

# North Queensland Aboriginal and Torres Strait Islander HIV Response Plan 2019 – 2021

## Acknowledgments

We acknowledge the traditional owners of the lands of North Queensland, and pay respects to Elders past, present and emerging.

We are grateful to Aboriginal and Torres Strait Islander people and organisations and others who participated in the stakeholder consultations and contributed to the Response Plan development process.

We acknowledge all people with HIV.

We pay respect to the many Aboriginal and Torres Strait Islander lesbian, gay, bisexual, transgender, sistergirl, brotherboy, gender diverse, non-binary, intersex, and queer (LGBTIQ+) people who are no longer with us, who fought for gender equality, healthcare and acceptance.

## Author

HIV Project Team, Tropical Public Health Services, Cairns and Hinterland Hospital and Health Service

# Contents

<i>Section</i>	<i>Page</i>
Introduction	3
HIV Data	6
Goals	7
Priority populations	8
A socio-ecological model to address HIV	9
Strategic alignment	10
North Queensland Aboriginal and Torres Strait Islander HIV Response Plan 2019-2021	10
1. Leadership and coordination	10
2. Health promotion and prevention	16
3. Testing	20
4. Integrated management – treatment and support	23
5. Data, monitoring and evaluation	28
Performance framework	31
Table 1. Alignment of domains of NQ HIV Response Plan and NQ STI Action Plan	10
<b>FIGURES</b>	
Figure 1. Framework for determinants of health, adapted from Dahlgren and Whitehead	5
Figure 2. Rate of new infections in North Queensland by Indigenous status 2009-2018	6
Figure 3. Priority populations of the Response Plan	8
Figure 4. Socio-ecological model of factors influencing HIV-related behaviour and/or behaviour change	9
Figure 5. person centred care model for people with HIV	25
Appendix 1. Consultation undertaken to inform the development of this response	35
Appendix 2. Abbreviations and acronyms	36
Appendix 3. References	37

## Introduction

This plan has been developed in response to the increasing notifications of HIV among Aboriginal and Torres Strait Islander people in North Queensland and a recommendation of the North Queensland HIV Roundtable: “it is essential to partner with Aboriginal and Torres Strait Islander people and communities to identify goals for prevention of HIV and be innovative in creating a service system that is culturally aware and supports an immediate and integrated management response when required”<sup>1</sup>. Actions have been identified to ensure a comprehensive response. Current funding, however, is limited. The proposed actions have been prioritised and some actions have been rationalised so that the Plan is achievable within the resources available. Timeframes for enacting the plan have been aligned with the North Queensland Aboriginal and Torres Strait Islander Sexually Transmissible Infections Action Plan (NQ STI Action Plan), recognising that there will be an ongoing need for a combined NQ STI and blood borne virus (BBV) Action Plan beyond June 2021.

This plan has been endorsed by the member organisations of the Chief Executive Steering Committee (Chief Executives or senior representation from Hospital and Health Services, Queensland Aboriginal and Islander Health Council, the Institute of Urban Indigenous Health, Primary Health Networks, Sexual Health Ministerial Advisory Committee and Communicable Diseases Branch) and, through this endorsement, these agencies are making a joint commitment to work together to support delivery and achieve the goals as detailed in this document.

The North Queensland Aboriginal and Torres Strait Islander HIV Response Plan 2019 – 2021 (NQ HIV Response Plan) outlines a regionally coordinated approach to HIV. The overarching intent of the plan is to make best use of limited resources and draw on the strengths of each service to provide high quality HIV services that deliver tangible and sustained outcomes. It is recognised that a successful approach will require integrated collaboration by public health, clinical and support organisations working with affected communities to minimise the impact on the health of individuals and to prevent the further spread of infection. In the context of this Response Plan, affected communities are broadly defined as Aboriginal and Torres Strait Islander people at risk of HIV and Aboriginal and Torres Strait Islander people with HIV. These are the priority populations for this Action Plan. ‘North Queensland’ in this Plan is defined as the area covering the five northern Queensland Hospital and Health Services (HHS): Cairns and Hinterland, Mackay, North West, Torres and Cape, and Townsville.

The NQ HIV Response Plan has been written to align with and add value to the NQ STI Action Plan. Many, if not all of the activities under the NQ STI Action Plan complement HIV prevention, hence an integrated approach to STI and BBV is appropriate. The actions in both plans will be executed by many of the same service providers and workforce. Aligning the NQ HIV Response Plan to the NQ STI Action Plan will ensure consistency and the most efficient use of resources.

The plan is underpinned by the guiding principles of the Eighth National HIV Strategy 2018-2022 to support a high-quality, evidence-based and equitable response to HIV, and makes a commitment to the ongoing and meaningful participation of people with HIV and affected communities in all aspects of the response.

1. Centrality of people with HIV and meaningful involvement of priority populations
2. Human rights
3. Access and equity
4. Health promotion
5. Prevention
6. Quality health services
7. Harm reduction
8. Shared responsibility
9. Commitment to evidence-based policy and programs
10. Partnership

It is through recognition of these principles that the high-level actions detailed in this response will be progressed to meaningful action.

The North Queensland response to HIV is modelled on a partnership and shared ownership approach, recognising the importance of Aboriginal and Torres Strait Islander community control, cultural capability and respect, community participation and comprehensive service provision. Acknowledgment is given to the contributions made by key partners who support improved health and wellbeing of North Queensland communities in the broader context of the social determinants of health. The plan promotes collaboration to truly effect change and recognises that individuals and communities affected by HIV are best placed to inform service models and successful initiatives. The Response builds on clinical and public health initiatives that have been introduced in some areas of North Queensland, which have shown positive outcomes in supporting people with HIV and begun to address local needs.

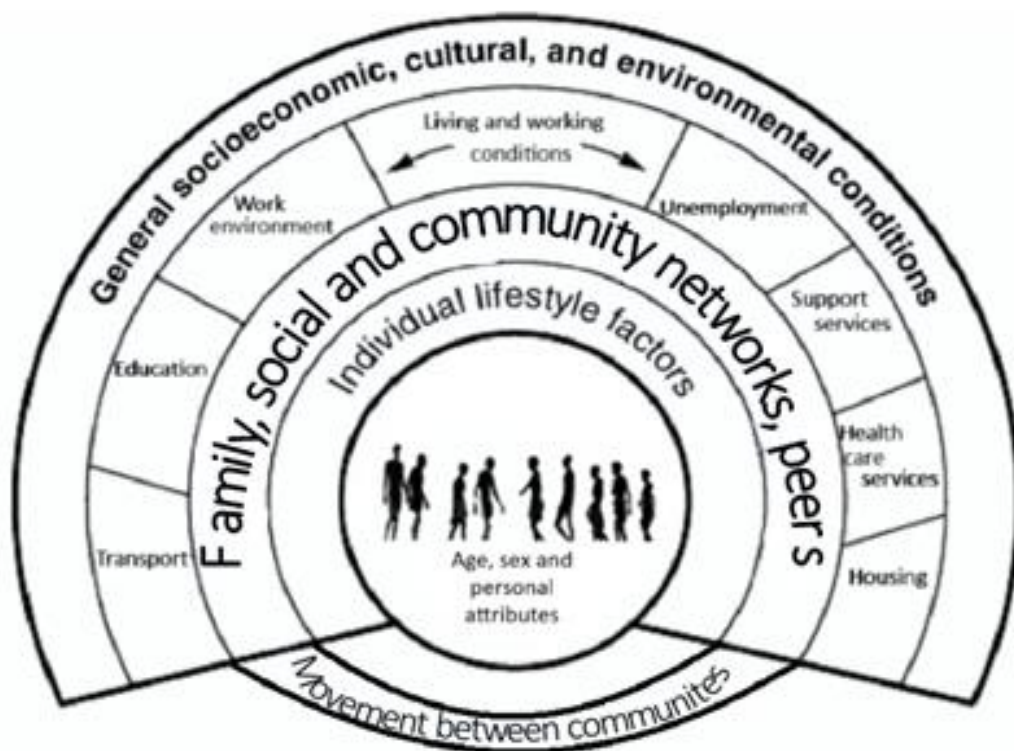
This Response Plan has been developed in consultation and collaboration with Aboriginal and Torres Strait Islander Community Controlled Health Services, Aboriginal and Torres Strait Islander community members, representatives from Queensland Health, including the five northern HHS, and non-government organisations (NGO) including relevant peak bodies and academic experts. A full list of agencies involved in the consultation is included as Appendix 1. Consultation will be ongoing as the high-level actions detailed in this response are further shaped to achieve operationalisation that is informed by community. Ongoing consultation with affected communities will be critical to the successful implementation of this Response.

Historically, strategic health promotion and outreach services for HIV care have been coordinated by sexual health services. However, in an outbreak situation there is a need for a wider, coordinated geographical response, bringing together resources and expertise to respond effectively. The organisations with roles to play in the delivery of the Response Plan are funded from a combination of State and Commonwealth sources, requiring a collaborative approach to funding to enable effective delivery. The Response Plan outlines response activities. Some of the most efficient ways to prevent further transmission of HIV are to increase testing of people at increased risk, to ensure that people with HIV are engaged in care, and to improve contact tracing. A sustainable ongoing response will be developed while the Response Plan is underway, ensuring that an appropriate strategy is active in the long term.

The concepts of shame and stigma have featured strongly in many of the consultations undertaken in the development of this Response Plan, as well as in the literature. Shame influences people’s experience of, and response to HIV in many and complex ways, including the way individuals engage with the health system; stigma and shame needs to be addressed to create a supportive environment. The health system must accommodate individuals and their varied histories. Models of HIV care require flexibility, continuity, sensitivity and understanding in all responses to circumstances that are faced by Aboriginal and Torres Strait Islander people with HIV.

Socioeconomic, cultural and environmental conditions also have an impact on the health of people at risk of or living with HIV (see figure 1). Individuals do not live in isolation but are subject to a wide range of influences, all of which can impact the attitudes and beliefs they hold, as well as the choices they make. These influences range from close interpersonal familial relationships and close friendships, through to the built environment and the laws of the country in which the person lives. It is important to consider all of the influences that act on an individual when devising initiatives to bring about changes in behaviour, and to support people to do this.

