

Strategies adopted by high income countries to end HIV transmission

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Introduction

Several high income countries, or jurisdictions within these countries, have established strategies or frameworks to end HIV transmission. This paper summarises several of these efforts to identify what language, approaches and strategies have been employed in these settings. Their experience can provide insights for efforts in Australia and inform the development of Australia's eighth *National HIV Strategy*.

An online review was conducted to identify strategies and any additional information on efforts, such as presentations, related policies, resources and websites. One of the limitations of the review is that materials in English for non-English high income countries (such as France, Netherlands, Germany) were not easily available. As a result, this review summarises ending HIV initiatives in United States jurisdictions, Canada and the United Kingdom.

Terminology used to describe initiatives

Jurisdictions in the United States use different terminology to describe their efforts. For example, 'Getting to Zero', 'Ending AIDS', and 'Ending the Epidemic'. During a HIVE Online discussion on 'Frameworks for Getting to Zero',¹ presenters were asked about the names of their initiatives:

- New York State's 'Ending the Epidemic' nomenclature reflected feedback from the community that long-term survivors living with HIV did not see themselves in the 'getting to zero' terminology. Health officials also argued that HIV notifications were at "sub-epidemic" levels and it was valuable to "elevate it to outbreak again".
- San Francisco's 'Getting to Zero' consortium took some time to decide a name for the initiative. 'Ending HIV' and 'Ending AIDS' were thought to make people living with HIV 'invisible'. The consortium reported having organically gravitated to calling the initiative 'Getting to Zero'.
- Washington's 'Ending AIDS' terminology came from the community-based organisation that initiated the actions. The name was considered bold and direct. It was seen as identifying the goal with clear and strong language to coalesce the response.

General observations of US Strategies

Consistent priorities in all initiatives

There are three consistent priorities reflected in all efforts:

- identifying people with HIV who are undiagnosed
- supporting people with HIV to commence and maintain HIV treatment and have an undetectable viral load
- facilitating access to PrEP.

¹ <https://www.hiveonline.org/hangouts-with-hive-frameworks-for-getting-to-zero/>

Unsurprisingly, identifying people with HIV who are undiagnosed is a high priority across all efforts. This is followed by supporting people diagnosed with HIV to remain in care. This includes recognition of vulnerable populations such as the homeless, those in unstable housing, people who use drugs and the uninsured.

Targets and indicators are a feature of all strategies

All strategies feature targets and indicators. While the indicators are similar (for example, reduce the number of new diagnoses), the targets and how they are expressed are variable. By way of example, a target in most strategies is to reduce the number of new diagnoses by: 25 per cent in US National Strategy, 50 per cent in Washington State, 90 per cent by 2020 in San Francisco, and New York State aims to reduce new HIV infections by 750 in 2020 (equivalent to a 75 per cent reduction).

Community involvement, partnerships, and political will and leadership is a feature of all responses

Political will and leadership has been paramount in mobilising efforts. For example, in New York, Governor Cuomo publicly committed to ending HIV, calling on experts to develop a blueprint. Similarly, in Washington State, Governor Inslee in December 2014 issued a 'Proclamation to End AIDS in Washington' and then called on a steering team to develop recommendations.

Partnerships and community involvement are components of all strategies, although there are divergent experiences on how stakeholders informed each strategy. In most cases, the initiatives are driven by government health officials with community involvement, with the exception of San Francisco.

In San Francisco, the initiative is led by an independent consortium of partners (established in 2014), operating under the principles of 'collective impact'. The initiative arose out of a community meeting in 2012 when an audience member asked how the city's HIV leaders were working together. This prompted the various agencies to consider how they could better work together in a consortium. A Steering Committee oversees the consortium and four committees work on specific program areas: a RAPID Committee, a Retention and Re-engagement Committee, a PrEP Committee and an Ending Stigma Committee.

