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**HIV, viral hepatitis
and sexually transmissible
infections in Australia
Annual surveillance
report 2022**



HIV



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HIV, viral hepatitis and sexually transmissible infections in Australia

Annual surveillance report 2022

Kirby Institute, UNSW Sydney

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in collaboration with networks in surveillance for HIV, viral hepatitis and sexually transmissible infections

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Abbreviations

ABS	Australian Bureau of Statistics
ACCESS	Australian Collaboration for Coordinated Enhanced Sentinel Surveillance
AIDS	acquired immunodeficiency syndrome
ANSPS	Australian Needle Syringe Program Survey
ART	Antiretroviral therapy
BBV	bloodborne virus
CI	confidence interval
DNA	deoxyribonucleic acid
HIV	human immunodeficiency virus
PEP	post-exposure prophylaxis
PrEP	pre-exposure prophylaxis RNA ribonucleic acid
STI	sexually transmissible infection
TasP	treatment as prevention
UNAIDS	Joint United Nations Programme on HIV/AIDS

HIV

The years for comparison in this report are for the 10-year period from 2012 to 2021 unless the focus is the impact of the COVID-19 pandemic, where the years for comparison are 2012 to 2019, and 2019 to 2021.

1 Summary data

HIV notifications

- There were 552 HIV notifications with a first ever diagnosis in Australia in 2021, a 48% decline in notifications since 2012 (1068 notifications), and a 38% decline since 2019 (897 notifications). While declines in the number of notifications were observed prior to 2020, subsequent declines were likely attributable in part to the constraints COVID-19 public health measures placed on travel and movement, social activity, and healthcare access including testing.
- Male-to-male sex continues to be the major HIV risk exposure in Australia, accounting for 378 (68%) HIV notifications in 2021 (including those reporting male-to-male sex and injection drug use), with heterosexual sex reported for 148 (27%) notifications, and injection drug use for 9 (less than 2%) notifications.
- The number of HIV notifications among Australian-born men attributed to male-to-male sex or male-to-male sex and injection drug use decreased, from 522 in 2012 to 297 in 2019, a decline of 43%. In the same period, there was a 9% decline in the number of HIV notifications among men born in other countries outside Asia (from 151 to 138 notifications). By comparison, there was a 54% increase among Asian-born men (106 in 2012 to 163 in 2019). All regions of birth showed declines in notifications attributed to male-to-male sex between 2019 and 2021.
- Between 2012 and 2016, the HIV notification rate among Aboriginal and Torres Strait Islander peoples increased from 4.9 to 6.5 per 100 000, declined to 3.3 per 100 000 in 2019, and then declined further to 2.3 per 100 000 in 2021. By comparison, in 2021, the HIV notification rate was 2.2 per 100 000 among the non-Indigenous population. Trends in HIV notification rates in the Aboriginal and Torres Strait Islander population are based on small numbers and may reflect localised occurrences rather than national patterns.
- Based on the test for immune function (CD4+ T-cell count), 48% of HIV notifications in 2021 were classified as late diagnoses (having a CD4+ cell count of less than 350 cells/ μ L), the highest proportion in the past 10 years. These diagnoses are likely to have been in people who acquired HIV at least four years prior to diagnosis.
- Over the past five years (2017–2021) the proportion of late HIV diagnoses was higher among people born in Sub-Saharan Africa (59%), Southeast Asia (57%), and Latin America or the Caribbean (44%). The proportion of late HIV diagnoses was also higher among people who reported heterosexual sex as their HIV risk exposure (51%), and in particular, men aged over 50 years with heterosexual sex as their reported HIV risk exposure (65%).
- Between 1992 and 2021, 1186 cases of perinatal HIV exposure among children born in Australia were reported. For the period 2017–2021, the HIV vertical transmission rate was 1.9%, compared with 24.1% in the period 1992–1996 and 24.0% in the period of 1997–2001. There were three reported cases of vertical HIV transmission from 2017 to 2021, including two cases in 2018, and one case in 2019. No cases of vertical HIV transmission were reported in 2021.

HIV testing

- Among participants in the Gay Community Periodic Surveys, the proportion of non-HIV-positive gay and bisexual men who reported having had an HIV test in the 12 months prior to the survey increased from 61% in 2012, to 74% in 2019. Between 2019 and 2021 this proportion dropped from 74% to 66%, likely due to the impacts of the COVID-19 pandemic.
- Among gay and bisexual men attending general practice clinics in the ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance) network, the proportion of gay and bisexual men who were tested for HIV at least once in the previous 12 months increased from 54% in 2012 to 74% in 2019 and reduced to 66% in 2021.

HIV prevalence and incidence

- In 2021, HIV prevalence (the proportion of all people in Australia who are living with HIV), was estimated to be 0.14%, which is low compared with other high-income and Asia-Pacific countries.
- The self-reported HIV prevalence among gay and bisexual men participating in the Gay Community Periodic Surveys was 9.2% in 2021.
- HIV prevalence among people who inject drugs attending needle and syringe programs was estimated to be 1.5% in 2021, and 0.5% if gay and bisexual men are excluded.
- HIV incidence (the rate at which HIV negative people are newly diagnosed with HIV) among gay and bisexual men attending sexual health clinics in the ACCESS network, reduced between 2011 (0.60 new infections per 100 person-years) and 2016 (0.24 new infections per 100 person years) and was stable from 2016 to 2019. In 2020 and 2021, HIV incidence among gay and bisexual men was 0.09 new infections per 100 person-years. Among female sex workers, HIV incidence remained low between 2011 and 2021 and was 0.1 per 100 person-years in 2021.

HIV testing and care cascade

- There were an estimated 29 460 people living with HIV in Australia at the end of 2021. Of those, an estimated 91% (26 830 people) had received an HIV diagnosis. Of those diagnosed, 96% (25 820) were retained in care and 92% (24 560 people) were receiving antiretroviral therapy (ART). Of those receiving ART, 98% (24 030) had a suppressed viral load (less than 200 HIV-1 RNA copies/mL). Of all people living with HIV in Australia, an estimated 82% had a suppressed viral load.
- There were an estimated 2630 (9%) people living with HIV in Australia in 2021 who were unaware of their HIV status (undiagnosed). The estimated proportion with undiagnosed HIV was highest among people born in Southeast Asia and Latin America (25% each). The estimated proportion with undiagnosed HIV was also higher in people with reported risk exposures of heterosexual sex (15%) and injection drug use (13%), and lower among men with male-to-male sex as their HIV risk exposure (7%).