**Figure 1. Framework for determinants of health, adapted from Dahlgren and Whitehead 1991<sup>2</sup>:**



## HIV data

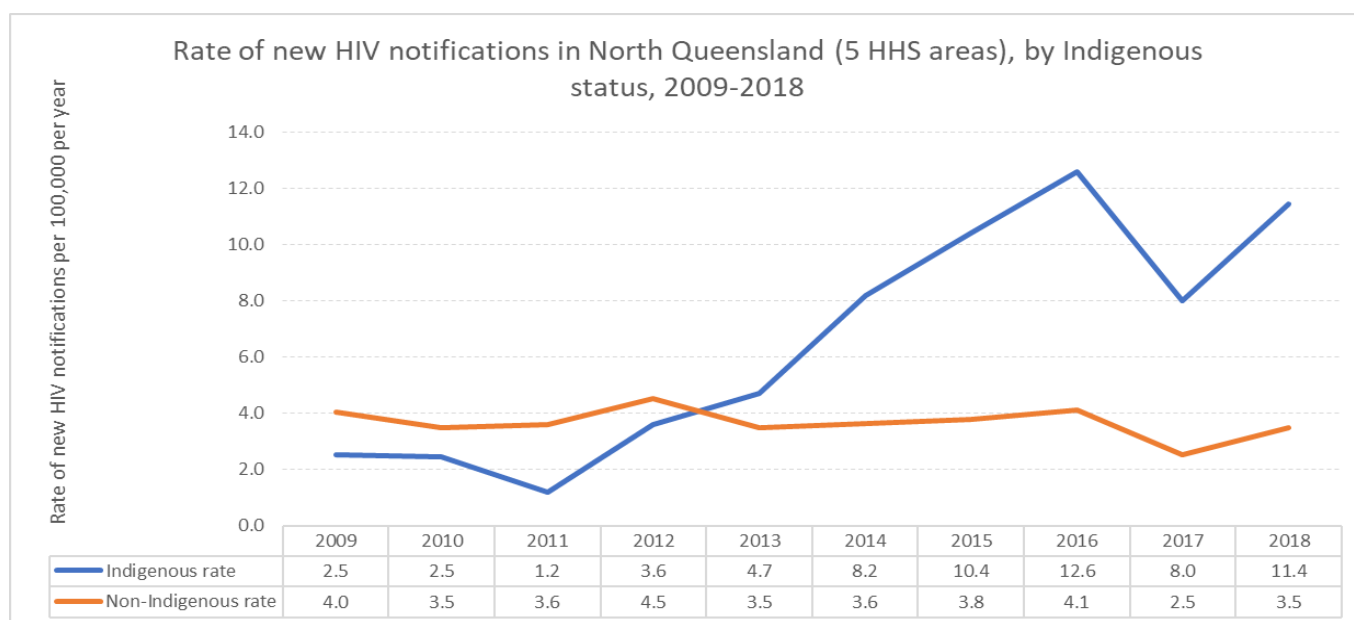
### North Queensland

The data below illustrate the current context that has informed development of this Response Plan:

- Since 2014 there has been an increase in new diagnoses of HIV in Aboriginal and Torres Strait Islander people in four of the five Hospital and Health Services in North Queensland - Cairns and Hinterland (CHHHS), Torres and Cape, Townsville and North-West Hospital and Health Services, resulting in 43 new diagnoses of HIV within the Aboriginal and Torres Strait Islander population(s) across NQ from January 2014 – December 2018.
- The notification rate of newly diagnosed HIV in Aboriginal and Torres Strait Islander people per 100,000 population in CHHHS increased from 3.6 in 2009 to a peak of 37 in 2016, and in Torres and Cape HHS, from zero in 2009 to 21.6 in 2018.
- This trend of increasing HIV notifications for Aboriginal and Torres Strait Islander people is also reflected at a state level in Queensland and is in contrast to the trend in the non-indigenous population, for which the notification rate of newly diagnosed HIV has reduced from 4.2 per 100,000 population in 2009 to 3.6 per 100,000 population in 2018 (figure 2).
- The data above reflect an HIV outbreak affecting Aboriginal and Torres Strait Islander people in Far North Queensland (FNQ), which is centred in Cairns and appears to have been initially catalysed by syphilis co-infection. People from other HHS regions have been infected with HIV, with several people known to have acquired the infection in Cairns.
- Since 2014, most new HIV diagnoses in Aboriginal and Torres Strait Islander people in North Queensland were in men aged 20-50 years. The predominant risk exposure was sexual transmission by men who have sex with men (MSM), some of whom have sex with both men and women.

(Source: NoCS 25 March 2019)

**Figure 2.**



## Australia

The data below are not intended to be read as a comprehensive summary but provide a snapshot of recent data from the 2018 Kirby Institute annual surveillance report<sup>3</sup>. More comprehensive information can be sourced from the full report and other national reports.

- Nationally, from 2013-2017 there was a 260% increase in the notification rate of HIV for Aboriginal and Torres Strait Islander populations in remote areas.
- The rate of HIV notifications increased by 41% in the Aboriginal and Torres Strait Islander population between 2013 and 2016, compared with a 12% decline in Australian-born non-Indigenous people. In 2017, the rate was 1.6 times as high as the Australian-born non-Indigenous population.
- In 2017, the notification rate in Aboriginal and Torres Strait Islander people aged 35 and above (5.4 per 100,000) was almost twice that of Australian-born non-Indigenous people (3.0 per 100,000).
- A greater proportion of notifications in the Aboriginal and Torres Strait Islander population were attributed to heterosexual sex and injection drug use in the years 2015-2017 than in the Australian-born non-Indigenous population.

## Papua New Guinea

- The prevalence of HIV in Papua New Guinea (PNG) is estimated at 0.89%, the highest rate of HIV in the Pacific region<sup>4</sup>. Sexual transmission is the leading transmission route<sup>5</sup>. Low HIV testing coverage may mean this is an underestimate.
- Although there has long been a concern that HIV transmission could occur in the cross-border region of the Torres Strait where there are close connections with PNG, there is no current evidence of such transmissions occurring. Where information is available, Cairns is the likely place of acquisition for all of the people who have been newly diagnosed with HIV in the Torres Strait in the recent past.

## Goals

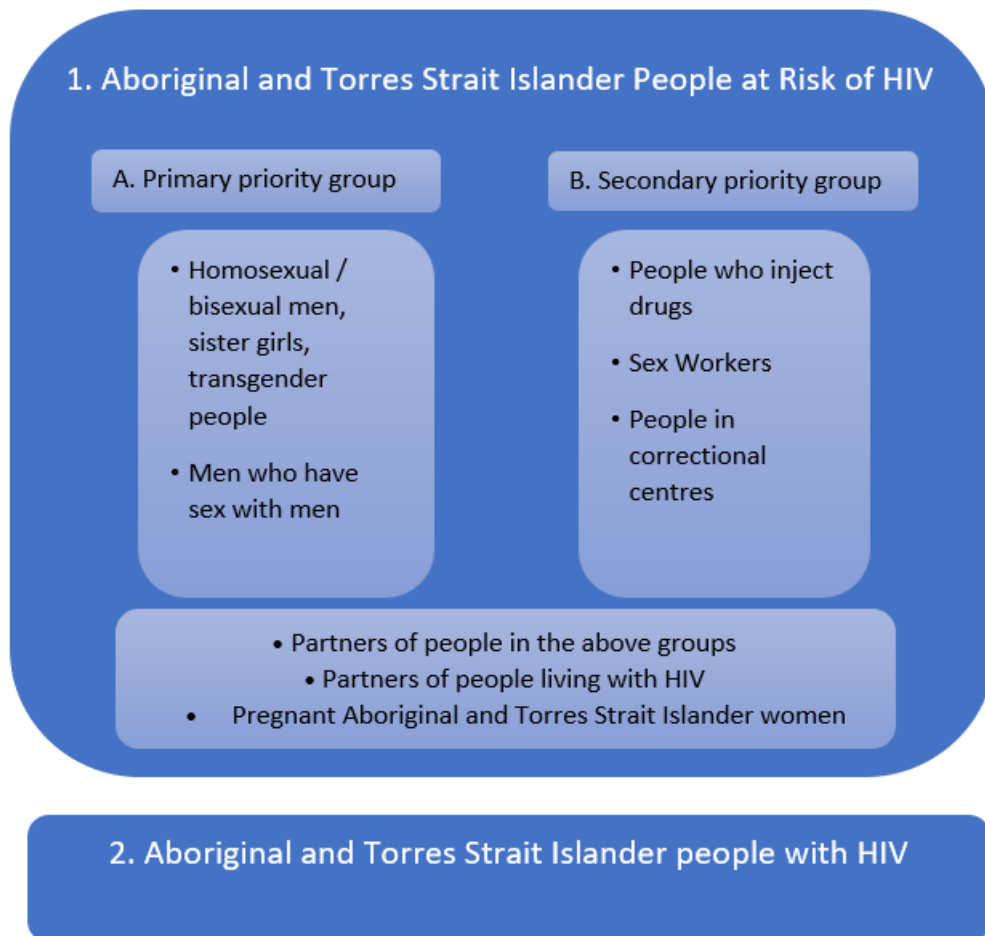
Goal 1 - Achieve the elimination of new transmissions of HIV in Aboriginal and Torres Strait Islander people in North Queensland

Goal 2 - Minimise the personal, social and public health impact of HIV for Aboriginal and Torres Strait Islander people in North Queensland

Goal 3 - Achieve the UNAIDS Fast-track targets 95-95-95<sup>1</sup> for Aboriginal and Torres Strait Islander people by 2024:

- 95% of people with HIV are aware of their status
- 95% of people who know their status are engaged in treatment and
- 95% of people on treatment have an undetectable viral load

## Priority populations



**Figure 3. Priority populations of the Response Plan**

This diagram illustrates the priority populations of this Response Plan; people at increased risk of acquiring HIV, and people with HIV.

People in the primary priority group of box 1 are at highest risk of acquiring the virus. People in the secondary priority group have either benefitted from effective public health initiatives to significantly reduce transmission, including condom use and needle and syringe programs, or in the case of correctional centres, are vulnerable because of a lack of access to preventive measures. The partners of people in these groups are also identified as priority populations.

Pregnant Aboriginal and Torres Strait Islander women are included as a priority risk group because, if they are found to be infected with HIV, this provides an opportunity to prevent transmission of the virus to the baby.

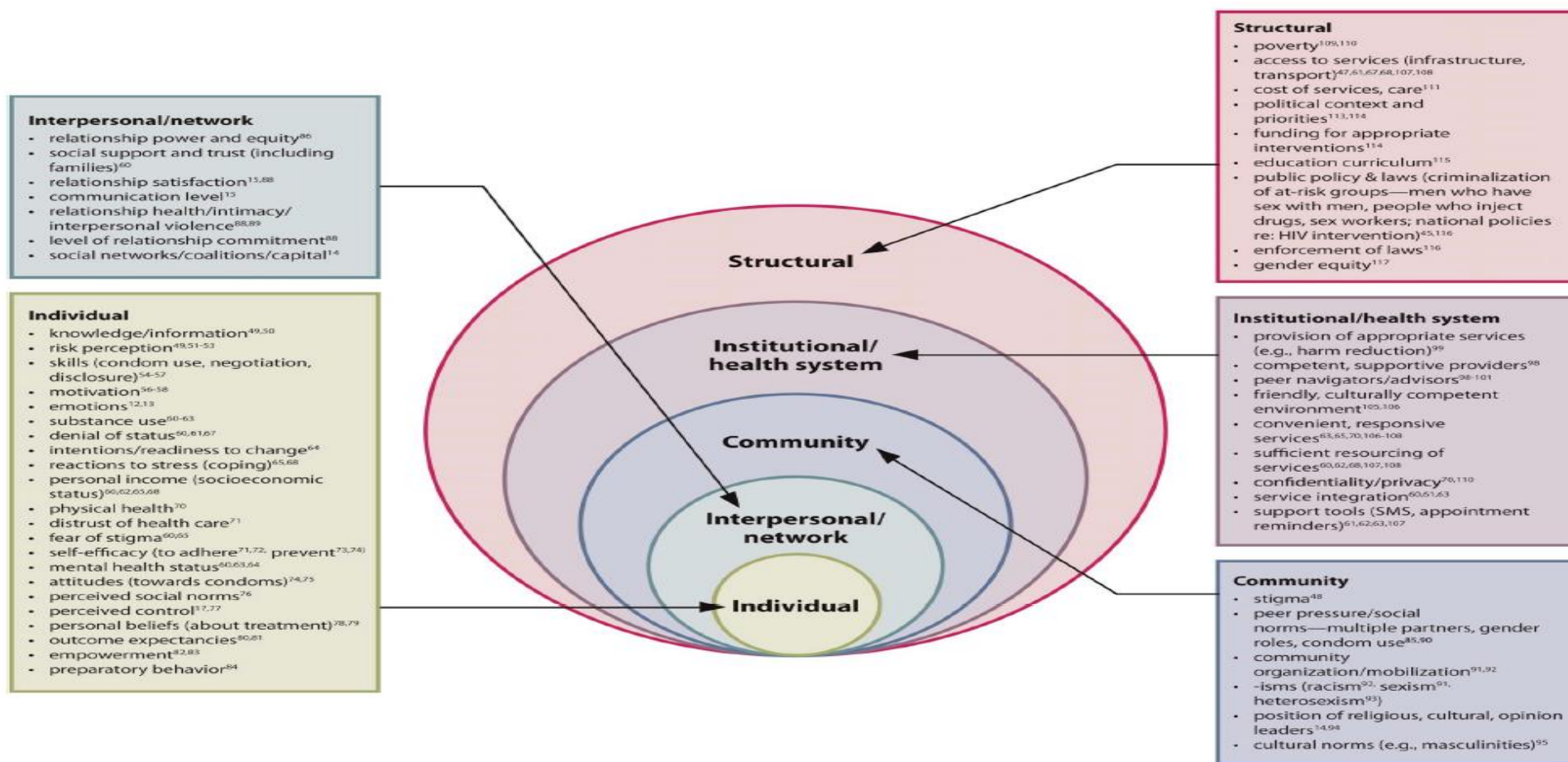
Aboriginal and Torres Strait Islander people with HIV are the priority for treatment and care. Such treatment not only protects the health of the positive person but can prevent onward transmission of the virus.



