recent systematic review investigated evidence of youth-specific social marketing interventions that reported changed behaviour for at least 1–2 years on a range of public health outcomes (Thornley & Marsh 2010). Evidence from the United States, New Zealand, Australia, Tonga, Canada, as well as Scandinavian and European countries was assessed. It found the common key success factors were:

- adopting an ethnic and age-specific youth-centred approach
- social marketing informed by research and theory
- application of commercial marketing success factors, such as branding, to social marketing
- use of appropriate messages that empowered youth
- working across sectors and organisations (Thornley & Marsh 2010).

Evaluations of social marketing health campaigns for Indigenous Australians have shown they have a limited effect on behaviour; in most cases their effect has been on raising awareness and knowledge of health initiatives (Boyle et al. 2010; Gregory et al. 2008).

An example of a sexual health social marketing campaign for Indigenous youth is the SNAKE condom campaign. It was developed by local youth in Mildura who worked closely with Marie Stopes Australia, Victorian Aboriginal Community Controlled Health Organisation, Mildura Aboriginal Health Service and an advertising agency and has been implemented nationally. It includes making condoms readily available, training and supporting peer educators and peer condom sellers, and advertising at Indigenous-specific and Indigenous-relevant services and locations. An early evaluation found that consumers recalled the message and its perceived relevance overall (Gregory et al. 2008). Internal surveying also associate increased condom use to the SNAKE campaign (ANTaR 2007); however, a comprehensive evaluation of its effectiveness for changing behaviour is still to be completed.

Text messaging

Short messaging service (SMS), also known as text messaging, is increasingly being used on a community-wide basis as a sexual health education tool and for clinical management. International evidence has shown that using text messages in health services was effective:

- in providing an acceptable form of receiving STI results in certain populations
- in reducing time to initial treatment
- in increasing attendance at health appointments
- as an acceptable medium for receiving sexual health education messages (Lim et al. 2008).

Recent Australian evidence has found that the use of text messaging as a health promotion tool for sexual health is effective in promoting recall of health messages, increasing knowledge, encouraging discussion of STIs with a doctor and, particularly for women, having an STI test (Lim et al. 2012; Wilkins & Mak 2007). Other areas of health have started to use mobile phones as an education tool, including Miwatj Health in the Northern Territory, which is spreading anti-tobacco messages through five music videos (Lemke 2009).

Combined clinical and behavioural programs

Primary health services play a central role in promoting sexual health. Clinical approaches in addressing STI rates in Indigenous communities have mostly focused on comprehensive primary health care or community-wide screening programs to detect STIs in people with few or mild symptoms, rapid treatment to reduce the period of infectivity and the chance of complications such as pelvic inflammatory disease, and treatment of contacts to reduce the rate of re-infection. For BBV, the clinical focus has been to detect infection early to reduce onward transmission, and initiate early management plans for the maintenance of good health for those living with BBV.

Clinical approaches to STI and BBV control and management, however, are best used in combination with education to promote behavioural change (Huang et al. 2008a). To date, more emphasis has been placed on evaluating the effectiveness of the clinical management of STIs and BBVs rather than evaluating the factors in a clinical setting that promote and sustain behavioural change.

As part of a multifaceted approach to sexual health, the World Health Organization (WHO 2010) advocates a comprehensive approach to the control of STIs that includes community-based education and health promotion. In remote Australia, (on the Anangu Pitjantjatjara Yankunytjarra Lands) the Nganampa Health Council devised the '8 ways to beat HIV', a comprehensive STI control model (Figure 2) that includes education and health promotion. Education is provided about STIs and reducing risk behaviours, with many resources available in local languages. Using this model led to a reduction in gonorrhoea, chlamydia and infectious syphilis between 1996 and 2003 (Huang et al. 2008b), and the model has been recognised nationally and used as a basis for programs and policies for STIs and HIV in many jurisdictions (Goller et al. 2009; Willis et al. 2004).

Source: DHAC 1999.

Figure 2: Eight ways to beat HIV: model of an STI control program, Nganampa Health Council

School-based programs

There is substantial international evidence on the effectiveness of sexual health education within the school environment. Education is an important avenue for improving sexual health outcomes for young people who bear the greatest burden of STIs (WHO 2006). Evaluations of international sexual health education programs in schools have found that they have successfully delayed the initiation of sex, decreased the frequency of sex and the number of sexual partners, increased the use of condoms and reduced risk-taking behaviour. Some evaluations have, however, found that educational programs have had little effect on these outcomes and a few have recorded negative outcomes (UNESCO 2009).