Prevention

- In 2021, according to the Gay Community Periodic Surveys, the majority (76.2%) of HIV-negative gay and bisexual men who reporting having had casual partners were regularly using at least one strategy to protect themselves against acquiring HIV (avoiding anal sex, using condoms, or biomedical prevention), up from 69.4% in 2014. Conversely, this means 23.8% were not consistently using any of these strategies in 2021.
- On 1 April 2018, pre-exposure prophylaxis (PrEP) became available to eligible individuals through listing on the Pharmaceutical Benefits Scheme (PBS). From this date to the end of December 2021, 51 898 people had ever taken PrEP, 22 024 had taken PrEP in the last three months and 34 944 people had taken PrEP in the last 12 months.
- Among participants in the Gay Community Periodic Surveys, 39.8% were eligible for PrEP in 2021, up from 36.7% in 2018. Of those eligible for PrEP in 2021, 97.0% were aware of PrEP up from 87.1% in 2018 and 50.5% reported using prescribed PrEP in the previous six months, up from 40.1% in 2018, but down from 53.0% in 2019.

2 Interpretation

The 48% decline in HIV notifications in Australia between 2012 and 2021 was driven by a decrease in notifications among Australian-born men whose exposure risk was reported as male-to-male sex. In this period, among gay and bisexual men and other men who have sex with men, there was an increasing uptake of PrEP and the use of treatment as protection (TasP). However, the decline in HIV notifications has not been equal across all populations. Prior to 2020, there was no decline among overseas-born men. Testing and PrEP uptake needs to increase further, across all jurisdictions to have the greatest benefit, particularly in the contexts of declines in testing during the COVID-19 pandemic.

The 38% decline in HIV notifications between 2019 and 2021 was influenced by COVID-19 restrictions. This influenced changes in sexual behaviour, healthcare access, testing practices, and travel. At the end of 2021, there were an estimated 27 390 people living with HIV in Australia. Australia has yet to meet the first two UNAIDS 2025 targets of 95% of people living with HIV being diagnosed (91% or 24 230 people in 2021), 95% of those diagnosed being on antiviral treatment (92% or 21 990 people in 2021) but has met the third target of 95% of those on antiviral treatment with a suppressed viral load (98% or 21 310 people in 2021). High treatment coverage has been maintained in 2021 despite the COVID-19 pandemic, suggesting an effective transition to telehealth consultations during periods of lockdown and associated restrictions on travel. There has also been a corresponding increase in the proportion of people on treatment with a suppressed viral load. Having an undetectable viral load reduces the risk of onward transmission to zero. With 77% of all people living with HIV having achieved viral suppression, Australia has not yet reached the UNAIDS 2025 target of 86%. To achieve the UNAIDS 2025 targets, Australia must address legal frameworks that create barriers to health care access and undermine the investment in public health measures to address HIV. These legal barriers reinforce stigma directed at populations at risk of acquiring HIV as well as at those people living with HIV.

New diagnoses in populations other than Australian-born men, including people who acquired HIV from heterosexual sex and people who were born overseas haven't shown the same declines. More than half (51%) of notifications attributed to heterosexual sex were diagnosed late, indicating the importance of initiatives to raise awareness about HIV testing. The overall proportion of those who were categorised as late HIV diagnoses in 2021 (48%) was the highest since 1990 and is a continuation of a longer-term trend, reinforcing the need for improved access to testing among at-risk populations to reduce the time between HIV acquisition and diagnosis. The COVID-19 pandemic may also have influenced the proportion of notifications classified as late, by reducing the number of people undergoing routine testing leading to an increased proportion of people seeking testing due to experiencing symptoms.

Among Aboriginal and Torres Strait Islander peoples, the HIV notification rate increased between 2012 and 2016 and then declined from 2016 to 2021 to be less than half that of 2012. In 2021, the HIV notification rate among the Aboriginal and Torres Strait Islander population (2.3 per 100 000) was similar to the non-Indigenous population (2.2 per 100 000) but is based on small numbers (17 new notifications) so should be interpreted with caution.

Among people who inject drugs, high uptake and broad coverage of harm reduction strategies to minimise blood-borne virus transmission continue to be highly effective in sustaining low HIV prevalence in this population.

Low rates of vertical transmission of HIV were observed in Australia, reflecting a high uptake of effective interventions during the periods of pregnancy, labour, delivery and breastfeeding.

The incidence of HIV among women involved in sex work was extremely low—among the lowest in the world—due to highly successful HIV prevention efforts for this priority population.

At the end of 2021, COVID-19 restrictions had largely been lifted with the resumption of interstate and international travel, however HIV testing rates have yet to recover to pre-pandemic levels. To improve health outcomes and reduce the risk of onward transmission, targeted testing strategies are needed to counter these declines, and the increasing proportion of people being diagnosed with HIV late.

The decline in PrEP use during the 2020 and 2021 COVID-19 lock-downs had largely recovered by the end of 2021. However, to reach the 2025 UNAIDS targets, it will be necessary to expand PrEP promotion, as well as other forms of prevention to people who would benefit from these strategies, including overseas-born people and Aboriginal and Torres Strait Islander peoples.

3 HIV notifications

There were 193 HIV cases previously diagnosed overseas with subsequent diagnostic test conducted in Australia in 2021; 29% were in New South Wales, 26% in Victoria, and 20% in Queensland (Table 1, Table 2). In 2021, among HIV notifications previously diagnosed overseas, 135 (70%) were male, 172 (90%) were aged 30 years or over, and 45% were attributed to male-to-male sex or male-to-male sex and injection drug use (Table 2).

These notifications are included in the HIV cascades of treatment and care estimates but excluded from further analyses in this report.

Table 1 Number of HIV notifications in Australia by state/territory and whether HIV was first diagnosed in Australia or overseas, 2021

State/Territory	Place of first ever diagnosis of HIV		
	Australia	Overseas	Total cases
Australian Capital Territory	14	8	22
New South Wales	189	56	245
Northern Territory	2	0	2
Queensland	124	38	162
South Australia	21	16	37
Tasmania	7	2	9
Victoria	140	50	190
Western Australia	55	23	78
Total	552	193	746

Source: State and territory health authorities; includes all states and territories

Table 2 Characteristics of HIV notifications previously diagnosed overseas, 2012–2021