## A socio-ecological model to address HIV

The following model identifies factors influencing HIV-related behaviour and/ or behaviour change, using a socio-ecological lens. It provides a comprehensive summary of behaviour change interventions related to HIV prevention, treatment and care, which can be applied to the North Queensland context.

Figure 4. Socio-ecological model of factors influencing HIV-related behaviour and/or behaviour change<sup>6</sup>



## Strategic alignment

The Response Plan is aligned to:

- Queensland Sexual Health Strategy 2016–2021
- Queensland HIV Action Plan 2016–2021
- North Queensland Aboriginal and Torres Strait Islander STI Action Plan 2016–2021
- North Queensland HIV Roundtable Report 2017
- Fifth National Aboriginal and Torres Strait Islander Blood-Borne Viruses and Sexually Transmissible Infections Strategy 2018-2022
- Eighth National HIV Strategy 2018-2022

## North Queensland Aboriginal and Torres Strait Islander HIV Response Plan 2019-2021

The Response Plan comprises actions that have been grouped into the following five domains:

1. Leadership and coordination
2. Health promotion and prevention
3. Testing
4. Integrated management- treatment and support
5. Data, monitoring and evaluation

The domains detailed in the following pages are matched to those in the NQ STI Action Plan in table 1.

**Table 1. Alignment of domains of NQ Aboriginal and Torres Strait Islander HIV Response Plan and NQ Aboriginal and Torres Strait Islander STI Action Plan**

NQ HIV Response Plan	NQ STI Action Plan
1. Leadership and coordination	Implementation Better health services
2. Health promotion and prevention	Promotion and prevention
3. Testing	<b>Testing</b> and treatment
4. Integrated management – treatment and support	Testing and <b>treatment</b>
5. Data, monitoring and evaluation	Monitoring and evaluation

The Response Plan details priority actions to 2021. Each domain is presented with a description of the evidence and key issues, followed by a table of actions related to that domain. The actions shaded in grey are deferred actions that should be part of a multi-strategic response but are not resourced at present. The lead organisation noted beside each action is responsible for coordinating that action in partnership with the other stakeholders listed and for reporting progress.

# 1 Leadership and coordination

## What is the evidence?

- Public health approaches prevent disease, promote health and improve the well-being of the population. A public health approach includes addressing equitable access to services, engagement of communities, collaboration to leverage the skillsets brought by different organisations, advocacy for supportive policies and use of surveillance, research and evaluation data to inform an effective, flexible response<sup>7</sup>.
- Partnerships with community are a critical element of an effective response<sup>8</sup>. For communities affected by complex problems, involvement, empowerment and self-determination in shaping and defining solutions are, in themselves, important outcomes<sup>9</sup>.
- People with HIV and affected communities must have meaningful involvement in all aspects of the HIV response (GIPA principle)<sup>10</sup>. Similarly, Aboriginal and Torres Strait Islander involvement in all aspects of the HIV response supports best practice for Indigenous health outcomes<sup>11</sup>.
- Cross-jurisdictional information-sharing, and dialogue with State and Commonwealth services can enhance access to new tools for HIV prevention, testing and management<sup>12</sup>.
- Workforce training and support are important aspects of improving HIV prevention, detection and management; and health professionals must be supported to provide culturally responsive and safe, current, innovative and effective BBV and STI testing, treatment, monitoring and care<sup>4</sup>.

## Key issues/ strategies

### 1.1 Governance

The NQ HIV Response Plan builds on the existing governance structures in place for the NQ STI Action Plan. The Plan's governance structure consists of oversight by the Chief Executive Steering Committee and utilises Area Action Group structures. The Steering Committee includes membership from each of the five North Queensland Hospital and Health Service Chief Executives and a range of partner agencies including the Aboriginal and Torres Strait Islander Health Branch, Queensland Aboriginal and Islander Health Council (QAIHC) and the Communicable Diseases Branch (CDB). The Chief Executive Steering Committee has endorsed the alignment of the governance of the HIV Response Plan with the existing NQ STI Action Plan

The committees and action groups of the NQ STI Action Plan will identify and include additional HIV stakeholders who may not have previously been engaged in the NQ STI Action Plan. In the 2018 evaluation of the NQ STI Action Plan, it was recommended that Local Area Action Plans be developed, detailing local activities related to each of the NQ STI Action Plan domains. These local plans, which have yet to be finalised, will incorporate activities detailed in the NQ HIV Response Plan.

The Tropical Public Health Services (TPHS) – Sexual Health Team will assist with the outbreak response and other activities in the five HHS areas, supported by CDB. Public Health Services play a key role in coordinating a regional response, ensuring surveillance data informs a flexible response to the outbreak. All partners' contributions are key to an effective regional response with a coordinating function that aligns with the existing NQ STI Action Plan governance structure.

The Cairns-based public health team will oversee regional implementation of the HIV Response Plan and will ensure the following:

- Close collaboration with Townsville-based public health staff and the Brisbane-based HIV Public Health team
- Integrated with the pre-existing NQ STI Action Plan governance structure
- Regional health promotion leadership and activities including support for community input
- Public health support to clinical services including the primary care sector
- Health surveillance, monitoring and reporting
- Oversight of the governance process and support to governance committees.

## 1.2 Workforce

Building and maintaining an appropriately skilled workforce is critical to achieving the goals of the Response Plan. The current workforce is diverse, and a range of strategies will be needed to meet identified needs. Where possible and appropriate, positions should be Aboriginal and Torres Strait Islander identified. There are longstanding challenges to sustaining a workforce in remote settings, and to the competing demands on primary care staff. In addition to the wider role of primary health care in offering HIV testing, primary health care practitioners who are HIV treatment prescribers are crucial for providing treatment and clinical care for people with HIV in the community. Ensuring an appropriate geographic spread and recruiting and/or training to address identified gaps is a potential challenge. The level of support offered to general practitioners (GPs) who are diagnosing HIV infections but who are not HIV treatment providers will need to be reviewed and addressed as required. Sexual Health Services play an important role in workforce development and supporting GPs to expand the range of HIV care providers.

Consultation for this Response Plan has identified that some primary care clinicians have expressed reluctance to question Aboriginal and Torres Strait Islander clients about sexual behaviours. In the North Queensland setting, where identification of risk factors may not occur, there is a need to increase clinician awareness of clinical presentations that may a) indicate a person is at risk despite non-disclosure of risk behaviours, or b) be suggestive of an HIV seroconversion or related condition. Clinicians in primary care could benefit from increased HIV awareness.

The health workforce (e.g. in primary care, hospitals and other settings including Corrections) needs appropriate levels of knowledge and awareness of HIV prevention, testing and management - including contact tracing. The workforce requires appropriate training, knowledge and skills to maximise all opportunities for diagnosis, and to create environments where people at risk of or living with HIV have access to professional, unbiased and equitable care that meets their health needs. Overseas-trained doctors may sometimes require education to raise awareness about sexual health and contact tracing<sup>13</sup>.

It is important that there is collaboration between primary care and specialist HIV service providers with other agencies providing drug and alcohol and mental health services to enhance capacity to meet the needs of people with HIV who also require this support.

Community organisations and the health promotion workforce play vital roles in maintaining and improving the health of populations through education, advocacy, creating environments that support healthy behaviours, and enabling access to prevention, treatment and care services. Health promotion activities and initiatives will be informed by the available research and evidence base.

The national post-exposure prophylaxis (PEP) guidelines state that PEP should, ideally, be obtained from a GP or sexual health clinics but acknowledges that geographic considerations may necessitate presentation to a hospital Emergency Department<sup>14</sup>; in north Queensland; this should also include the local primary care centre. Staff training to deliver PEP in these services should include the necessity for appropriate priority and sensitivity. Some negative experiences accessing PEP have been reported anecdotally in north Queensland, which may lead to preventable HIV transmissions as has happened nationally<sup>15</sup>.

### **1.3 Leadership**

Public health services play a key role in coordinating regional approaches by identifying, responding to and controlling outbreaks. The regional implementation for this Response Plan will be led by TPHS. Activities will include ongoing epidemiological analysis of trends and the development of appropriate responses in collaboration with key partners. All activities will be underpinned by workforce development in relation to HIV in Aboriginal and Torres Strait Islander communities.

Sexual Health Services, as the experts in HIV care, will continue to undertake prevention and health promotion activities, provide direct care for people with HIV, outreach, expert clinical advice, support and education, and work with other services to provide comprehensive HIV treatment and care.

This plan recognises the strong leadership that organisations such as QAIHC, Aboriginal and Torres Strait Islander Community Controlled Health Services (AICCHS) and Primary Health Networks (PHN) have in supporting and delivering primary health care. Similarly, the plan recognises that NGOs such as Queensland AIDS Council (QuAC) and Queensland Positive People (QPP) have strong leadership in community engagement in relation to HIV and the LGBTIQ+ community.

Public health and sexual health teams will work closely with community and facilitate collaboration between services and make effective use of scarce resources and ensure knowledge and learnings are shared effectively across regions.

Responsibility for implementation of the Response Plan is shared amongst Queensland Health, AICCHS, NGO and PHN in partnership with the affected communities and population groups. Collaboration and partnership between these organisations is essential to the successful delivery of the plan.