In New York, a range of steps led to the development of their blueprint. Initial action emerged from the community, prior to the Governor announcing a three-point plan to end the epidemic. Following the announcement, there were extensive consultations open to community, service providers and clinicians. Key steps included:

- community letter to Governor Cuomo from 42 LGBT advocacy organisations to initiate discussion about ending the epidemic in New York, May 2013
- Six community meetings to discuss priorities with over 300 participants, October-December 2013
- Governor Cuomo announces three-point plan to end the epidemic in New York, June 2014
- A task force appointed by the Governor to develop a blueprint for ending the epidemic, October 2014
- 17 listening forums held across New York State with over 565 participants and an online survey to collect recommendations which was open to anyone in the state (294 recommendations received), October-November 2014
- Release of blueprint for 'Ending the Epidemic' in New York, January 2015
- 13 regional 'Ending the Epidemic' New York State Regional Discussions to discuss how to move from the blueprint to action.

Routine HIV testing of the general population is a priority

While each strategy identifies priority population groups, there is at times also a priority on routine HIV testing of the general population. The *National HIV Strategy* recommends routine HIV testing for all people aged 15-65 years.

Since 2010, New York State has had a law that mandates primary care providers as well as hospitals and emergency departments should offer HIV testing to all persons between the ages of 13 and 64, with certain exceptions. This focus on HIV testing in the general population may reflect an epidemic that is diverse in its racial makeup and modes of transmission. In 2015, of the new HIV diagnoses in New York City, 58 per cent were among men who have sex with men, 16 per cent through heterosexual contact and 20 per cent were of unknown transmission risk. In 2015, 42 per cent of new diagnoses were among African Americans and 36 per cent among Latino and Hispanic Americans.

Strategies to re-engage patients in care

A significant focus of several of the initiatives is retaining and re-engaging people with HIV in care. ‘Navigators’ is often used to describe individuals who undertake outreach in pursuit of this initiative. In San Francisco, if an HIV-positive person has ‘fallen out of care’ and could benefit from assistance by re-connecting with care providers, the LINCS (Linkage, Integration, Navigation, and Comprehensive Services) program navigators work to re-engage the individual. The New York blueprint has a focus on developing peer navigators who can help support early access to and retention in HIV care.

There is an acknowledgement that the complex health insurance landscape can produce disruptions in care for many. There is also a significant emphasis on health equity and reducing stigma and discrimination (‘zero discrimination’ features in many efforts – driven by UN targets). Some strategies, such as those of New York City and Massachusetts, specifically refer to ‘sexual health equity’ for LGBTI people.

Facilitate access to PrEP

In the US, PrEP is reportedly available through most insurance plans and state government Medicaid programs. In addition, San Francisco and New York State have made PrEP available through access programs for specific population groups and/or those unable to access PrEP through other means.

Public accountability for ending HIV efforts

Across a range of initiatives, there is a focus on public accountability for reporting on progress. This has meant the establishment of dashboards to provide updates. These are websites providing key metrics on how the campaign to end HIV is progressing in an accessible visual format. For example: <http://etedashboardny.org>.

Terminology includes ‘scalable interventions’ and ‘accelerated efforts’

‘Scalable interventions’ is a term used regularly. The United States’ *National HIV/AIDS Strategy* uses this terminology, for example: “Intensifying efforts in communities where HIV is concentrated, and focusing on interventions that are effective and scalable can have the biggest impact, lowering all communities’ collective risk of acquiring HIV infection”. A San Francisco health official defined scalable interventions as “the ability of the intervention to reach a broad number of the population”. ‘Scalable interventions’ is often used in conjunction with reference to interventions that have a high impact. In other words, ensuring that interventions that have been demonstrated to work are also reaching large numbers of the population.

'Accelerate', 'accelerated pace' or 'accelerated efforts' terminology is used. The United States' *National HIV/AIDS Strategy*, when referring to continuum of care, refers to the need to "drive change at an accelerated pace". In an update of the Strategy, taking its implementation to 2020, bold targets are identified while it notes we "must accelerate progress by scaling up our efforts and seizing new opportunities". The Strategy also refers to the need for city/state plans to "accelerate the response to HIV by expanding access to HIV testing, care, treatment, and prevention services."

San Francisco's 'Getting to Zero'

San Francisco's 'Getting to Zero' initiative is driven by an independent multi-sector consortium operating under the principles of 'collective impact'. The initiative includes San Francisco Department of Public Health, the University of California San Francisco, many community organisations, activists, and government representatives. There are three signature initiatives:

- PrEP expansion
- Rapid ART (antiretroviral treatment)
- ART retention.