Characteristic	Year first ever Australian HIV diagnosis									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cases^a	193	211	257	221	260	290	290	345	321	193
Gender										
Male	136	154	177	162	186	228	221	268	239	135
Female	56	56	79	59	73	60	69	77	81	55
Transgender	1	0	1	0	0	2	0	0	1	3
Median age (years)										
Male	37	37.5	38	34	35	34	32	35	36	39
Female	34	33	37	38	34	38	39	36	43	44
Age group (years)^b										
0-14	0	4	1	0	10	1	0	3	0	1
15-19	3	1	4	2	2	1	7	3	2	1
20-29	51	51	53	59	60	81	78	79	68	19
30-39	71	78	93	85	99	104	107	141	109	74
40-49	40	45	74	50	52	63	59	68	70	49
50+	28	32	32	25	37	40	38	51	72	49
State/Territory										
ACT	0	3	2	6	10	6	2	3	4	8
NSW	55	48	77	66	85	105	99	100	92	56
NT	6	6	2	1	1	2	3	4	3	0
QLD	51	55	63	49	63	67	64	99	78	38
SA	10	11	16	14	11	18	9	20	8	16
TAS	0	1	1	0	0	4	7	1	0	2
VIC	51	58	68	66	74	57	81	88	102	50
WA	20	29	28	19	16	31	25	30	34	23
HIV exposure risk category										
Male-to-male sex ^c	95	97	116	111	116	144	138	165	160	86
Male-to-male sex and injecting drug use	1	2	1	6	4	1	5	8	6	1
Heterosexual sex	77	99	107	84	105	95	89	110	80	51
Injection drug use	2	2	4	5	5	0	1	1	4	1
Mother with/at risk of HIV	0	1	1	4	1	1	0	5	2	5
Receipt of blood/tissue ^d	4	5	4	2	7	3	2	9	1	3
Other/undetermined	14	5	24	9	22	46	55	47	68	45

a. Includes gender of 'Other' and 'Not reported'

b. Not including notifications missing age at diagnosis,

c. Includes men who had sex with both men and women.

d. Includes receipt of blood/tissue overseas, so does not indicate transmission through blood products in Australia.

Source: State and territory health authorities; see [Methodology](#) for detail.

The following section focuses on people diagnosed with HIV for the first time in Australia ('notifications'). In 2021, there were 552 HIV notifications in Australia: 488 (88%) among males, 413 (75%) among people aged 30 years and above, and 17 (3%) among Aboriginal and Torres Strait Islander peoples. Just under a fifth of all notifications (107) were classified as newly acquired (evidence of HIV acquisition in the 12 months prior to diagnosis), while 48% of notifications were classified as diagnosed late, the highest proportion since before 2012 (Table 3).

A total of 41 086 notifications of HIV with first ever diagnosis in Australia have been reported since 1984, of which 37 375 (91%) were among males, 3 338 (8%) among females and 125 (<1%) among trans and gender diverse people. In the period 2012–2014, the number of HIV notifications remained stable, but in the subsequent period 2014–2019 the number of notifications decreased by 16%. A decline of 38% between 2019 and 2021 from 897 to 552 notifications likely includes the impacts of the COVID-19 pandemic, alongside targeted prevention measures, and should be interpreted with caution (Table 3). A similar pattern has been seen among males, with HIV notifications stable between 2012 and 2014, an 18% decrease between 2014 and 2019 and followed by a 39% decrease between 2019 and 2021. Notifications among females were relatively stable between 2012 and 2019 followed by a 33% decline between 2019 and 2021. Between 2012 and 2021 there were 42 notifications reported among trans and gender diverse people, although it is likely that this figure is an underrepresentation due to potential under reporting of gender diversity in HIV notifications data (Table 3).

By age group, the largest number of notifications in 2021 were among people aged 30 to 39 years (173), followed by those aged 20 to 29 years (139), and those 50 years or older (127). The number of notifications remains low among younger age groups in 2021, with two notifications among those aged 15 to 19 years, and no notifications among those aged 0 to 14 years. Notifications in younger age groups fluctuated between 2012 and 2021 (Table 2).

Table 3 Characteristics of HIV notifications with a first ever diagnosis in Australia, 2012–2021

Characteristic	Year of HIV diagnosis									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total cases^a	1068	1037	1079	1029	1005	962	841	897	633	552
Gender										
Male	962	928	974	919	912	848	756	795	547	486
Female	105	106	103	108	88	106	81	95	78	64
Transgender	1	3	2	2	5	8	4	7	8	2
Median age (years)										
Male	36.0	37.0	35.0	35.0	34.0	35.0	35.0	35.0	35.0	37.0
Female	31.0	34.0	35.0	36.0	34.0	34.0	35.0	37.0	35.5	34.5
Transgender	20.0	40.0	38.0	35.0	29.0	39.0	30.0	39.0	38.0	39.0
Aboriginal and Torres Strait Islander Status										
Aboriginal and/or Torres Strait Islander	35	27	34	40	47	31	33	25	17	17
Non-Indigenous	1027	996	1030	970	954	919	798	858	609	535
Not reported	6	14	15	19	4	12	10	14	7	0
Age group (years)										
0-14	2	6	3	3	5	2	3	1	1	0
15-19	22	22	14	20	11	12	8	7	10	2
20-29	319	273	315	296	310	253	262	244	162	139
30-39	323	287	346	304	308	314	237	287	199	173
40-49	224	250	216	210	194	170	159	159	128	111
50+	178	199	185	196	177	211	172	199	133	127
Language spoken at home										
English	799	534	832	737	728	540	529	577	495	420
Other language	85	76	103	131	134	134	149	158	101	104
Not reported	184	427	144	161	143	288	163	162	37	28
Newly acquired^b (% of new diagnoses)	396 37.1%	349 33.7%	424 39.3%	399 38.8%	364 36.2%	276 28.7%	257 30.6%	262 29.2%	143 22.6%	107 19.4%
Diagnosed late	275	274	285	270	267	297	272	479	223	221
Late HIV diagnosis, % ^c	29.3%	30.4%	27.8%	28.2%	30.4%	34.3%	36.9%	36.9%	41.8%	47.7%
Advanced HIV diagnosis, %	16.5%	17.5%	16.3%	15.7%	18.2%	21.7%	19.5%	23.1%	28.1%	33.7%
Median CD4+ cell count, cells/ μ L	430	420	440	440	420	390	390	374	330	318
State/Territory										
ACT	17	21	18	14	13	13	6	12	8	14
NSW	408	355	343	348	317	309	283	284	215	189
NT	20	13	8	9	23	11	13	7	3	2
QLD	208	181	245	203	195	185	180	158	107	124
SA	31	58	39	44	42	43	30	30	29	21
TAS	13	11	16	17	19	12	11	17	6	7
VIC	268	307	302	285	304	310	260	290	194	140
WA	103	91	108	109	92	79	58	99	71	55
HIV exposure risk category										
Male-to-male sex ^d	745	685	757	702	709	610	519	534	364	333
Male-to-male sex and injecting drug use	34	44	50	49	51	53	58	64	61	44
Heterosexual sex	206	220	200	204	205	237	189	209	157	148
Injection drug use	25	28	31	32	14	32	28	23	21	9
Mother with/at risk of HIV	2	4	3	4	5	3	2	1	1	0
Receipt of blood/tissue ^e	4	3	0	8	1	0	0	2	2	2
Other/undetermined	52	53	38	30	20	27	45	64	27	17

a. Includes gender of 'Other' and 'Not reported'

b. Newly acquired HIV was defined as newly diagnosed infection with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV within one year before HIV diagnosis. In Victoria from April 2016 there was a change in the laboratory reporting of HIV confirmatory results such that there are expected to be fewer indeterminate results requiring follow-up. This will therefore reduce the number of results which were previously used to provide evidence for newly acquired HIV infections.