### **1.4 Development of guidelines**

Evidence-informed guidelines can support best practice care. Consultation has identified that clinicians use varied and variable approaches to offering HIV testing for Aboriginal and Torres Strait Islander people in North Queensland. In particular, there is limited active inquiry about behavioural risk factors by clinicians. This highlights the need to review North Queensland guidelines regarding HIV testing amidst the changing epidemiology of HIV in the region and consultation findings. There is a need to clearly articulate outbreak response guidelines to guide action in the event of increased notifications. The evolving landscape of newly-diagnosed people with HIV in widely-dispersed locations may also necessitate a review of management guidelines and referral pathways to optimise care provision that meets the needs of the affected communities.

**Priority 1: Leadership and coordination**

Action	Timeline	Lead	Stakeholder
<b>Leadership</b>			
1.1 Ensure strong leadership, collaboration and coordination to implement an evidence-based, human rights approach and centralised public health response to manage HIV in North Queensland for Aboriginal and Torres Strait Islander people, which includes cross border considerations with Papua New Guinea. This will be achieved through access to relevant knowledge, skills, expertise and information.	By June 2020	TPHS	SHS, AICCHS, GP, HHS, NGO, CDB, PNG services
1.2 Maintain and build strong relationships between partner agencies in North Queensland and ensure all implementation partners have a role in governance of the HIV response through active participation in the governance structure, working groups and focus groups as appropriate.	By Dec 2019	TPHS	All
<b>Workforce</b>			
1.3 Provide workforce development opportunities to develop the skills of the HIV and generalist workforce, including s100 prescribers, to support culturally appropriate, evidence-based clinical practice using a partnership approach.	By June 2020	ASHM QH contract via CDB	SHS, PHN, QAIHC, PHU, HHS
<b>Guidelines</b>			
1.4 Develop a North Queensland HIV outbreak response guideline for endorsement by all relevant key partners to support the timely and effective response to the outbreak and any future clusters.	By June 2020	TPHS	SHS, QAIHC, AICCHS HHS, PHN, TPHU, CDB

### Priority 1: Leadership and coordination – deferred actions

Action	Timeline not specified	Lead	Stakeholder
<b>Leadership</b>		To coordinate and report	
1.1 Work with provider organisations to support them to address legal, regulatory and policy barriers that negatively influence health-seeking behaviours of Aboriginal and Torres Strait Islander people with HIV or at risk of HIV.		QPP QuAC	SHS, AICCHS, GP, HHS, NGO, CDB, PHU
1.2 Review and develop models of care informed by consultation with Aboriginal and Torres Strait Islander people with HIV to meet their needs and preferences. Such models should include choice of provider, access to specialist HIV expertise, peer navigation, and service models offering multidisciplinary, individualised, holistic care and culturally appropriate management.		QPP/SHS	TPHS, QAIHC, AICCHS, PHN, HHS, PHU
<b>Workforce</b>			
1.3 Create more positions for Aboriginal and Torres Strait Islander health professionals with sexual health and HIV competence.		TPHS/SHS	HHS, QAIHC
1.4 Increase sexual health and HIV testing in primary health consultations through the development, implementation and evaluation of education and communication strategies to support concurrent testing for HIV and other STI as part of routine, holistic, culturally-safe primary health care.		SHS	AICCHS, QAIHC, PHN, QuAC, HHS, TPHSU
1.5 Reduce stigma and discrimination among healthcare providers and support organisations in relation to working with people with HIV and people at risk of HIV.	*subject to funds	CSHS QPP	SHS, QAIHC, PHN, HHS, QuAC, AICCHS
<b>Guidelines</b>			
Develop and implement continuous quality improvement indicators and targets to support best practice HIV testing and management.	*subject to funds	TPHS	QAIHC, PHN, AICCHS, GP, HHS, TPHU

## 2. Health promotion and prevention

### What is the evidence?

- Effective HIV prevention requires a suite of risk reduction strategies ('prevention toolbox'), including condoms, treatment as prevention, PEP and post-exposure prophylaxis (PrEP), and access to sterile injecting equipment<sup>12</sup>.
- There is emerging evidence that gay men and MSM are reducing their condom use, thought to be partly attributable to PrEP<sup>16</sup>.
- Amongst gay men and MSM in Queensland, there is an increasing awareness and use of PEP and PrEP, however the use of PrEP among Aboriginal and Torres Strait Islander people is low<sup>17</sup>.
- Most HIV infections take place early in relationships or through casual sex. Fewer infections take place in longer-term relationships<sup>18</sup>.
- High levels of mobility between cities and remote communities contribute to high rates of STI among Aboriginal and Torres Strait Islander people. Such mobility is highest among people aged 17 to 25 years old<sup>19</sup>. It has been asserted that "well conducted public health strategies aimed at educating the population about safe sex when travelling have the potential to significantly reduce the prevalence of STI in these communities or possibly lead to their elimination"<sup>19</sup>.
- Aboriginal and Torres Strait Islander young people in Far North Queensland have lower levels of knowledge in relation to STI and HIV, and higher levels of partner change than their non-Indigenous peers<sup>20</sup>. There is also anecdotal evidence from clinicians of limited knowledge of the health and social consequences for Aboriginal and Torres Strait Islander people newly-diagnosed with HIV.
- Targeting gaps in knowledge and misconceptions can reduce stigma and increase rates of testing and treatment<sup>4</sup>.
- Young people who receive curriculum-based sexual health education are more likely to adopt healthy sexual behaviours and are less likely to present with STI, including HIV<sup>21</sup>.
- Peer education for young Aboriginal and Torres Strait Islander people has been shown to influence their behavioural intentions and attitudes pertaining to STI and BBV<sup>22</sup>.
- There is a need for health promotion around PrEP to be developed and implemented by Aboriginal and Torres Strait Islander people to ensure it remains consistent with principles of community control<sup>23</sup>.
- Providing discreet all-hours access to condoms is a proven and effective strategy to encourage safe sex practice<sup>21</sup>. In 2006, sexually active young people living in remote north Queensland communities did not have reliable commercial access to condoms<sup>24</sup>; however, NQ condoms has made some inroads into free 24-hour condom supply, particularly in remote North Queensland; more can still be done to improve this.
- There is a greater proportion of HIV attributable to injecting drug use and heterosexual contact in Aboriginal and Torres Strait Islander people than in their non-Indigenous counterparts<sup>3</sup>.

### Key issues/ strategies – how evidence applies to North Queensland context

#### 2.1 Health Education

Sustained education and prevention initiatives are critical in reducing the spread of STI including HIV among Aboriginal and Torres Strait Islander people in north Queensland. Health education, including curriculum-based education for young people, is essential to raise individual and community awareness of HIV, address stigma and shame, promote risk modification and safe sex practices to prevent HIV transmission, and to increase the number of people seeking testing and biomedical methods (treatment as prevention (TasP), PEP and PrEP) to prevent HIV transmission. Health education is an important component in improving the health literacy in north Queensland around HIV. A health literate individual has the skills and knowledge to access, understand and use information to make decisions, and take action about their sexual health and healthcare.

Education and prevention initiatives must be:

- culturally safe and linguistically appropriate,
- co-designed and led by the community



- responsive to the social, cultural and environmental context in which they are being implemented
- embedded within a community-wide approach to build general knowledge and awareness and minimise stigmatisation of priority target groups.

## 2.2 Health Promotion

Health promotion approaches are more than providing education to the community or target audience. Effective health promotion aims to ensure the healthy choice is the easy choice. To achieve this, health promotion approaches are guided by the five action areas of the Ottawa Charter for Health Promotion which are to create supportive environments, strengthen community actions, develop personal skills, reorient health services and build healthy public policy.

Evaluating health promotion and prevention initiatives is important to build the evidence base, which can inform the ongoing efforts and lead to the scaling-up and adaption of successful initiatives in other communities.

## 2.3 Prevention strategies

Discreet all-hours access to condoms is important to reduce the burden of STI and manage HIV risk in remote settings. Policy-makers and health system managers need to support remote community condom supply; health service managers should embed condom distribution and reporting into the core accountabilities of primary health care service delivery. Public health authorities also need to work with community leaders to understand and address supply barriers, thereby ensuring that all-hours condom distribution and infrastructure is in place in communities and functioning<sup>24</sup>. All-hours condom access in remote communities in North Queensland has increased since 2016 through activities of the NQ STI Action Plan.

Aboriginal and Torres Strait Islander gay men and MSM appear to be at a relatively higher risk of HIV transmission than their mainstream peers. Many men in the mainstream gay/ MSM population in Queensland have considerable knowledge about HIV and opportunities to reduce risk of transmission. The population were ready to embrace new technologies that could reduce the risk such as PrEP. Amongst Aboriginal and Torres Strait Islander MSM and gay men in North Queensland, however, there appears to be limited knowledge about HIV, PrEP and other HIV prevention strategies. In this situation, there is urgent work to do to raise awareness about HIV risk and prevention strategies to enable people to make educated decisions about accessing PrEP or PEP. The Closing the Gap co-payment measure can reduce one barrier to Aboriginal and Torres Strait Islander people's access to PrEP<sup>4</sup>.

Alongside the promotion of condom use and other behavioural strategies, there is a need to raise awareness of biomedical methods of preventing HIV transmission, including PrEP, PEP, and TasP. Promoting the concept of 'undetectable equals untransmittable' (U=U) has the potential to reduce stigma and shame associated with HIV, both among people with HIV, and in the wider population.

Access to sterile injecting equipment is an important strategy in HIV prevention. The number of HIV diagnoses in North Queensland attributable to injecting drug use in all people, including Aboriginal and Torres Strait Islander people, is currently low. There is limited information about the extent of injecting drug use amongst Aboriginal and Torres Strait Islander people in North Queensland. The proportion of people accessing the Needle and Syringe Program (NSP) in the 'northern region' of Queensland who are Aboriginal and Torres Strait Islander people is 12%, compared with 13% state-wide<sup>25</sup>. There has been an increase in the proportion of Aboriginal and Torres Strait Islander people accessing Cairns NSP sites in the past four years, and this might reflect a change in how sterile injecting equipment is being accessed, rather than an increase in injection drug use. There is a need to monitor this situation, promote harm-reduction strategies including maintaining access to sterile injecting equipment in the region, promoting strategies to support regular HIV testing for people who inject drugs, and responding promptly to any increase in HIV diagnoses in people who inject drugs.

The following health promotion and prevention actions complement the activities that are already underway as part of the NQSTI Action Plan.