Rapid ART aims to reduce the time between an HIV positive result and treatment to 24 hours. It has functioned by creating 'hubs' around the city where people newly diagnosed with HIV can rapidly access HIV treatment and then have a smooth transition to their 'medical home'. A mechanism for providing same day HIV treatment has been put in place in these hubs. This may be a starter pack of medications (for five to seven days) and/or list of pharmacies that can provide same-day dispensing. A pilot initially commenced at San Francisco General Hospital/HIV Clinic in 2013, then expanded to the rest of the city. The SFGH protocols were adapted for city-wide use.

In San Francisco, there is often no explicit reference to HIV testing or identifying undiagnosed infections as one of the main strategies of 'Getting to Zero'. This is because the consortium has identified that "widespread HIV testing services" are working well in the city. It is estimated that 93 per cent of HIV positive San Franciscans are aware of their HIV status.²

PrEP availability: Medi-Cal (California's Medicaid program that provides medical benefits and services for state residents with limited income and resources) and most insurance plans pay for PrEP.³ For those who are uninsured or have a high co-payment, there are patient assistance programs, such as Gilead's Medication Assistance Program. In addition, there are 'Getting to Zero' programs that provide access for specific population groups including young men who have sex with men (MSM), transgender women, Latino MSM, and African American MSM.

How is San Francisco tracking against its Getting to Zero strategy?⁴

San Francisco's strategy has had significant overall impact with new HIV diagnoses having decreased by 44 per cent in the three years to 2015. Another significant achievement is that people with HIV are being linked to care more quickly which has resulted in the average time from diagnosis to full viral suppression dropping to three months in 2015: 211 days (mean) in 2013 from diagnosis to viral suppression to 87 day in 2015. The table below highlights other key HIV care and prevention indicators from 2009 to 2014.

² San Francisco Department of Health. 2015 HIV Epidemiology Annual Report & Getting to Zero Presentation at San Francisco Health Commission Meeting

³ San Francisco Department of Health. Ask about PrEP. How providers can prescribe PrEP to prevent HIV and reduce health disparities. January 2017.

⁴ Getting to Zero: An Update. Presentation to Health Commission, May 2 2017. Accessed 10 July: https://www.gettingtozerosf.org/wp-content/uploads/2017/06/GTZ_Health-Commission_02MAY17_From-HC-website.pdf

Indicator	2009 to 2014
Linked to care within three months of diagnosis	86% to 92%
Retained in care within 6-12 months	70% to 73%
Initiated ARV treatment within 12 months of diagnosis	63% to 91%
Virally suppressed within 12 months of diagnosis	49% to 82%

Washington and Massachusetts

Washington's 'End AIDS' is a more recent initiative than New York State's or San Francisco's. They are finalising their efforts now. Washington state's public campaign focusses on 'Get Insured, Get Tested, Get PrEP and Get Treatment'. Their strategy has a focus on gay and bisexual men in urban areas.

Massachusetts' 'Getting to Zero' Coalition is also a more recent initiative with a plan having been finalised in December 2016. They have adopted a coalition approach, like San Francisco. Its targets are zero discrimination, zero AIDS-related deaths and zero new HIV infections. They plan to securely cross-reference patients with state surveillance systems, laboratories and clinical services to ensure patients remain in care.

New York State 'Ending the Epidemic'

'Ending the Epidemic' has three overall goals:

- identify persons with HIV who remain undiagnosed ('test everyone')
- link to care and viral load suppression
- access to PrEP.

Interesting use of terminology with an emphasis on return on investment rather than focusing on expenditure: "The state's expenditures on efforts to end AIDS as an epidemic should be viewed as investments rather than costs, and HIV infections and their associated lifetime treatment costs averted as the benefits to be realized." The Treatment Action Group has undertaken a fiscal analysis that reported that "ending AIDS as an epidemic is not just the right thing to do for the health of New Yorkers – it's also cost-effective."⁵ The analysis identified that every new HIV infection costs \$443,904 in health spending alone. The analysis concluded that implementing the 'Ending the Epidemic' blueprint will "translate into substantial savings in avoided health care and services spending."