In Australia, there have been only a small number of evaluations of school-based programs for sexual health and no evaluations of Indigenous-specific school-based programs. Although some programs have been shown to be effective in increasing knowledge and changing attitudes, there is no evidence on their effectiveness in bringing about behaviour change, such as increased condom use, increased use of health services and decreased risk-taking behaviour (Paxton 2002; Skinner et al. 2000).

The *Share* program introduced to schools in South Australia to improve the sexual health, safety and wellbeing of high school students has been evaluated three times (see Box 2). It was deemed to be successful as it was well received and had the capacity to affect sexual health in the longer term, even though it did not lead to significant improvements in the knowledge, attitudes or behaviours of participating students in the evaluation period. The Aboriginal Focus Schools Program was an Indigenous-specific school-based program that evolved from *Share*. It aimed to promote and improve relationships, sexual health literacy and the wellbeing of Indigenous school students (Box 2). It has yet to be evaluated.

Other programs that have been evaluated include a teacher-delivered education program for hepatitis B vaccine to Year 7 students. A randomised–control trial of 135 Victorian schools found that there was no difference in uptake and completion of the vaccine between intervention schools and other schools; however, there was a significant increase in knowledge and changes in attitude in the intervention schools (Skinner et al. 2000). Another longitudinal, matched control study using qualitative and quantitative methods showed attitudinal changes in students aged 14–18 in the perceptions of HIV and AIDS when HIV–positive speakers delivered AIDS education (Paxton 2002).

Box 2: *Share* and the Focus Schools programs

The Sexual Health and Relationship Education (*Share*) Program was implemented by SHine SA, South Australian Department of Education and Children's Services and the Department of Health (Dyson & Fox 2006; Dyson et al. 2003; Johnson 2006; SHine SA 2006). It was a pilot program implemented in 15 schools involving 14,000 students. The aim was to deliver educational programs to improve the sexual health, safety and wellbeing of young people living in South Australia. The program included 15 lessons a year for students during Years 8, 9 and 10. Teaching staff were required to have 15 hours of formal training (Dyson & Fox 2006). The key elements were:

- taking a whole-school approach and developing community partnerships
- acknowledging that young people were sexual beings
- acknowledging and catering for the diversity of all students
- providing an appropriate and comprehensive curriculum context
- acknowledging the professional development and training needs of the school community.

Ongoing monitoring of the program has been completed through annual student learning and experience surveys that have been collected since the program began in 2006. There have been three evaluations—two were independent and one was conducted by SHine SA.

The first evaluation used interviews, workshops and questionnaires in a qualitative and quantitative analysis to assess the relevance and effectiveness of the program for students, parents and teachers (Dyson & Fox 2006). The second used a retrospective qualitative approach based on 22 in-depth interviews with 36 key people involved with the development and implementation of the program (Johnson 2006). Project documentation, support materials, reports and media articles were also analysed. The third evaluation analysed feedback from teachers, students and parents from the 15 schools over the 3 years (SHine SA 2006).

Overall, these evaluations found that the program did not result in any significant improvement in student sexual health knowledge, behaviours or attitudes. The program was, however, deemed to be successful because it was highly rated by both students and teachers and garnered strong family and community support. Additionally, although parent/child communication did not change dramatically as a result of the program, students indicated a greater degree of confidence that they could talk with their parents about sex and relationships if the need arose. (Dyson & Fox 2006). An important component of the program was to provide students with the ability to know where and how to access the sexual health information when it was needed, as well as critical thinking and decision-making skills. As the students were in the early to middle high school years when most were not sexually active, it was considered that the time frame of the evaluations may have been too short to assess the program's full effects.

As a result of its success, the *Share* program evolved into the Focus Schools Program, which is now being implemented across 102 South Australian schools. An adaptation of the program, called the Aboriginal Focus Schools Program, has been introduced specifically for use in Anangu and Aboriginal schools, and schools that have high numbers of Aboriginal students. All 17 Anangu and Aboriginal schools, plus an additional three schools, are involved in the program. In 2012, an evaluation of the Focus Schools Program by Professor Bruce Johnson will be available.