**Priority 2: Health promotion and prevention**

Action	Timeline	Lead	Stakeholder
<b>Raise awareness and promote healthy behaviours</b>			
2.1 Promote condom use as a means of preventing STI and HIV, and increase the use of PrEP, PEP and TasP for high-risk Aboriginal and Torres Strait Islander populations.	By June 2020	SHS	QuAC, PHU, QPP, HHS

**Priority 2: Health promotion and prevention – deferred actions**

Action	Timeline	Lead	Stakeholder
<b>Raise awareness and promote healthy behaviours</b>			
2.1 Develop, implement, support and evaluate a range of culturally appropriate, community co-designed and led, multi-strategic HIV education and prevention initiatives to build community knowledge and awareness and support healthy behaviours, that target the following: <ul style="list-style-type: none"> <li>- HIV, transmission risk and protective behaviours</li> <li>- HIV treatment, effects on health and health benefits of early diagnosis and clinical engagement</li> <li>- Testing options</li> <li>- Condom availability and use</li> <li>- Sexual health stigma and shame.</li> </ul>	*subject to funds	QuAC	AICCHS, QAIHC, PHN, HHS, SHS, PHU
2.2 Seek further funding and engage expertise to implement tailored and locally appropriate social marketing campaigns covering: HIV, its transmission and risk; combination and biomedical prevention, condoms, TasP, undetectable viral load, post-exposure prophylaxis (PEP) and pre-exposure prophylaxis (PrEP); needle and syringe programs (NSP); testing and treatment and contact tracing		TPHS	CSHS, QuAC, AICCHS, QAIHC, QPP, PHN, PHU, QNSP
2.3 Include HIV awareness in sexual health education in schools, community settings, correctional centres and other settings.		PHU HHS	QuAC, SHS, AICCHS, Lives Lived Well

Action	Timeline	Lead	Stakeholder
2.4 Promote knowledge and awareness of safe use and disposal of injecting equipment, and encourage HIV testing and promotion of safe sex for users of the Needle Syringe Program		QNSP	QuAC, SHS, PHU, Youth link, ATODS, LLW, QuIHN
2.5 Complete mapping and assess the need for increased provision of Needle and Syringe Programs in Aboriginal and Torres Strait Islander communities.		HHS-ATODS	QuAC, SHS, QuIHN, QAIHC, QNSP
<b>Peer support</b>			
2.6 Develop, implement and evaluate culturally appropriate peer support approaches, tailored for Aboriginal and Torres Strait Islander people with HIV, and other mechanisms to give a voice and support to Aboriginal and Torres Strait Islander people with HIV e.g. Queensland Positive speakers.	*subject to funds	QPP	
2.7 Explore development, implementation, evaluation and funding opportunities for peer education around sexual health and healthy relationships with young people.		TPHS	SHS, QAIHC, AICCHS
<b>Service providers</b>			
2.8 Provide expert health promotion advice to support key stakeholders to guide best practice health promotion approaches for local delivery.	*subject to funds	TPHS/SHS	AICCHS, QuAC, TPHU
2.9 Deliver training to health service providers to promote culturally inclusive LGBTIQ+, brotherboy and sistergirl services.	*subject to funds	QuAC	SHS, PHU

## 3. Testing

### What is the evidence?

- Willingness and ability of people at-risk of HIV to get tested is influenced by a range of factors including time constraints, geographical location and perception of risk<sup>26</sup>.
- Recognised barriers to HIV testing include low knowledge of HIV, fear of testing, access to services, and priority populations such as women and people who inject drugs and are insufficiently targeted in testing programs<sup>27</sup>.
- HIV testing opportunities can be missed when HIV risk is not identified or known<sup>28</sup>.
- The proportion of Aboriginal and Torres Strait Islander people infected with HIV but who have not been diagnosed is estimated to be twice as high compared with the proportion in Australian-born non-indigenous people<sup>29</sup>.
- There have been low HIV testing rates in communities with endemic high rates of sexually transmitted infections. In a study of remote Indigenous communities from 2010 to 2014, only 32% of people were tested for HIV following diagnosis of other sexually transmitted infections<sup>27</sup>.
- In primary care settings in Aboriginal communities, increases in STI testing can be achieved through multi-faceted system change and quality improvement programs. Regional support and a comprehensive approach to sexual health support this<sup>30</sup>.
- Strategies shown to increase HIV testing amongst gay and homosexually active men, include SMS retest reminders<sup>31</sup>, rapid (point-of-care) tests and express testing services<sup>32</sup>; MSM would test more frequently if testing were more convenient and with rapid availability of results<sup>36</sup>.
- Surveys of gay and bisexual men found that approximately two thirds would test more frequently if home testing was available<sup>33</sup>. HIV self-testing became available in Australia in March 2019 and is considered another promising option<sup>34</sup>.
- Early diagnosis can result in reduced transmission risk because of early initiation of treatment and behaviour change following diagnosis<sup>15</sup>.
- There are recognised cost benefits from increased testing, as early HIV diagnosis and entry into care reduces morbidity, mortality, the risk of onward transmission, and associated costs<sup>35</sup>.
- Contact tracing for sexual partners of MSM has resulted in a new HIV diagnosis for every 10 men interviewed<sup>36</sup>. Contact tracing increases identification of people at risk of HIV for testing, enables sexual and injecting partners to access preventive care and may reduce risk behaviour<sup>37</sup>, although concern about confidentiality and trust in services in Aboriginal and Torres Strait Islander communities has been identified<sup>13</sup>.
- The Canadian national HIV screening and testing guide recommends that healthcare providers discuss HIV testing as part of routine medical care to destigmatise and normalise testing<sup>38</sup>. The Australian HIV testing policy also refers to normalisation of HIV testing in specific populations or people with risk factors<sup>39</sup>.

### Key issues/ strategies – how evidence applies to North Queensland context

#### 3.1 Testing

HIV testing for people at risk of infection must be increased. To assist in this, local guidelines will be reviewed, disseminated and promoted. Health professionals need to be supported to increase HIV testing broadly in the Aboriginal and Torres Strait Islander populations in North Queensland. Most new HIV cases in Aboriginal and Torres Strait Islander people in North Queensland have been diagnosed in primary care general health checks. Testing in primary care settings should be incorporated and normalised as part of holistic care. The implementation of the NQ STI Action Plan has resulted in steady increases in the numbers of young people in remote communities who have been tested for STI and HIV in the past 12 months, presenting an opportunity to further incorporate HIV testing. HIV testing should continue to be encouraged in correctional settings.

Regular testing is required for people at greater risk of HIV such as men who have sex with men. Consultation has highlighted that some Aboriginal and Torres Strait Islander men who have sex with

men in North Queensland are not comfortable discussing sexual partners with health professionals, therefore HIV testing opportunities based on risk may be missed. There is also some clinician reluctance to enquire about the gender of sexual partners (which may be exacerbated by workforce turnover). This should be explored further. A person-centred approach would involve identification of individual risk. However, in the absence of a clinician exploring risk, a broad testing approach is required. There needs to be increased clinician awareness of clinical presentations suggestive of HIV risk, or symptoms suggestive of infection. Specialist public health and sexual health services provide support to clinicians who have diagnosed a new case of HIV (to support initial conversations, contact tracing, guide further investigation, management and ongoing care); this strengthens the confidence of primary care staff to engage in HIV testing and care.

There is also a need to increase awareness of risk of HIV amongst MSM to support testing uptake and make it easier to test more frequently. Consultation has identified that a variety of HIV testing options should be made available. In parallel with awareness raising, different models of testing need to be explored to better address the needs of the population. Point-of-care testing is currently available at SHS and some GP practices. A lack of perceived risk is effectively a barrier to testing. Peer-led testing has been successful in other parts of Queensland; this and other options should be explored.

### **3.2 Contact tracing (also known as partner notification)**

There are specialist public health and contact tracing staff to support clinicians and people newly-diagnosed with HIV to enable contacts who may have been exposed to HIV to be offered a test, and treatment or prevention as required. In the Far North Queensland HIV outbreak, the main affected population are men who have sex with men, many of whom do not identify as gay or bisexual, making it difficult to offer more opportunities for testing and prevention information provision. In this context, sensitively-conducted contact tracing has the potential to identify people at increased risk. The North Queensland syphilis outbreak has highlighted challenges in local contact tracing, including medico-legal boundaries, clinical skills, client factors and service approach and capacity. Some of these factors are even more acute in the setting of a stigmatised sexually transmitted infection such as HIV. Some of these challenges have been addressed with a combination of actions, including provision of clinician support during the process of enhanced surveillance, increased contact tracing capacity in sexual health services and increased sexual health program leadership and support. These actions also support HIV contact tracing, the systematic performance of which is an immediate priority.

### Priority 3: Testing

Action	Timeline	Lead	Stakeholder
<b>Leadership</b>			
3.1 Review, disseminate and promote HIV testing guidelines in priority groups and settings	By June 2020	TPHS	SHS, AICCHS, GP, HHS, QuAC, PHN, ASHM
3.2 Ensure that all pregnant women are offered routine HIV testing at the first presentation for antenatal care and all women are tested at least once during pregnancy	By Dec 2019	TPHS	All antenatal service providers
3.3 Ensure effective contact tracing for people who are newly-diagnosed with HIV to support their sexual and injecting partners to access HIV testing and preventive care in partnership with contact tracing support officers and HIV public health nurse	By Dec 2019	SHS, TPHS	AICCHS, GP, HHS

### Priority 3: Testing – deferred actions

Action	Timeline	Lead	Stakeholder
3.1 Increase access to HIV testing in a systematic and culturally appropriate manner and within testing guidelines by provision of a combination of testing options and locations, and ensuring links between HIV, syphilis and other STI testing	*subject to funds	SHS TPHS	AICCHS, GP, HHS, TPHU, PHN
3.2 Make access to peer-led HIV and other STI testing available	*subject to funds	QuAC	QPP, SHS, AICCHS

## 4. Integrated management – treatment and support

### What is the evidence?

- A holistic approach is crucial when providing care for Aboriginal and Torres Strait Islander people with HIV, and this includes supporting people in the context of their everyday lives, psychosocial and welfare support as well as providing healthcare.<sup>40</sup>
- Peer support is an effective way to support people living with chronic diseases such as HIV. It is an effective way to address psychosocial needs,<sup>41</sup> and can also aid in reducing stigma for people with HIV and the community.
- Other strategies that increase engagement in care and adherence include consistency and a quality doctor-patient relationship, reducing financial barriers and ensuring easy access to care<sup>42</sup>.
- The first few weeks after being infected with HIV is called 'acute HIV infection'. This brief time period plays a disproportionately large role in the sexual transmission of HIV<sup>43</sup>. Early detection and treatment of HIV can reduce onward transmission.
- There is individual, and population benefit from antiretroviral (ART) medication adherence. ART is recommended for all individuals with HIV infection to reduce the risk of disease progression<sup>44</sup>. A person living with HIV, who is taking medication and has an undetectable viral load cannot transmit the virus; this is known as treatment as prevention (TasP).
- Undetectable = Untransmittable (U=U). People who maintain an undetectable viral load on ART treatment have, effectively, no risk of transmitting HIV to sexual partners<sup>45</sup>.
- The 'HIV diagnosis and care cascade' describes how well health systems are diagnosing and caring for people with HIV. Whilst nationally Australia is performing well, outcomes for Aboriginal and Torres Strait Islander people with HIV are comparatively poorer<sup>17</sup>.
- Some people with HIV who feel well do not access care at times and may need support to re-engage in care; services need to be flexible to facilitate retention systems must be in place to monitor patient retention in care<sup>46,47</sup>.
- The four main barriers to ART care adherence have been classified as:
  - i. personal factors (including fear of disclosure, shame, discrimination, lack of knowledge about HIV, prevention and treatment)
  - ii. socio-economic factors (including financial constraints, lack of social support and unstable housing)
  - iii. health-care and treatment-related factors (including patient-doctor relationship, discrimination and structural racism), and
  - iv. disease-related factors<sup>48,17</sup>.
- If pregnant women with HIV are adequately treated, the risk of transmission to the baby is very low<sup>49</sup>.

### Key issues/ strategies – how evidence applies to North Queensland context

#### 4.1 HIV care

The main HIV specialist expertise for North Queensland is based within Cairns and Townsville Sexual Health Services (SHS). These services undertake care for newly diagnosed and existing clients, contact tracing and treatment. Specialist HIV clinical care teams including nurses, pharmacists, health workers and social workers who offer support to clients who are newly diagnosed or require assistance to engage in care. A holistic service is required to support engagement in care and ensure that clients' psychosocial needs and health needs are met in a balanced way. This requires a person-centred model of care and collaboration between services (refer to figure 5).