c. Late HIV diagnosis was defined as newly diagnosed HIV with a CD4+ cell count of less than 350 cells/ μ L, and advanced HIV as newly diagnosed infection with a CD4+ cell count of less than 200 cells/ μ L. Newly acquired HIV were categorised as not late or advanced diagnosis, irrespective of CD4+ cell count. HIV diagnoses classified as advanced include those classified as late.

d. Includes men who had sex with both men and women.

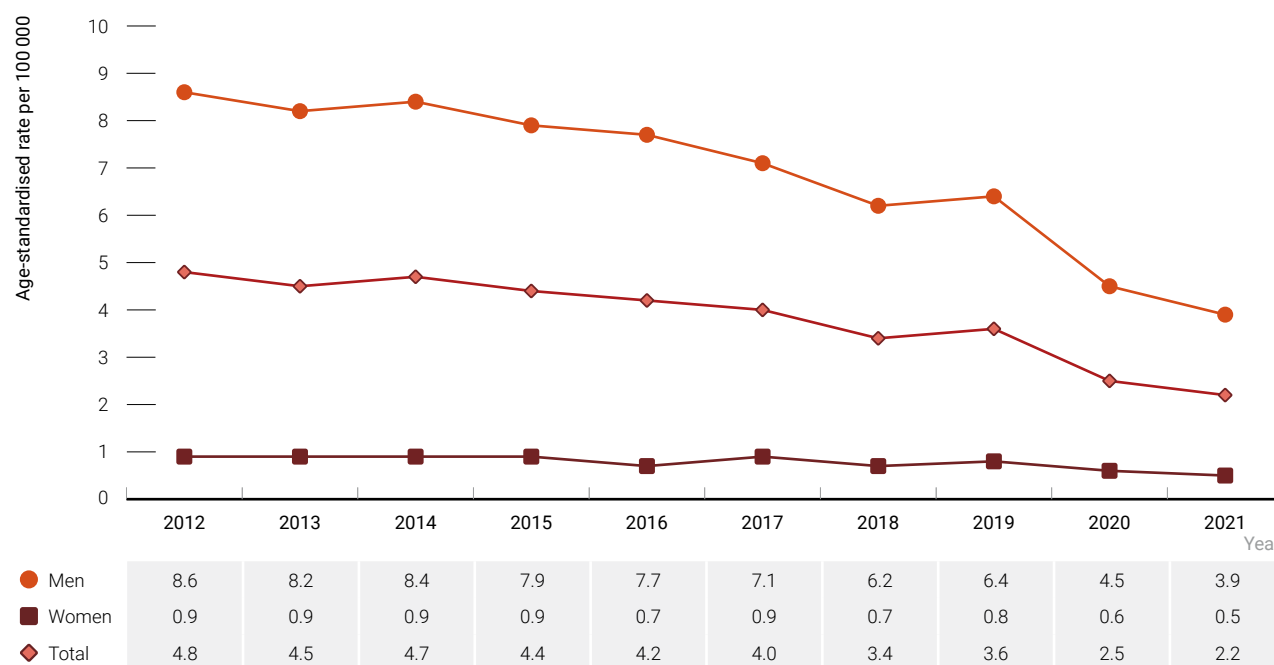
e. Includes receipt of blood/tissue overseas, so does not indicate transmission through blood products in Australia.

Source: State and territory health authorities; see [Methodology](#) for detail.

Demographics

Between 2012 and 2019, the HIV notification rate declined by 25% from 4.8 to 3.6 per 100 000 population. Between 2019 and 2021 the HIV notification rate declined by 38% from 3.6 to 2.2 per 100 000 (Figure 1). Similar trends were seen among males and females and in 2021, the notification rates were 3.9 per 100 000 males and 2.2 per 100 000 females.

Figure 1 HIV notification rate per 100 000 population by gender, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