A focus on surveillance using enhanced methods for tracing HIV transmission: "Employ state-of-the-art scientific methods to 'fingerprint' HIV strains in real time, allowing Health Department staff to map possible transmission networks and identify New Yorkers who may be at risk or infected with HIV". This is a new initiative as the New York Department of Health has identified the need to "equip the New York City Public Health Laboratory to conduct HIV phylogenetic testing" and "integrate laboratory processes and findings into protocols for field work outreach" and then pilot the system.

As part of the objective to retain people in care, HIV surveillance allows some tracking of individuals: "Sharing of limited patient-specific data from HIV surveillance allowed by 2020 HIV testing law, allows providers to submit their out-of-care patients for query against the registry to determine whether additional outreach is needed to engage the patient in care." It appears that the outcomes for any query is that "follow-up needed" or "no follow-up needed."

⁵ <http://www.treatmentactiongroup.org/tagline/2015/spring/ending-hiv-epidemic-ete-new-york-state>

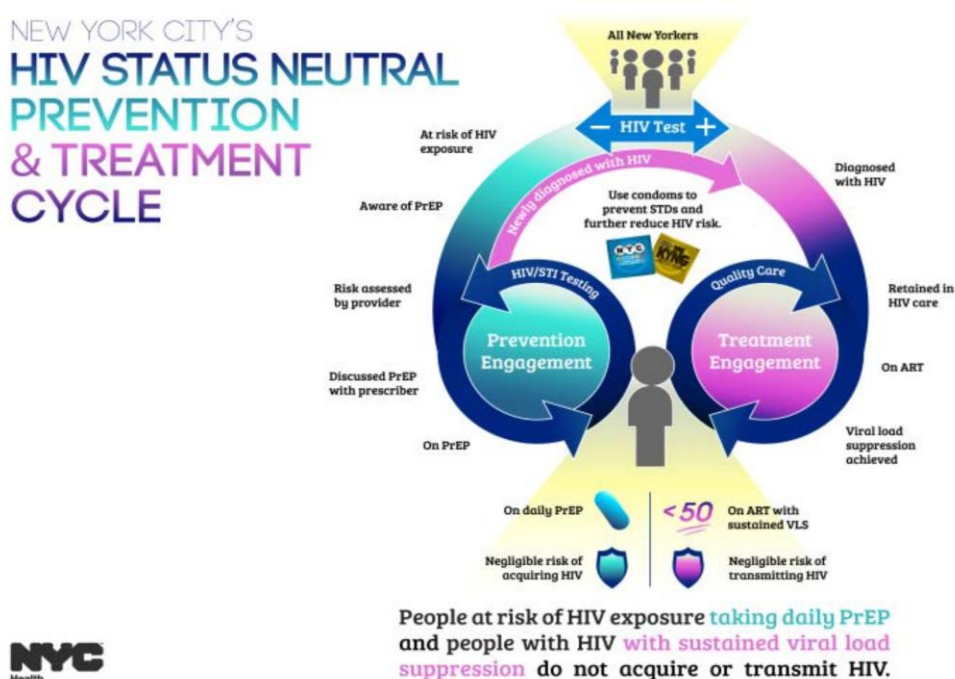
There is a focus on transforming New York City STD Clinics, renaming them Sexual Health Clinics and transforming them into hubs of comprehensive HIV prevention and care. The intention is to make sexual health clinics efficient gateways for HIV prevention and treatment. This transformation was announced in February 2017. The Clinics play an important role as 10 per cent of new New York City HIV diagnoses and 20 per cent of acute New York City HIV diagnoses occur within the Sexual Health Clinics. This new HIV hub focus includes ensuring express visits for asymptomatic patients, PrEP initiation, full 28-day course of post-exposure prophylaxis, improved patient navigation to link patients to long-term care and same day initiation of HIV treatment (JumpstART program).

PrEP availability: In New York, many insurance plans, including New York State Medicaid, cover PrEP and PEP. Several programs have been established to help cover the cost of PrEP and associated care, where required. This includes Gilead’s assistance program and the New York Department of Health’s Pre-Exposure Prophylaxis Assistance Program (PrEP-AP) to assist those uninsured or underinsured New York State residents.