Most Aboriginal and Torres Strait Islander people with HIV in North Queensland currently receive care from SHS. People attending SHS have access to a multi-disciplinary team with a range of skills, which is advantageous. People in remote communities, however, might have restricted access to multi-disciplinary expertise, and primary care clinicians might not have sufficient caseload to build expertise to confidently deliver HIV care. More information is needed from affected communities to understand the preferred model of care in the medium to long term. Choice of service to access care is important; Primary Health Care Centre (PHCC), AICCHS, SHS or GP. Service provision by various organisations allows people with HIV the choice of provider that best meets their needs. Staff in primary care settings might also need upskilling to increase the care options available.

## **4.2 Access to care**

Stigma and shame about HIV, sexuality or cultural issues can prevent people accessing care and taking treatment. Concerns about confidentiality can be a barrier for clients. These themes have recurred in consultations in North Queensland in relation to both testing and care. Some people with HIV are comfortable accessing local services, but others are not for a variety of reasons. These people are more likely to remain engaged in care if there are alternative access points to the health system. Peer support has been positive and, in some cases, essential, in assisting people to engage in care in North Queensland. Support for peers is also important. Support for women with HIV remains a challenge. Presently, most initiatives are directed towards men, and there are comparatively smaller numbers of women with HIV, making support networks harder to create.

Recent experience in Cairns and Townsville has demonstrated that an intensive support team, which includes Aboriginal and Torres Strait Islander staff, can address some barriers to engagement in care. This level of intensive support can also assist Aboriginal and Torres Strait Islander people with HIV to address challenges including housing and finance issues, lack of knowledge about HIV and mobility.

Systems are also needed to support people with HIV in North Queensland who have disengaged from care to assist them to re-engage in care with the support of local services.

## **4.3 HIV medication**

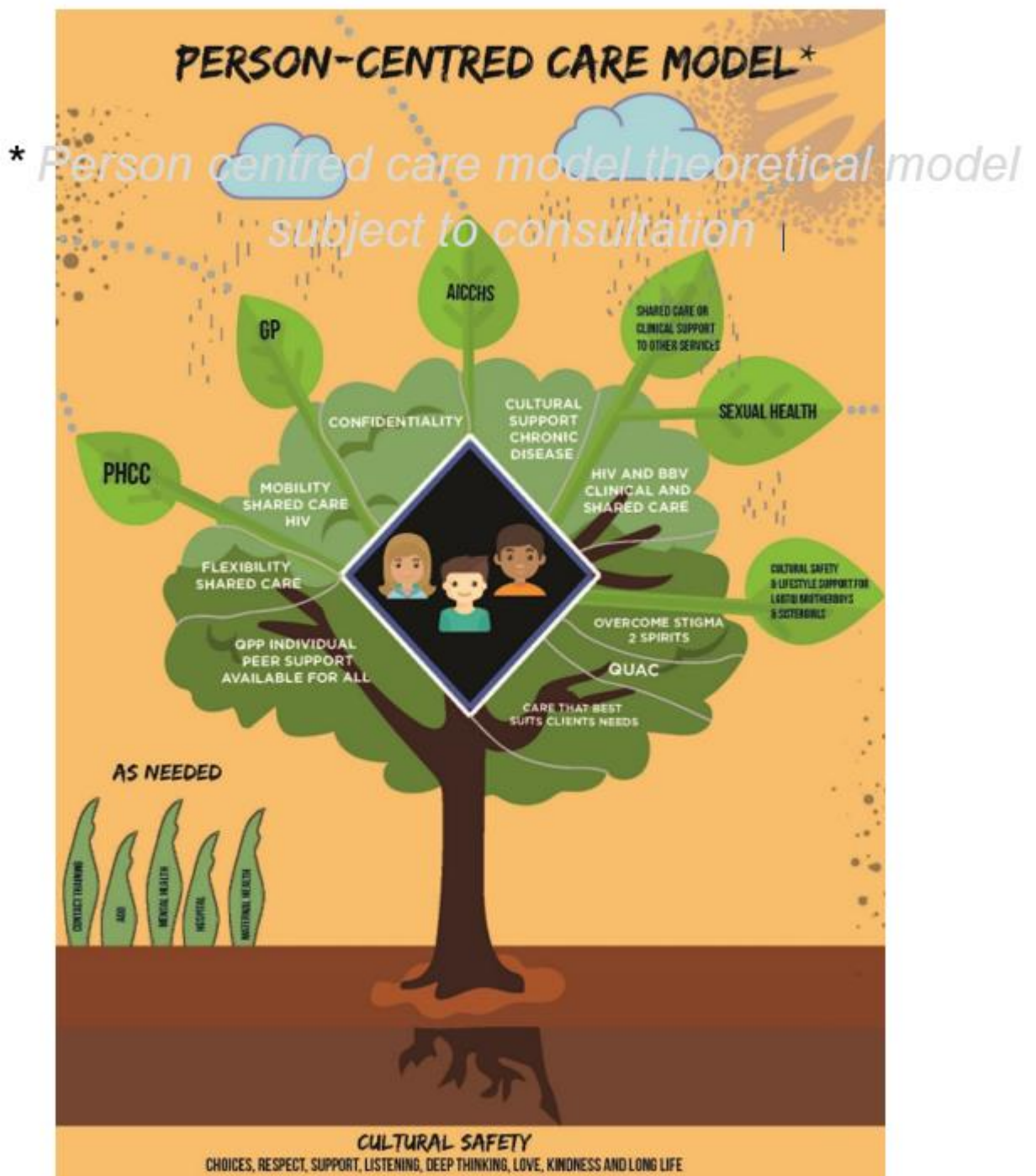
Access to ART has its own challenges, which include fear of being seen collecting HIV-related medications, cost of co-payment, pharmacy location and sometimes the need to have ART dispensed from a non-local pharmacy. There is currently support available from QPP for people with HIV who require funding assistance to access ART and other care needs.

People with HIV require lifelong ART to manage this chronic condition and prevent transmission of the virus. ART can only be prescribed by doctors with s100 training, yet most of the new cases of HIV are diagnosed in primary healthcare settings, often by doctors without this training. In areas with high staff turnover, it is important to have regularly available upskilling in s100 training and ongoing SHS support for primary care clinics with low caseloads.



**Figure 5. Person-centred care model for people with HIV**

The proposed person-centred model of care has flexibility to respond to the needs of the individual, understanding that a person’s needs will change over time. This model highlights some of the specific considerations for Aboriginal and Torres Strait Islander people with HIV in North Queensland, such as the recurring issue of confidentiality and a population in which many people travel between remote home communities and regional centres. Although many Aboriginal and Torres Strait Islander people with HIV currently receive care through a SHS, the model includes a range of shared care options complemented as needed by peer support.



#### Priority 4: Integrated management – treatment and support

Action	Timeline	Lead	Stakeholder
<b>HIV care</b>			
4.1 Implement and evaluate a multi-disciplinary, holistic model of person-centred care that supports the health and psychosocial needs of people with HIV according to need, and share learnings with other NQ HHSs	By June 2020	SHS	HHS, GP, AICCHS, Allied Health practitioners, QPP, Qld Sexual Health Network, PATSIN
4.2 Provide information, referral for specialist assessment and/or case management/care coordination and access to peer-based support to primary health care providers supporting people newly-diagnosed with HIV	By Dec 2019	TPHS	SHS, GP, AICCHS, HHS, QPP, 2 Spirits
4.3 Strengthen systems to support people with HIV who have disengaged from care, and work with them to support re-engagement in care	By June 2020	TPHS/SHS	SHS, GP, AICCHS, HHS, QPP, CDB, PHU
4.4 Ensure all pregnant women with HIV are supported to engage in care throughout their pregnancy and beyond to prevent perinatal and postnatal transmission	By Dec 2019	SHS, HHS	GP, PHCC, AICCHS
<b>Access to care</b>			
4.5 Identify and implement strategies to remove barriers to accessing HIV care, and support rapid treatment initiation, engagement in care and adherence, and share learnings	By June 2021	SHS	GP, HHS, AICCHS, QPP, RFDS
4.6 Identify and implement strategies to reduce barriers to access ART, PrEP and PEP medication, including access for women, and share learnings with other NQ HHSs	By Jun 2021	Cairns SHS pharmacy	HHS, QPP, Pharmacy Guild, Pharmacy providers

Action	Timeline	Lead	Stakeholder
<b>HIV medication</b>			
4.7 Support s100 prescribers to deliver HIV care in settings outside of sexual health services through development of a shared care model, and share learnings	By June 2021	SHS	GP, AICCHS, HHS, ASHM

#### Priority 4: Integrated management – treatment and support – deferred actions

Action	Timeline	Lead	Stakeholder
<b>HIV care</b>			
4.1 Explore and implement models that support self-efficacy, autonomy, resilience and health literacy for people with HIV, and share learnings with other NQ HHSs		SHS QPP	All health providers
4.2 Develop and evaluate collaborative models between healthcare and client support services including peer-led models		QPP	All health providers

## 5 Data, monitoring and evaluation

### What is the evidence?

- National modelling from 2015, suggests that approximately one in five Aboriginal and Torres Strait Islander people with HIV may be undiagnosed<sup>29</sup>.
- There is strong evidence that effective use of surveillance data and other data sources can inform policy and program development, priority setting and support implementation and evaluation of strategies<sup>7,12</sup>.

### Key issues/ strategies

#### 5.1 Data

Access to data in relation to HIV has been very restricted because of concerns about patient confidentiality. Agreements to share data between organisations should be pursued where feasible to improve outcomes.

Queensland Health (CDB) has undertaken work to enable provision of regular epidemiological reports about HIV in Aboriginal and Torres Strait Islander people in North Queensland.

#### 5.2 Monitoring and evaluation

Collaboration of public health and clinical services will facilitate the development of a monitoring and surveillance plan to evaluate the effectiveness of the North Queensland response. This includes monitoring testing rates and the HIV care cascade, and evaluation of health promotion strategies. Enhanced surveillance by the TPHS-based Public Health Nurse will complement this.

It is expected that an increase in testing may result in an initial increase in diagnoses. This provides an opportunity for previously undiagnosed people to know their status and be engaged in care, which ultimately reduces the risk of further onward transmission. The increase in diagnoses can potentially affect the ability to achieve the targets of the care cascade in the short term.

TPHS will work collaboratively with the CDB, HHS, QAIHC, AICCHS to implement local level continuous quality improvement initiatives and sharing of information.

All organisations are responsible for evaluating the effectiveness of their activity and contributing to the evidence base in HIV prevention and management.

Where appropriate, the performance indicators have been linked to related actions and indicators in the Queensland Sexual Health Strategy 2016–2021 and the Fifth National Aboriginal and Torres Strait Islander Blood Borne Viruses and Sexually Transmissible Infections Strategy 2018–2022.

#### 5.3 Research

A lack of knowledge about the social and sexual networks of Aboriginal and Torres Strait Islander people at risk of HIV in North Queensland is hindering prevention and promotion activities. Anecdotal evidence has identified that people travel to Cairns from remote regions to 'party' and this, for some, can include having unprotected sex. Several recent transmissions of HIV in Aboriginal and Torres Strait Islander people have occurred in Cairns, although some people have been diagnosed following their return to other HHS. Collaboration between community, research institutes and others in clinical settings, public health or on-the-ground expertise would be valuable in informing the ongoing response.