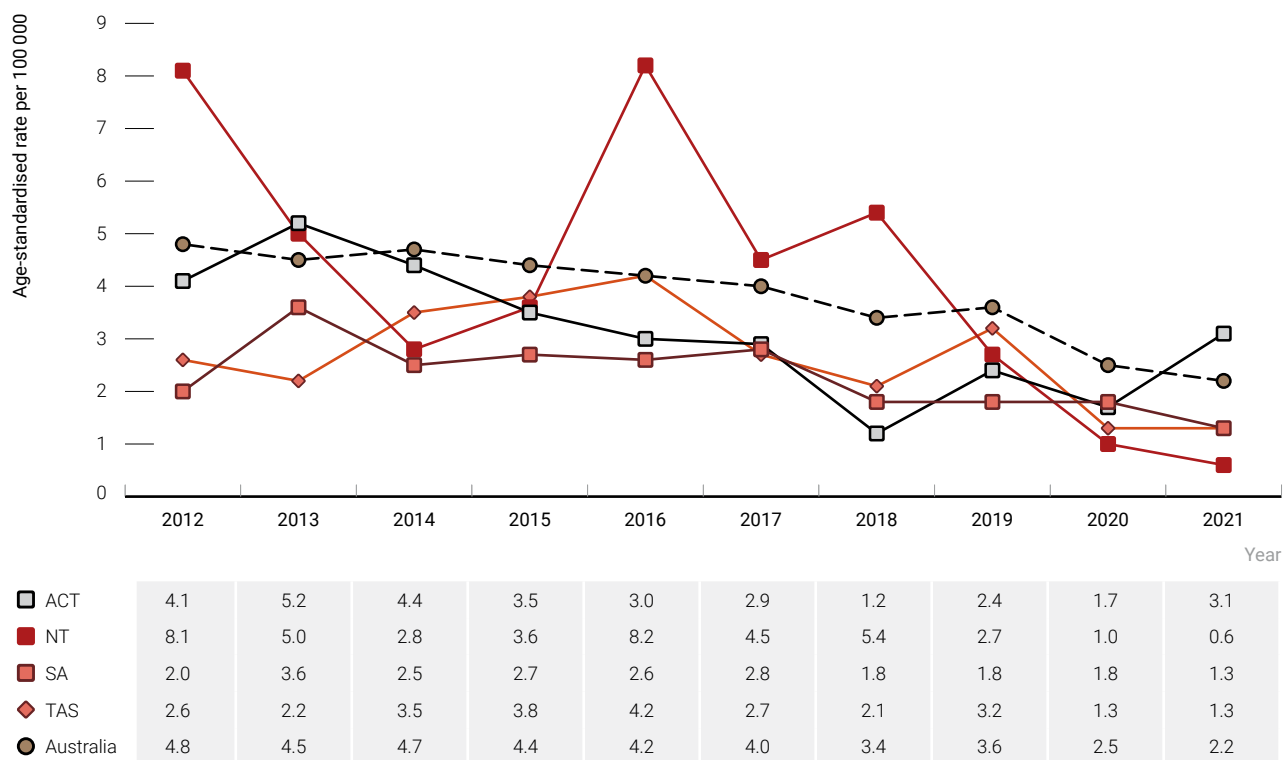
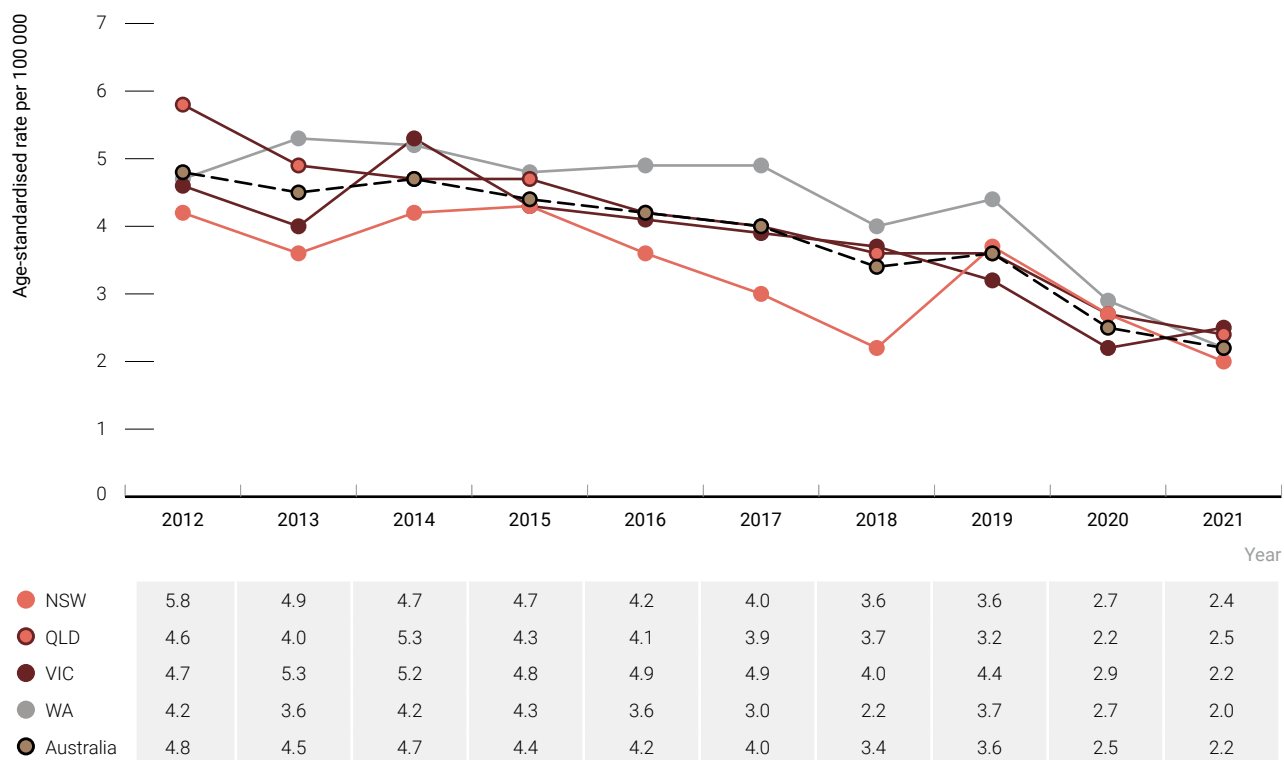
In 2021, HIV notification rates were highest among those aged 30 to 39 years (4.6 per 100 000), 20 to 29 years (4.0 per 100 000) and 40 to 49 years (3.4 per 100 000). Between 2012 and 2019 there was a 32% decline in the notification rate for those aged 40 to 49, a 30% decline for those aged 20 to 29 years and a 24% decline for those aged 30 to 39.

The HIV epidemic in Australia remains concentrated among gay and bisexual men and other men who have sex with men. Reflecting this, HIV notification rates among females were lower than males in all age groups between 2012 and 2021. In 2021, HIV notification rates among females were highest for those aged 30 to 39 years (1.5 per 100 000), followed by those aged 40 to 49 years (0.4 per 100 000). Small numbers of notifications among females when separated by age groups mean that caution should be applied when interpreting these rates. Breakdowns of HIV notification rates by age and gender can be found on the [Kirby Institute data site](#).

Between 2012 and 2019, the HIV notification rate declined by 30% in Queensland from 4.6 to 3.2 per 100 000, 37% in New South Wales from 5.8 to 3.6 per 100 000, 13% in Western Australia from 4.2 to 3.7 per 100 000, and 7% in Victoria from 4.7 to 4.4 per 100 000. All four states had a decline in notification rates between 2019 and 2021. In 2021, the HIV notification rate was highest in Queensland at 2.5 per 100 000, followed by New South Wales at 2.4 per 100 000, Victoria at 2.2 per 100 000, and Western Australia at 2.0 per 100 000 (Figure 2).

In the Australian Capital Territory, South Australia, Tasmania and the Northern Territory the numbers of notifications each year are low, so trends need to be interpreted with caution. Between 2012 and 2019, HIV notification rates fluctuated in all four states and territories, followed by a decline between 2019 and 2021. In 2021 the HIV notification rate was 3.4 per 100 000 in the Australian Capital Territory, 1.3 per 100 000 in South Australia and Tasmania, and 0.6 per 100 000 in the Northern Territory (Figure 2).