Facilitators and barriers

Understanding the population

In reviewing the evidence for best practice in sexual health promotion for Indigenous Australians, Willis and colleagues (2005:32) state:

> One of the key lessons we have learned from reviewing the evidence base is that the best interventions are those that are based on a sound knowledge of the behaviours, knowledge, beliefs or practices that they are trying to influence.

Box 3 provides examples of publications that discuss the needs of specific Indigenous populations at risk of STIs and BBVs and the barriers to, and facilitators of, successful sexual health programs for them. There are substantial gaps in the evidence for particular populations, including people in adult and juvenile corrections settings and people living in the Torres Strait Island region (DoHA 2010). Also, gaps exist in the evidence for:

- Indigenous populations living in urban and regional areas
- difficult-to-reach target populations, such as highly mobile populations, out of school populations, young people who are homeless or have inconsistent accommodation, people who inject drugs, and men who have sex with men.

Gender is also an important consideration when developing and delivering sexual health education programs for Indigenous Australians. There are gender differences in behaviours, risks taken and willingness to accept help. Programs also need to take account of men's and women's business. There are a number of studies that identify differences in attitudes and how programs should be tailored for Indigenous males and females (Senior & Chenhall 2008; Stark & Hope 2007).

Box 3: Examples of publications that discuss needs, barriers and/or facilitators for specific Indigenous populations to enable successful sexual health programs

'Something is going to get us': a consultation and development project for a national campaign addressing injecting drug use in Indigenous communities final report (Coupland et al. 2005)

This report on the consultation process with Indigenous injecting drug users informed the development of a national campaign to address injecting drug use in Indigenous communities. It provided information about Indigenous experiences of injecting drug use and related issues.

Queensland survey of Aboriginal and Torres Strait Islander men who have sex with men: 2004 (Lawrence et al. 2006)

This study provided data on the risk behaviour and community relationships in a broad cross–sectional sample of homosexually active men of Aboriginal and Torres Strait Islander background.

Just gettin' on with my life without thinkin' about it: the experiences of Aboriginal people in Western Australia who are HIV positive (Bonar et al. 2004)

This report gave HIV-positive Aboriginal people the opportunity to record their experiences, which enabled policy makers and health-care providers to offer better access to health services, reduce the social and health effect of HIV in the Aboriginal community, and understand the needs of and improve the quality of life for Aboriginal people who live with HIV.

Workforce

Having an adequately trained and resourced workforce to implement sexual health education programs in community, clinical and school settings is paramount to the successful implementation and maintenance of the programs. There are a number of priority actions for primary health-care workforce development in the Third National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2010–2013.

These include:

- understanding where the Aboriginal and Torres Strait Islander sexual health workers are located and identifying gaps
- providing training, qualifications and career pathways for Aboriginal and Torres Strait Islander sexual health workers and generalist Aboriginal health workers
- employing gender-specific workers where necessary
- improving effectiveness of training, recruitment and retention of Indigenous and non–Indigenous health staff (DoHA 2010).

Access to health hardware

Limited access to condoms can be a barrier to safe sex, particularly in rural and remote areas (Mooney-Somers et al. 2009). Distribution of condoms by peer educators and making condoms freely available at health-care clinics and other places frequented by the target population can increase the likelihood of condoms being used. However, access to condoms does not necessarily translate into their use. Changing behaviour and enhancing life skills are important factors in the effective use of condoms for sexual health. Also, condom use is often reduced when other factors, such as alcohol and drugs, are involved (Mooney-Somers et al. 2009; Stark & Hope 2007). The need for multifaceted programs that include enhanced life skills and reduced use of alcohol and other drugs is fundamental for improving sexual health.

Identification of Aboriginal and Torres Strait Islander people

The number of notifications for STIs and BBVs that do not have Indigenous status recorded means that the prevalence and morbidity associated with these infections is likely to be underestimated. The most accurate way of identifying Indigenous status is through self-reporting. The Australian Institute of Health and Welfare has developed best practice guidelines, *National best practice guidelines for collecting Indigenous status in health data sets*, for collecting and recording accurate information on the Indigenous status of patients (AIHW 2010). The implementation of these guidelines across data collection systems will improve the quality of the Indigenous data and enable better monitoring of changes over time, as well as assist in the planning and delivery of services.

Increasing the evidence base

This resource sheet has identified the need to increase the evidence base on sexual health programs for Indigenous Australians, in particular the evidence on whether programs lead to positive changes in behaviour. Measuring changes in behaviour, however, can be difficult and depends on many factors, including sample, settings, assessed outcomes and the targeted health research.