Focus on repairing the post-exposure prophylaxis delivery system: The delivery system was described as “a mess” in one presentation by a New York health official. In response, New York is establishing Centres of Excellence, a 24-hour PEP phone line, and scaling-up the use of starter packs.

New York City is offering incentives for viral load suppression. For people with HIV, this includes receiving up to four \$100 gift cards each year for quarterly lab results showing an undetectable viral load (≤ 50 copies/ml).

New York is attempting to reduce HIV stigma by soothing the divide between prevention and treatment via a *HIV Status Neutral Prevention and Treatment Cycle*. Their argument is that “treatment is prevention” and “prevention is treatment,” so it does not make sense to have a different continuum of care. Dr Demetre Daskalakis, New York City Department of Health, has stated that “a status neutral approach treats people taking HIV treatment and people taking PrEP in the same way with the same services, thus reducing stigma”.



How is New York State tracking against its 'Ending the Epidemic' targets?⁶

New York City has reported that for the first time in the history of the epidemic, the annual number of new HIV diagnoses dropped below 2,500 to 2,493 in 2015.⁷ This is an eight per cent decline from 2014. As with San Francisco, one of their major challenges is retaining people in care. The largest group of persons not achieving suppression are those linked to care but not retained in care. Key metrics monitored by New York State include:

- 92% of people living with HIV know their HIV status (target is 98%)
- 81% of persons living with diagnosed HIV infection receive any care (target is 90%)
- 73% of newly diagnosed persons linked to HIV medical care within 30 days (target is 90%)
- 67% of persons living with diagnosed HIV infection have suppressed viral load (target is 85%)

Canada

Leading Together: Canada Takes Action On HIV/AIDS provides a strategic blueprint for the response to HIV/AIDS. It is not a government strategy, as such, but is "owned by all stakeholders and partners across Canada involved in the response to HIV/AIDS." It was published in 2005, and updated in 2013. It identifies as its vision the end of the HIV/AIDS epidemic in Canada. In contrast to US or Australian efforts, it lacks specific targets. In fact the introduction identifies that it "has not set targets; rather it describes desired outcomes".

Biomedical prevention is referred to within *Leading Together*, although not in any significant detail (possibly due to the update been four years old). For example, a paragraph titled a 'A Changing Prevention Landscape' refers to post-exposure prophylaxis, PrEP and treatment as prevention but there is no sense of any action around these. Overall, despite the vision, the plan lacks a sense of momentum towards ending HIV transmission.

Some Canadian jurisdictions have produced their own strategies, such as Ontario and British Columbia. The Ontario HIV/AIDS Strategy's vision is to make HIV transmission rare by 2026. It recognises the importance of combination prevention and the expanded prevention tool box. For example, the strategy includes several actions on PrEP, such as actively promoting the use of PrEP among people at high risk of HIV infection. Yet despite including many of the right elements, the strategy does not come across as an ending HIV transmission initiative as it lacks a sense of compelling 'call to action' that is very evident in US strategies.

How is Canada tracking against UNAIDS' 90-90-90 treatment targets?

The Public Health Agency of Canada estimates 80 per cent of people living with HIV are diagnosed in Canada, 76 per cent of persons diagnosed with HIV are on treatment, and 89 per cent of persons on treatment have suppressed viral load.⁸ Increasing the uptake of HIV testing is recognised as a priority. The Public Health Agency reports that the recommendation to treat all people with HIV is a new change and that it is taking time for patients and doctors to adjust to this shift.

United Kingdom

The United Kingdom's *National HIV Strategy* expired in 2010 and it does not appear a new strategy has been developed. A new sexual health policy, *A Framework for Sexual Health Improvement in England*, was released in March 2013. The frameworks refer to HIV, but it is not the primary focus of the policy. The lack of a HIV strategy is a concern for UK HIV organisations.⁹

⁶ 'Ending the Epidemic' Dashboard, Accessed 10 July 2017: <http://etedashboardny.org/targets/>

⁷ New York City Department of Health and Mental Hygiene. HIV Surveillance Annual Report 2015.

⁸ Public Health Agency of Canada. Summary: measuring Canada's progress on the 90-90-90 HIV targets.