### Priority 5: Data, monitoring and evaluation

Action	Timeline	Lead	Stakeholder
<b>Data</b>		To coordinate and report	
5.1 Investigate and implement systems for measuring testing rates, and treatment uptake, engagement in care and viral suppression, as per the HIV care cascade	By June 2020	CDB	PHU, SHS, HHS, GP, AICCCHS, QAIHC, PHN
5.2 Advocate for improved completeness and accuracy of testing data to include Aboriginal and Torres Strait Islander status	By Dec 2020	CDB	QAIHC, private pathology providers, PHN, PHU
<b>Monitoring and evaluation</b>			
5.3 Develop criteria to enable recognition of those with complex care needs and a system for assessing engagement in care, and share learnings with other NQ HHSs	By June 2020	Cairns SHS	CDB, GP, AICCCHS, HHS, QPP, PHU
5.4 Develop systems for monitoring effectiveness of contact tracing	By June 2020	TPHS	SHS
5.5 Perform ongoing analysis of regional data to inform response activities	By Dec 2019	TPHS	CDB, SHS, TPHU, HHS
5.6 Develop and refine reporting frameworks and templates to ensure timely monitoring and evaluation of all actions in line with identified key performance indicators (KPI)	By June 2020	TPHS	CDB, QAIHC, PHN, HHS, GP, AICCCHS, QPP, TPHU
5.7 Include reporting on progress of the North Queensland HIV Response Plan in annual reports to document performance for the Chief Executive Steering Committee and other partners	By June 2020	TPHS	CDB, QAIHC, PHN, HHS, GP, AICCCHS, QPP, TPHU

Action	Timeline	Lead	Stakeholder
5.8 Explore opportunities to undertake research to address gaps in knowledge and add to the evidence base to inform best practice HIV prevention and care; and contribute to the monitoring and evaluation of the Response Plan	By June 2021	TPHS/SHS	Research institutes, HHS, CDB, PHN, QAIHC

#### Priority 5: Data, monitoring and evaluation – deferred actions

Action	Timeline	Lead	Stakeholder
<b>Research</b>			
5.1 Research issues to improve the health and well-being of Aboriginal and Torres Strait Islander people with HIV in North Queensland including: quality of life, engagement in care, stigma and discrimination, and their experiences of living with HIV		TPHS/SHS	QPP, CDB, QAIHC, QuAC

## Performance framework

Under development. Indicative measures are provided below.

### Indicative performance measures

#### Priority domain 1. Leadership and coordination

Indicator	Target	Source	Frequency
1.1 Number of health professionals authorised as s100 prescribers by HHS	(Need to determine baseline and target)  Increase the number of active s100 prescribers	BBV STI Unit, Communicable Diseases Branch, Department of Health	Annual

#### Priority domain 2. Health promotion and prevention

Indicator	Target	Source	Frequency
2.1 Number of Aboriginal and Torres Strait Islander people accessing pre-exposure prophylaxis (PrEP) by HHS	(Need to determine baseline and target)  Increase the number against baseline	Hospital and Health Services Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health using Pharmaceutical Benefits Scheme data <sup>#</sup>	Annual
2.2 Number of Needle and Syringe Programs by HHS	For further development	BBV STI Unit, Communicable Diseases Branch, Department of Health	Annual
2.3 Number of occasions of HIV post-exposure prophylaxis (PEP) access by Aboriginal and Torres Strait Islander people, by HHS	(Need to determine baseline and target)  Increase the number	BBV STI Unit, Communicable Diseases Branch, Department of Health	Annual

### Priority domain 3. Testing

Indicator	Target	Source	Frequency
3.1 Number of HIV serology tests conducted in public laboratories by HHS, setting (e.g. PHCC, SHS), and Aboriginal and Torres Strait Islander status	For further development Increase number of tests	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health	Annual
3.2 Percent of Aboriginal and Torres Strait Islander pregnant women who are tested for HIV by HHS	100%	HHS patient quality and safety audit	Annual
3.3 Proportion of people newly diagnosed with HIV with completed contact tracing of partners identified	50% of known contacts assessed within four weeks of being named	North Queensland Hospital and Health Services	Annual

### Priority domain 4. Integrated management- treatment and support

Indicator	Target	Source	Frequency
4.1 Proportion of Aboriginal and Torres Strait Islander people newly diagnosed with HIV who commenced treatment within six weeks, three months and six months of diagnosis	85% within 6 weeks 90% within 3 months 95% within 6 months	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health <sup>#</sup>	Annual
4.2 Proportion of Aboriginal and Torres Strait Islander people with HIV who were engaged in care in the past 12 months	95%	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health/ TPHS	Annual
4.3 Proportion of Aboriginal and Torres Strait Islander people newly diagnosed with HIV who were documented as fully virally suppressed at six months post diagnosis	90%	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health/ TPHS	Annual
4.4 Proportion of Aboriginal and Torres Strait Islander people with HIV who were documented as fully virally suppressed at their most recent test in the past 12 months	95%	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health/ TPHS	Annual



**Priority 5. Data, monitoring and evaluation**

<b>Indicator</b>	<b>Target</b>	<b>Source</b>	<b>Frequency</b>
5.1 Number of Aboriginal and Torres Strait Islander people newly diagnosed with HIV by HHS	Reducing number <sup>‡</sup>	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health	Quarterly
5.2 Number (%) of Aboriginal and Torres Strait Islander people newly diagnosed with newly-acquired HIV (in past 12 months)	Reducing number <sup>‡</sup>	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health	Quarterly
5.3 Number (%) of Aboriginal and Torres Strait Islander people newly diagnosed with HIV with evidence of late diagnosis or advanced stage infection*	Reducing number <sup>‡</sup>	Epidemiology and Research Unit, Communicable Diseases Branch, Department of Health	Quarterly

\* late diagnosis: CD4 count 200-349. Advanced stage: CD4 count <200 or an AIDS-defining illness

# Work is in progress by the Communicable Diseases Branch, Department of Health to identify data sources for these indicators to enable standardised reporting

‡ Recognising that numbers are likely to increase initially as more people are tested

## Appendix 1

### Consultation undertaken to inform the development of this response

- South Australian Health and Medical Research Institute
- Tropical Public Health Unit, Townsville Health and Hospital Service
- Queensland Positive People
- BBV STI Unit, Commonwealth Department of Health
- Apunipima Cape York Health Council
- Torres and Cape Hospital and Health Service
- Wuchopperen Health Service
- Communicable Diseases Branch, Queensland Health
- QUIHN Cairns and Far North Queensland
- Australasian Society for HIV Medicine (ASHM)
- Aboriginal and Torres Strait Islander Health Branch, Queensland Health
- Gidgee Healing
- Joyce Palmer Health Service
- Cairns and Hinterland Health and Hospital Service
- Queensland AIDS Council
- Youthlink, Cairns
- Positive Aboriginal and Torres Strait Islander Network
- Aboriginal and Torres Strait Islander community members
- Queensland Aboriginal and Islander Health Council
- Mulungu Aboriginal Corporation Medical Centre, Mareeba
- Mamu Health Service, Innisfail
- Townsville Aboriginal and Islanders Health Services (TAIHS)
- Palm Island Community Company
- NPA Family and Community Services ATSI Corporation
- Sexual Health Service, Townsville Hospital and Health Service
- Mackay Hospital and Health Service
- Northern Queensland Primary Health Network
- TRUE Relationships and Reproductive Health
- Respect Inc Cairns
- Representatives from community pharmacy, North Queensland s100 prescribers

## Abbreviations and acronyms

AICCHS	Aboriginal and Islander Community Controlled Health Service(s)
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment(s)
ASHM	Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine
ATODS	Alcohol, Tobacco and other Drug Service(s)
BBV	Blood borne virus(es)
CDB	Communicable Diseases Branch
CHHHS	Cairns and Hinterland Hospital and Health Service
FNQ	Far North Queensland
GP	General Practitioner(s)
HHS	Hospital and Health Service(s)
HIV	Human Immunodeficiency Virus
LGBTQI+	Lesbian Gay Bisexual Transgender, Queer, Intersex
LLW	Lives Lived Well
MSM	Men who have sex with men
NGO	Non-government organisation(s)
NQ	North Queensland
NSP	Needle and Syringe Program(s)
PATSIN	Positive Aboriginal and Torres Strait Islander Network
PEP	Post-Exposure Prophylaxis
PrEP	Pre-Exposure Prophylaxis
PHN	Primary Health Network(s)
PHCC	Primary Health Care Centre(s)
PHU	Public Health Unit(s)
PNG	Papua New Guinea
QAIHC	Queensland Aboriginal and Islander Health Council
QNSP	Queensland Needle and Syringe Program
QPP	Queensland Positive People
QuAC	Queensland AIDS Council
QuIHN	Queensland Injectors' Health Network
SHS	Sexual Health Service(s)
STI	Sexually Transmissible Infection(s)
TasP	Treatment as Prevention
TPHS	Tropical Public Health Services
TPHU	Townsville Public Health Unit
U=U	Undetectable equals Untransmittable


## Appendix 3

### References

- <sup>1</sup> Queensland Health. North Queensland HIV Roundtable report, 2017.
- <sup>2</sup> Dahlgren G & Whitehead M. Policies and Strategies to Promote Social Equity in Health. Institute for Futures Studies; 2019. Available from: <https://core.ac.uk/download/pdf/6472456.pdf>
- <sup>3</sup> Kirby Institute. HIV, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report 2018. Sydney: Kirby Institute, UNSW Sydney; 2018.
- <sup>4</sup> Australian Government. Fifth National Aboriginal and Torres Strait Islander Blood-Borne Viruses and Sexually Transmissible Infections Strategy 2018-2022. Canberra: Department of Health; 2018. Available from: [https://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/\\$File/ATSI-Fifth-Nat-Strategy-2018-22.pdf](https://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-bbvs-1/$File/ATSI-Fifth-Nat-Strategy-2018-22.pdf)
- <sup>5</sup> APMG Health. Papua New Guinea National STI and HIV Strategy 2018-2022. Available from: <https://apmghealth.com/project/png-national-sti-hiv-strategy-2018-2022>
- <sup>6</sup> Kaufman MR, Cornish F, Zimmerman RS, Johnson BT. Health behavior change models for HIV prevention and AIDS care: practical recommendations for a multi-level approach. *J Acquir Immune Defic Syndr.* 2014; 66(3): s250-s258.
- <sup>7</sup> World Health Organization. Global Health Sector Strategy on HIV 2016-202: towards ending AIDS. Geneva, WHO Press; 2016. Available from: <https://apps.who.int/iris/bitstream/handle/10665/246178/WHO-HIV-2016.05-eng.pdf>
- <sup>8</sup> AFAO. Strategies adopted by high income countries to end HIV transmission. AFAO policy paper; 2017. Available from: <https://www.afao.org.au/wp-content/uploads/2016/12/Strategies-adopted-by-high-income-countries-to-end-HIV-transmission-July-2017.pdf>
- <sup>9</sup> Andermann A. Outbreaks in the age of syndemics: New insights for improving Indigenous health. *Can Commun Dis Rep.* 2017;43(6):125-32. Doi:10.14745/ccdr.v43i06a02
- <sup>10</sup> UNAIDS. Policy brief: The greater involvement of people living with HIV (GIPA). UNAIDS; 2007. Available from: [http://data.unaids.org/pub/briefingnote/2007/jc1299\\_policy\\_brief\\_gipa.pdf](http://data.unaids.org/pub/briefingnote/2007/jc1299_policy_brief_gipa.pdf)
- <sup>11</sup> SAHMRI. HIV and Aboriginal and Torres Strait Islander Communities in 2017. South Australian Health and Medical Research Institute; 2017. Available from: <http://www.atsihiv.org.au/wp-content/uploads/2017/12/ATSIHAW-Booklet-2017.pdf>
- <sup>12</sup> NSW Ministry of Health. NSW HIV Strategy 2016-2020: Ending HIV. Sydney: NSW Health; 2015. Available from: <https://www.health.nsw.gov.au/endinghiv/Publications/nsw-hiv-strategy-2016-2020.PDF>
- <sup>13</sup> Burnet Institute. Partner notification of sexually transmitted infections in New South Wales: an informed literature review, June 2010. Melbourne; 2010. Available from: [https://stipu.nsw.gov.au/wp-content/uploads/NSW\\_STI\\_PN\\_PDF.pdf](https://stipu.nsw.gov.au/wp-content/uploads/NSW_STI_PN_PDF.pdf)
- <sup>14</sup> ASHM. Post-exposure prophylaxis after non-occupational and occupational exposure to HIV. Australian National Guidelines (second edition). Available from <http://www.pep.guidelines.org.au/>
- <sup>15</sup> Kirby Institute. Experiences of HIV: The Seroconversion Study Final Report 2007–2015. Sydney: Kirby Institute, UNSW Sydney; 2016.