Figure 2 HIV notification rates per 100 000 population by state/territory, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

HIV notification rates over the 10-year period 2012–2021 differed by region of birth. Between 2012 and 2019, among Australian-born people, the HIV notification rate declined by 35% from 4.1 to 2.6 per 100 000. HIV notification rates declined or remained stable for all regions of birth between 2019 and 2021 apart from North Africa and the Middle East (Figure 4). Among people born overseas, the highest HIV notification rates in 2021 were among people born in Southeast Asia (8.3 per 100 000), Latin America and the Caribbean (6.1 per 100 000), and Sub-Saharan Africa (3.3 per 100 000). Due to the impact of COVID-19 related travel restrictions, trends in HIV notification rates by region of birth from the end of 2019 to the end of 2021 should be interpreted with caution.

Table 4 HIV notification rates per 100 000 population by region of birth, 2012–2021

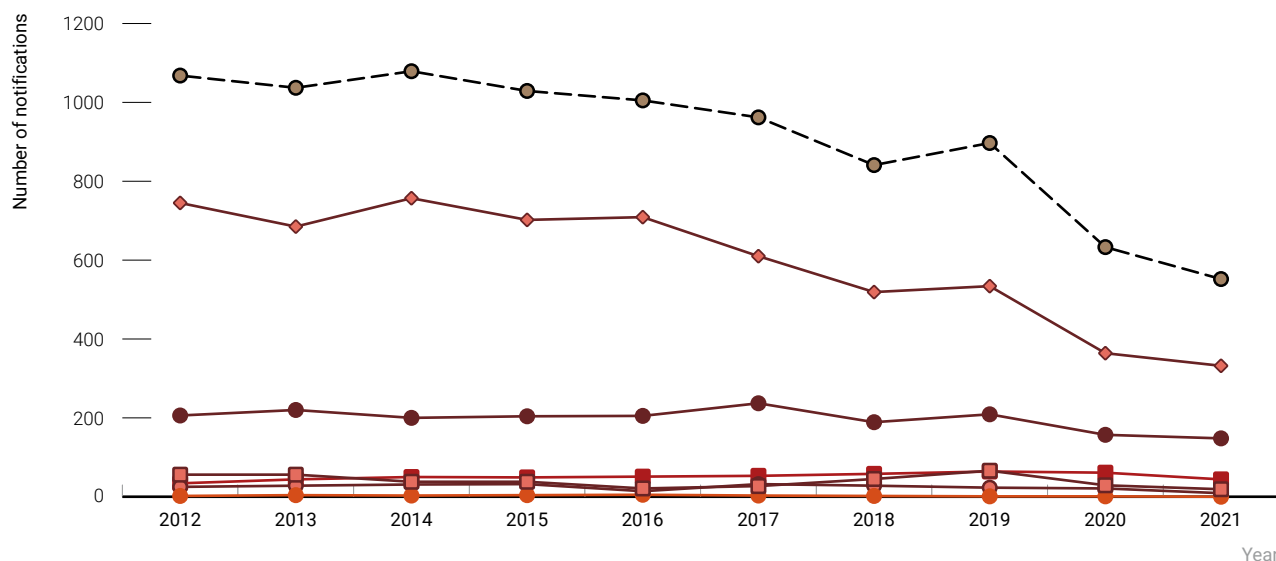
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Region of birth										
Australia	4.1	3.8	4.1	3.6	3.4	3.2	2.6	2.6	1.9	1.7
North Africa and the Middle East	4.7	6.5	4.4	6.0	2.2	3.0	2.4	1.3	2.0	2.3
Northeast Asia	5.0	3.3	4.3	4.8	3.9	2.3	3.5	2.9	0.8	1.8
North-West Europe, USA & Canada	6.1	4.4	5.1	6.0	4.8	2.5	3.3	4.3	1.5	1.9
Oceania	6.3	7.7	5.7	4.0	5.5	4.7	5.3	4.4	4.9	3.3
Latin America and the Caribbean	7.4	11.7	7.1	4.8	11.4	10.0	10.2	12.9	6.9	6.1
Southeast Asia	9.3	9.8	9.3	12.1	12.6	10.8	10.5	13.4	8.3	8.3
Southern and Central Asia	3.4	2.4	2.0	1.8	2.4	2.0	2.5	1.9	2.0	1.5
Southern and Eastern Europe	4.2	5.0	5.8	5.7	2.6	5.3	3.1	3.0	1.1	1.1
Sub-Saharan Africa	15.9	13.8	14.3	11.8	11.3	9.8	8.5	9.1	13.6	3.6

Source: State and territory health authorities; see [Methodology](#) for details.

HIV risk exposure

Transmission of HIV in Australia continues to occur primarily through male-to-male sexual contact (Table 2, Figure 3). Of the 552 new HIV notifications in 2021, 60% (332) were attributed to male-to-male sex, a decline from 70% (745) since 2012. Heterosexual sex accounted for 27% (148) of notifications, an increase from 19% (206) since 2012. In 2021, male-to-male sex and injection drug use accounted for 8% (44) of notifications, and injection drug use for less than 2% (9) of notifications (Table 2, Figure 3).

Figure 3 Number of HIV notifications by exposure category, 2012–2021



Exposure Category	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Male-to-male sex	745	685	757	702	709	610	519	534	364	332
Male-to-male sex and injecting drug use	34	44	50	49	51	53	58	64	61	44
Injecting drug use	25	28	31	32	14	32	28	23	21	9
Heterosexual contact	206	220	200	204	205	237	189	209	157	148
Mother-to-child contact	2	4	3	4	5	3	2	1	1	0
Other	56	56	38	38	21	27	45	66	29	19
Overall	1068	1037	1079	1029	1005	962	841	897	633	552

Notes: The 'male-to-male sex' category includes men who had sex with both men and women. One diagnosis was attributed to an overseas occupational exposure in healthcare or other settings in the 10 years 2012–2021 and was grouped in the 'Other' category.

Source: State and territory health authorities; see [Methodology](#) for detail.

Subpopulations

Gay and bisexual men: Men who have sex with men may identify as gay, bisexual, queer, heterosexual, transgender, or other identities. However, notifications only record data on the most likely HIV risk exposure, which is behavioural, so 'male-to-male sex' is used when describing HIV notifications. This section relates to notifications with a reported exposure classification of male-to-male sex and male-to-male sex and injection drug use.