⁹ <https://www.theguardian.com/society/2013/jan/14/strategy-needed-hiv-epidemic>

Interestingly, the *HIV Manifesto for the General Election 2017*,¹⁰ produced and endorsed by a broad variety of HIV organisations, lists seven key requests, including calling for fully-funded HIV services and making PrEP available for all individuals at risk, but makes no call for the development of a comprehensive national HIV strategy (or sub-national strategy, given the devolved nature of health and social care) or any similar ending HIV policy response.

How is the United Kingdom tracking in its efforts against HIV?

Despite the lack of a national ending HIV framework, recent news reports indicate that there has been a massive drop in HIV infection rates with a 32 per cent decline in HIV transmission in London being reported in five of the biggest sexual health clinics. This is understood to be driven by the uptake of PrEP. PrEP is currently unavailable on the National Health Service in England and Wales, but many source the drug privately, while others are involved in trials to assess the drug's effectiveness. The National Health Service in England announced a PrEP trial in December 2016, with at least 10,000 participants. In April 2017, it was announced that people at risk of HIV in Scotland will be able access PrEP through the National Health Service. In the same month, the Government in Wales announced it will implement a PrEP trial, like that in England.¹¹

Lessons for Australia

One of the consistent elements of all ending HIV responses has been the importance of leadership from politicians, government health officials, clinicians and community organisations. This has led to the development of ambitious strategies that have helped build momentum and mobilise the resources and actions required to end HIV. In reviewing these strategies, they all convey a sense of renewed engagement, energy and commitment from government and partners.

Across the various strategies there are identical core actions such as reducing undiagnosed infections, facilitating access to PrEP, promoting early treatment and ensuring sustained viral load suppression. Overall Australian efforts are on par with the United States. According to the HIV diagnosis and care cascade in the Australian Surveillance Report 2016,¹² Australia compares favourably on a number of the indicators:

- In San Francisco, they report 93 per cent of people living with HIV are aware of their HIV status and New York State reports 92 per cent. There is perhaps less of an emphasis on HIV testing in San Francisco compared to Australia because they estimate high levels of people with HIV already know their HIV status, although Australia reports only slightly lower with an estimated 90 per cent of people living with HIV aware of their HIV status.
- Retaining people with HIV in care is a significant priority in US jurisdictions. This is probably not as significant an issue in Australia due to universal health coverage. San Francisco reports 73 per cent are retained in care within 6-12 months and New York State reports 73 per cent newly diagnosed persons linked to HIV medical care within 30 days. It is estimated that 85 per cent of people living with HIV are retained in care in Australia.
- Maintaining suppressed viral load is an important outcome. San Francisco reports 82 per cent are virally suppressed within 12 months of diagnosis and New York State reports 67 per cent of persons living with diagnosed HIV infection have suppressed viral load. In Australia, it is estimated 69 per cent of all people living with HIV have suppressed viral load.

It is difficult to compare access to PrEP due to significant differences between the health systems in Australia and United States jurisdictions. Suffice to say, it is a significant element of all strategies.

¹⁰ <http://www.nat.org.uk/publication/hiv-manifesto-general-election-2017>

¹¹ Accessed 10 July 2017: <http://www.tht.org.uk/sexual-health/About-HIV/Pre-exposure-Prophylaxis#finding%20prep>

¹² The Kirby Institute. Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: Surveillance and Evaluation Report 2016. The Kirby Institute, UNSW Australia, Sydney NSW 2052

An area where Australian could learn from San Francisco is in ensuring newly diagnosed people with HIV are supported on to treatment quickly. In San Francisco, they aim to ensure newly diagnosed people with HIV receive same day HIV treatment. They have put in place mechanisms to enable this to happen. Because of these efforts the average time from diagnosis to full viral suppression now occurs within three months. San Francisco has consequently experienced a dramatic decline in the number of new HIV infections being reported.

A final observation and potential learning is New York's recognition that effective HIV programs should be viewed as investments, not cost, and that averted infections and costs are benefits realised from these investments. In this way, all ambitious strategies to end HIV transmission share a common (although not always stated) underpinning that frontloaded investments today are a means to realising great future health and economic gains.