There also needs to be a better understanding of how to evaluate Indigenous programs and produce rigorous tools and methods that are appropriate for the Indigenous context (Mikhailovich et al. 2007).

The following recommendations on monitoring and evaluation for sexual health education were suggested as part of the report *Sexual health promotion for Aboriginal and Torres Strait Islander people: a community guide to evidence-based best practice in social and behavioural interventions* (Willis et al. 2005):

- Constant monitoring and evaluation of programs can provide services with the:
  - support needed to justify programs to funding bodies, program staff, board members and the community
  - knowledge of whether programs reached the desired population and those services indicated were received
  - capacity to improve programs and identify what works and what doesn't work and how this information can be used for future programs.
- Disseminate information to other medical services, clinical workers and other interested parties so that services can implement practices that work, and avoid those that don't. There is always information about what works (although seldom evaluated); however, information about what to avoid is rarely published and is often only disseminated through word of mouth. Publishing and attending conferences is in the best interests of all parties.

There are two studies being conducted that will contribute to the evidence base on sexual health education for Indigenous Australians. In 2009, the National Health and Medical Research Council provided funding for 5 years for a Clinical Research Excellence Centre in Aboriginal Health that focuses on STIs and BBVs in the Aboriginal Community Controlled Health sector. The primary areas of research are urban and regional improvements in clinical practice, and program delivery, and include:

- STRIVE—a randomised-control trial that will assist clinicians working in remote clinics to achieve best practice targets in STI control using a quality improvement framework with an overall outcome of reduced community prevalence for chlamydia, gonorrhoea and trichomonas.
- GOANNA—a national cross-sectional survey of young Indigenous people, addressing STI and BBV knowledge, risk behaviours and medical service access. This project is being carried out in every Australian state and territory and will add significantly to the evidence base (Kirby Institute 2011a,b).

Conclusion

A range of international evidence shows that sexual health education can lead to delayed initiation of sex and increased condom use among young people. There is less evidence available from Australia, with few Australian studies demonstrating that sexual health education results in changes in behaviour. However, some studies have shown that sexual health education programs were effective in increasing levels of knowledge and changing attitudes to STIs and BBVs.

Evidence suggests text messaging and other forms of electronic media show promise in increasing awareness and knowledge of sexual health issues; however, evidence for social marketing campaigns and the use of peer educators was either weak or addressed only increases in knowledge and awareness of sexual health rather than behaviour change. School-based programs have been shown to be effective in overseas studies. All of these tools and strategies for sexual health education require further research to determine their effectiveness for Indigenous Australians.

In the Indigenous context, there were only a small number of evaluations that had been conducted. There was, however, evidence that a multifaceted approach that included community education and health promotion reduced rates of STIs (Huang et al. 2008b). This approach used a comprehensive STI model in remote Australia with resources for different language groups. Although the evaluation evidence was limited, there are a number of sexual health education programs for Indigenous Australians that have been sustainable and have substantial support from communities, government, health services and schools.

Sexual health education needs to take into account the context in which it is delivered. The best interventions are those based on a sound understanding of the behaviours, knowledge, beliefs and practices that they are

trying to influence. A well-trained and resourced workforce to implement sexual health education programs in the community, clinical and school settings is also paramount to their success.

Most importantly, community interventions that are multifaceted, culturally appropriate and have guaranteed long-term funding are necessary for successful sexual health education programs.

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Acknowledgments

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Abbreviations

BBV	bloodborne virus
FPWA	Family Planning Association of WA
HIV	human immunodeficiency virus
NCHECR	National Centre in HIV Epidemiology and Clinical Research
STI	sexually transmissible infection

Terminology

Indigenous: Aboriginal and Torres Strait Islander and Indigenous are used interchangeably to refer to Australian Aboriginal or Torres Strait Islander peoples. The Closing the Gap Clearinghouse uses the term 'Indigenous Australians' to refer to Australia's first people.

Notification rates: Diagnoses of specific STIs are notified by state and territory health authorities to the National Notifiable Disease Surveillance System, maintained by the Australian Government Department of Health and Ageing. In most health jurisdictions, diagnoses of sexually transmissible infections were notified by the diagnosing laboratory, the medical practitioner, hospital, or a combination of these sources (NCHECR 2010).

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