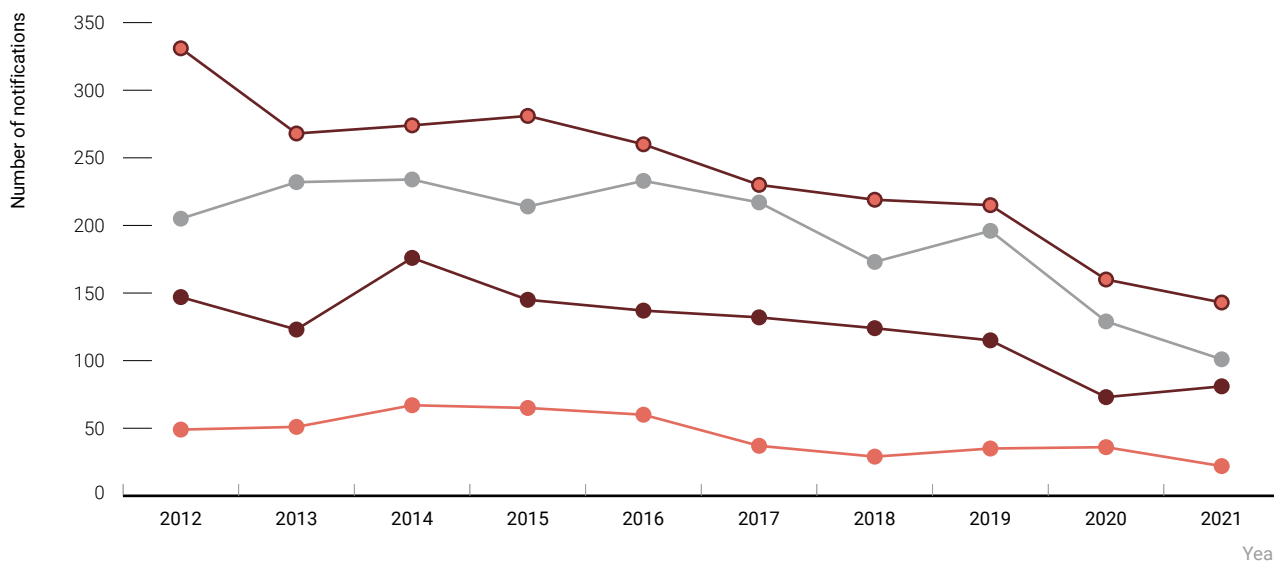
The median age at HIV diagnosis for men reporting male-to-male sex as an HIV risk exposure was 34 years in both 2012 and 2021 (data not shown). Of the 376 cases of HIV newly diagnosed in 2021 for whom exposure to HIV included male-to-male sex, 80 (18%) also reported sex with women, up from 7% (58 out of 883 notifications) in 2012. There were 44 men for whom the HIV risk exposure included male-to-male sex and injection drug use (Figure 3, Table 2).

Between 2012 and 2021, there was a 52% decline in HIV notifications attributed to male-to-male sex. In the same period, all jurisdictions saw a reduction in the number of notifications attributed to male-to-male sex (Figure 4).

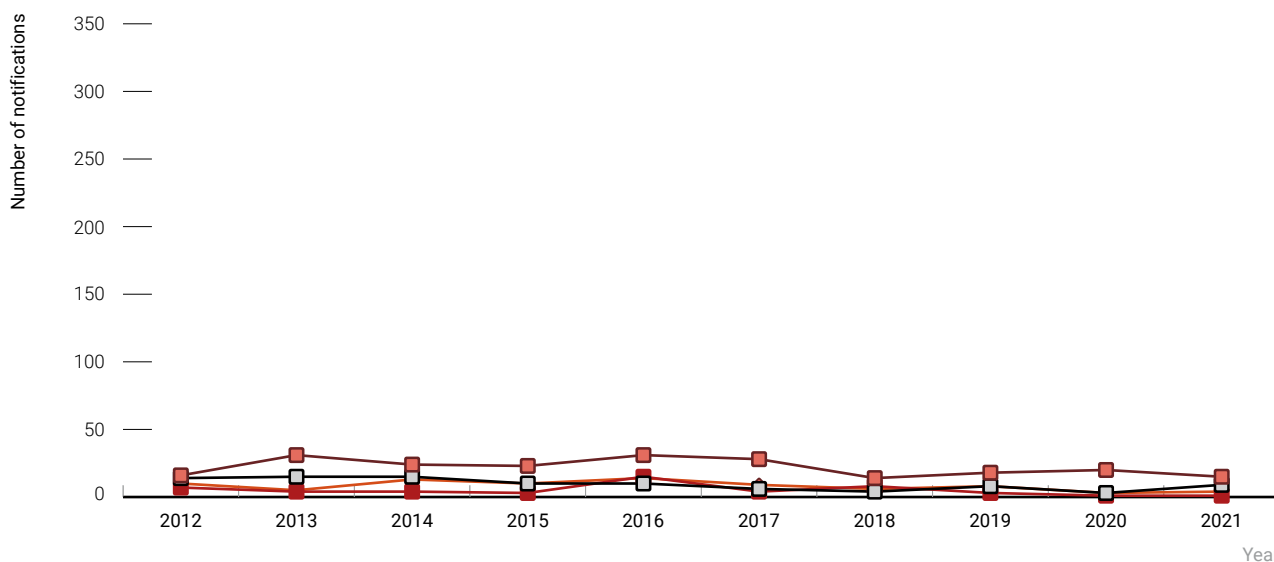
Between 2012 and 2019, the number of HIV notifications among Australian-born men attributed to male-to-male sex decreased 43% from 522 to 297, and then declined by 33% to 200 in 2021. The declines seen among Australian-born men from 2016 onwards are likely due to the availability of pre-exposure prophylaxis (PrEP) (see HIV Prevention on page 42 for further detail). Between 2012 and 2019, the number of HIV notifications among those who were born in Asia (Southeast Asia, Northeast Asia, and Southern and Central Asia) increased by 54% from 106 to 163, and then declined by 35%

between 2019 and 2021 to 106 notifications. The number of HIV notifications among men born in countries other than Asia remained stable between 2012 and 2019 (range 137–165) but declined by 49% from 138 notifications in 2019 to 70 notifications in 2021 (Figure 5). International travel was strongly affected by COVID-19 related border closures which also likely affected HIV notifications among people born overseas.