- <sup>16</sup> Lee E, Mao L, Lea T, Williams G, Scott M, Heywood J, et al. Gay Community Periodic Survey: Queensland 2017. Sydney: Centre for Social Research in Health, UNSW Sydney; 2018. Doi: 10.4225/53/5ad3e2469a4c7
- <sup>17</sup> Ward JS, Hawke K, & Guy RJ. Priorities for preventing a concentrated HIV epidemic among Aboriginal and Torres Strait Islander Australians. *The Medical Journal of Australia*, 2018; 209(1), 56.
- <sup>18</sup> Kirby Institute. Experiences of HIV: The seroconversion study annual report 2013. Sydney: Kirby Institute, UNSW Sydney; 2014. Available from: <https://www.acon.org.au/wp-content/uploads/2015/04/Seroconversion-Study-Annual-Report-2013.pdf>
- <sup>19</sup> Hui B, Gray R, Wilson D, Ward JS, Smith A, Philip J, et al. Population movement can sustain STI prevalence in remote Australian indigenous communities. *BMC Infectious Diseases*. 2013; 13,188.
- <sup>20</sup> Fagan P & McDonell P. Knowledge, attitudes and behaviours in relation to safe sex, sexually transmitted infections (STI) and HIV/AIDS among remote living north Queensland youth. *Australian and New Zealand Journal of Public Health*. 2010; 34(S1), 52-56.
- <sup>21</sup> World Health Organisation. Preventing HIV/AIDS in young people: A Systematic Review of the Evidence from Developing Countries. Geneva, WHO Press; 2016. Available from: [https://www.who.int/immunization/hpv/target/preventing\\_hiv\\_aids\\_in\\_young\\_people\\_unaids\\_who\\_2006.pdf](https://www.who.int/immunization/hpv/target/preventing_hiv_aids_in_young_people_unaids_who_2006.pdf)
- <sup>22</sup> D'Costa B, Lobo R, Thomas J & Ward JS. Evaluation of the Young Deadly Free Peer Education Training Program: Early results, methodological challenges and learnings for future evaluations. *Front Public Health*. 2019; 7:74 doi: 10.3389/fpubh.2019.00074.
- <sup>23</sup> Hope A. & Haire B. "No-one's driving this bus" – qualitative analysis of PrEP health promotion for Aboriginal and Torres Strait Islander gay and bisexual men. *Aust N Z J Public Health*. 2019; 43(1):18-23. doi: 10.1111/1753-6405.12852.
- <sup>24</sup> Crouch A. & Fagan P. Communities and condoms – how difficult can it be? *Australian and New Zealand Journal of Public Health*. 2012; 36(6),506-508.
- <sup>25</sup> Queensland Health. Queensland Minimum Data Set for Needle and Syringe Programs – 2017. Brisbane 2018.
- <sup>26</sup> Traversy GP, Austin T, Ha S, Timmerman K & Gale-Rowe M. An overview of recent evidence on barriers and facilitators to HIV testing. *CCDR*. 2015; 41(12): 304-321 doi: 10.14745/ccdr.v41i12a02
- <sup>27</sup> Ward JS, Dyda A, McGregor S, Rumbold A, Garton L, Donovan B, et al. Low HIV testing among people with a sexually transmissible infection diagnosis in remote Aboriginal communities. *Med J Aust*. 2016; 205:168-71.
- <sup>28</sup> Mallitt K-A, Wilson DP, Jansson J, McDonald A, Wand H & Post JJ. Identifying missed clinical opportunities for the earlier diagnosis of HIV in Australia, a retrospective cohort data linkage study. *PLoS ONE*. 2018; 13(12): e0208323.
- <sup>29</sup> Ward JS. Considerations across the HIV continuum specific to Aboriginal and Torres Strait Islander people and communities. Presentation at HIV roundtable, Cairns 2017.
- <sup>30</sup> Hengel B, Guy R, Garton L, Ward J, Rumbold A, Taylor-Thomson D et al. Barriers and facilitators of sexually transmissible infection testing in remote Australian Aboriginal communities: results from the Sexually Transmitted Infections in Remote Communities, Improved and Enhanced Primary Health Care (STRIVE) Study. *Sexual Health*. 2014; 12(1) 4-12. doi:10.1071/SH14080

- <sup>31</sup> Desai M, Woodhall SC, Nardone A, Burns F, Mercey D, Gilson R. Active recall to increase HIV and STI testing: a systematic review. *Sex Transm Infect.* 2015; 91(5):314–323.
- <sup>32</sup> Keen P, Jamil MS, Callander D, Conway DP, Guy R on behalf of the NSW Rapid HIV Testing Evaluation Framework investigators. NSW Rapid HIV Testing Evaluation Framework Final Report. The Kirby Institute, UNSW, Sydney; 2016. Available from: <https://kirby.unsw.edu.au/sites/default/files/kirby/report/NSW%20Rapid%20HIV%20Testing%20Evaluation%20Framework%20Final%20Report.pdf>
- <sup>33</sup> Bavinton B, Brown G, Hurley M, Bradley J, Keen P, Conway D et al. Which Gay Men Would Increase Their Frequency of HIV Testing with Home Self-testing? *AIDS & Behavior.* 2013; 17(6):2084-2092.
- <sup>34</sup> Guy R, Prestage GP, Grulich A, Holt M, Conway DP, Jamil MS et al. Potential public health benefits of HIV testing occurring at home in Australia. *MJA.* 2015; 202(10):529-532.
- <sup>35</sup> Baggaley RF, Irvine MA, Leber W, Cambiano V, Figueroa J, McMullen H et al. Cost-effectiveness of screening for HIV in primary care: a health economics modelling analysis. *The Lancet HIV.* 2017; 4(10):e465-e474. DOI: 10.1016/S2352-3018(17)30123-6.
- <sup>36</sup> Bergman J, Gratix J, Pillay T, Houston S, Cooper R, Charlton CL et al. Intensive HIV partner notification is effective in identifying new and previously diagnosed HIV infections in Edmonton, Canada. *AIDS Patient Care and STDs.* 2015; 29(8):419-422. DOI: 10.1089/apc.2015.0033
- <sup>37</sup> Hogben M, McNally T, McPheeters M, Hutchinson A. The effectiveness of HIV partner counseling and referral services in increasing identification of HIV-positive individuals: a systematic review. *Am J Prev Med.* 2007; 33(2S):S89 –s100.
- <sup>38</sup> Public Health Agency of Canada. Human Immunodeficiency Virus: HIV Screening and Testing Guide. Ottawa; 2012. Available from: [https://www.catie.ca/ga-pdf.php?file=sites/default/files/EN\\_HIV-Screening-Guide-2013.pdf](https://www.catie.ca/ga-pdf.php?file=sites/default/files/EN_HIV-Screening-Guide-2013.pdf)
- <sup>39</sup> ASHM. National HIV Testing Policy. February 2017. Available from: [http://www.testingportal.ashm.org.au/images/HIV\\_Testing\\_Policy\\_02\\_2017.pdf](http://www.testingportal.ashm.org.au/images/HIV_Testing_Policy_02_2017.pdf)
- <sup>40</sup> Newman CE, Bonar M, Greville H, Thompson S, Bessarab D, Kippax SC. Barriers and incentives to HIV treatment uptake among Aboriginal people in Western Australia. *AIDS.* 2007; 21(1):13-17.
- <sup>41</sup> Simoni J, Nelson K, Franks J, Yard S, Lehavot K. Are Peer Interventions for HIV Efficacious? A Systematic Review. *AIDS and Behavior* 2011; 15 (8): 1589–1595.
- <sup>42</sup> Thompson MA, Mugavero MJ, Rivet Amico K, Cargill VA, Chang LW, Gross R et al. Guidelines for improving entry into and retention in care and antiretroviral adherence for persons with HIV: evidence-based recommendations from an International Association of Physicians in AIDS Care Panel. *Ann Intern Med.* 2012; 156:817-833.
- <sup>43</sup> Miller WC, Rosenberg NE, Rutstein SE, Powers KA. The Role of acute and early HIV infection in the sexual transmission of HIV. *Curr Opin HIV AIDS.* 2010; 5(4): 277–282. doi: 10.1097/COH.0b013e32833a0d3a
- <sup>44</sup> ASHM. HIV management in Australia. NSW 2016. Available from: <http://hivmanagement.ashm.org.au/>
- <sup>45</sup> ASHM. Undetectable = untransmittable: a guide for clinicians to discuss. Available from: <https://www.ashm.org.au/products/product/UequalsU>
- <sup>46</sup> McMahon JH, Moore R, Eu B, Tee B-K, Chen M, El-Hayek C, et al. Clinic network collaboration and patient tracing to maximize retention in HIV care. *PLoS ONE.* 2015; 10(5): e0127726. doi:10.1371/journal.pone.0127726
- <sup>47</sup> Udeagu C-CN, Webster TR, Bocour A, Michel P, Shepard CW. Lost or just not following up: public health effort to re-engage HIV-infected persons lost to follow-up into medical care. *AIDS.* 2013; 27:2271-2279.



<sup>48</sup> Grierson J, Koelmeyer RL, Smith A, Pitts, M. Adherence to antiretroviral therapy: factors independently associated with reported difficulty taking antiretroviral therapy in a national sample of HIV-positive Australians. *HIV Medicine*. 2011; 12: 562–569. doi: 10.1111/j.1468-1293.2011.00928.x

<sup>49</sup> Camacho-Gonzalez AF, Kingbo M-H, Boylan A, Ross Eckard A, Chahroudi A, Chakraborty R. Missed opportunities for prevention of mother-to-child transmission in the United States. *AIDS*. 2015; 29: 1511-1515.