Figure 4 HIV notifications among men who reported male-to-male-sex as an exposure risk by state/territory, 2012–2021



● NSW	331	268	274	281	260	230	219	215	160	143
● QLD	147	123	176	145	137	132	124	115	73	81
● VIC	205	232	234	214	233	217	173	196	129	101
● WA	49	51	67	65	60	37	29	35	36	22

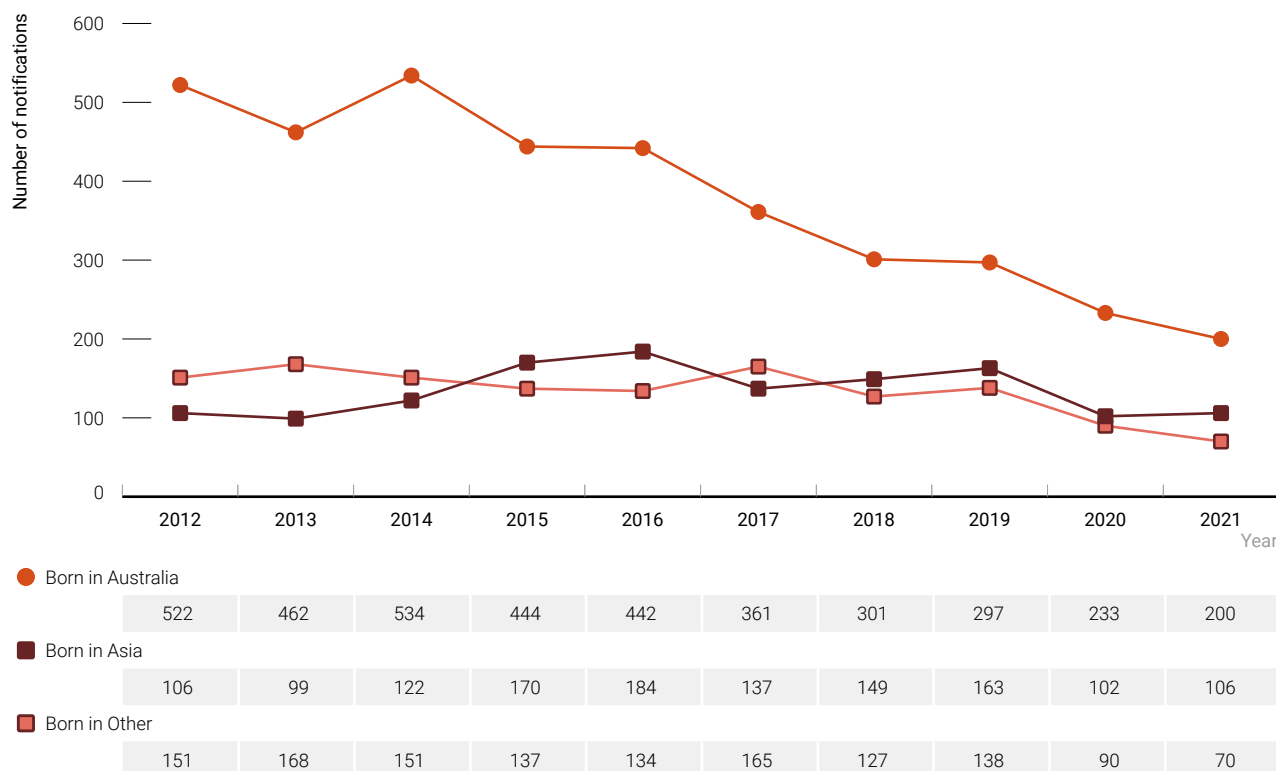


■ ACT	14	15	15	10	10	6	4	8	3	9
■ NT	7	4	4	3	15	4	8	3	1	1
■ SA	16	31	24	23	31	28	14	18	20	15
◆ TAS	10	5	13	10	14	9	6	8	3	4

Notes: Includes notifications where the exposure classification was reported as male-to-male sexual contact and injection drug use.

Source: State and territory health authorities; see Methodology for detail.

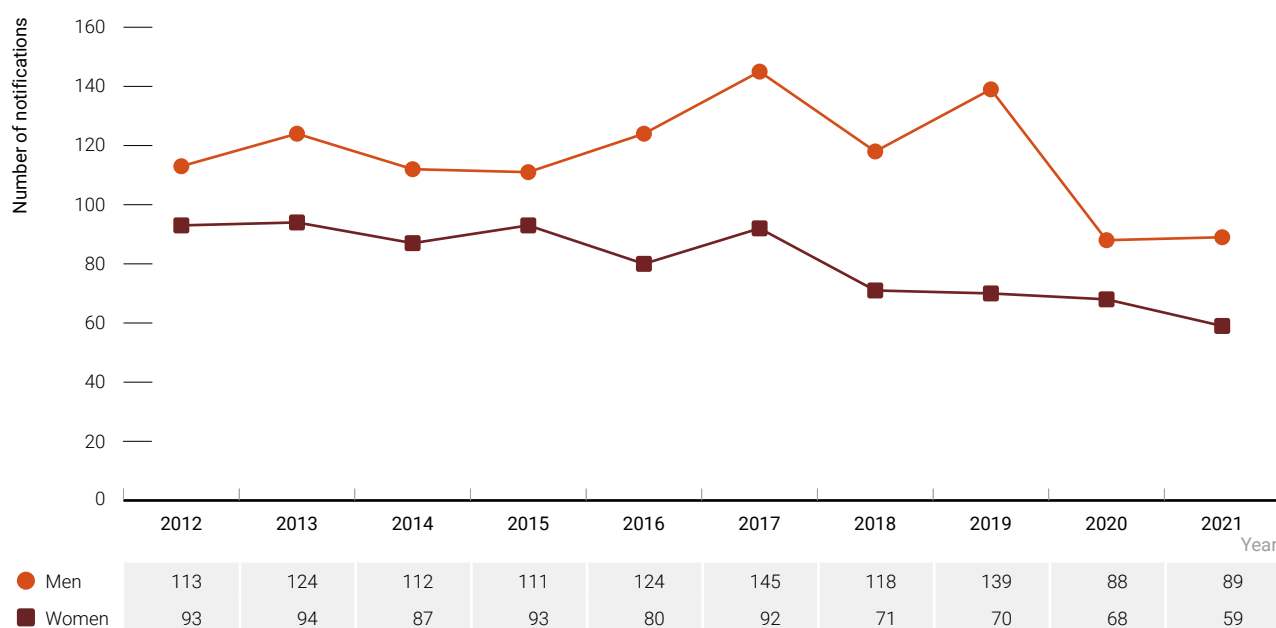
Figure 5 HIV notifications among men who reported male-to-male sex as an exposure risk by region of birth, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

Heterosexuals: Of the 148 HIV notifications attributed to heterosexual sex in 2021, 89 were among men and 59 among women (Figure 6). The number of notifications attributed to heterosexual sex among women declined by 25% from 93 in 2012 to 70 in 2019, and then declined by a further 16% to 59 in 2021. Among men, the number of notifications attributed to heterosexual sex fluctuated between 2012 and 2019 but then declined by 36% from 139 notifications in 2019 to 89 notifications in 2021, likely attributed to the impacts of the COVID-19 pandemic.

Figure 6 Number of HIV notifications reporting exposure as heterosexual sex by gender, 2012–2021

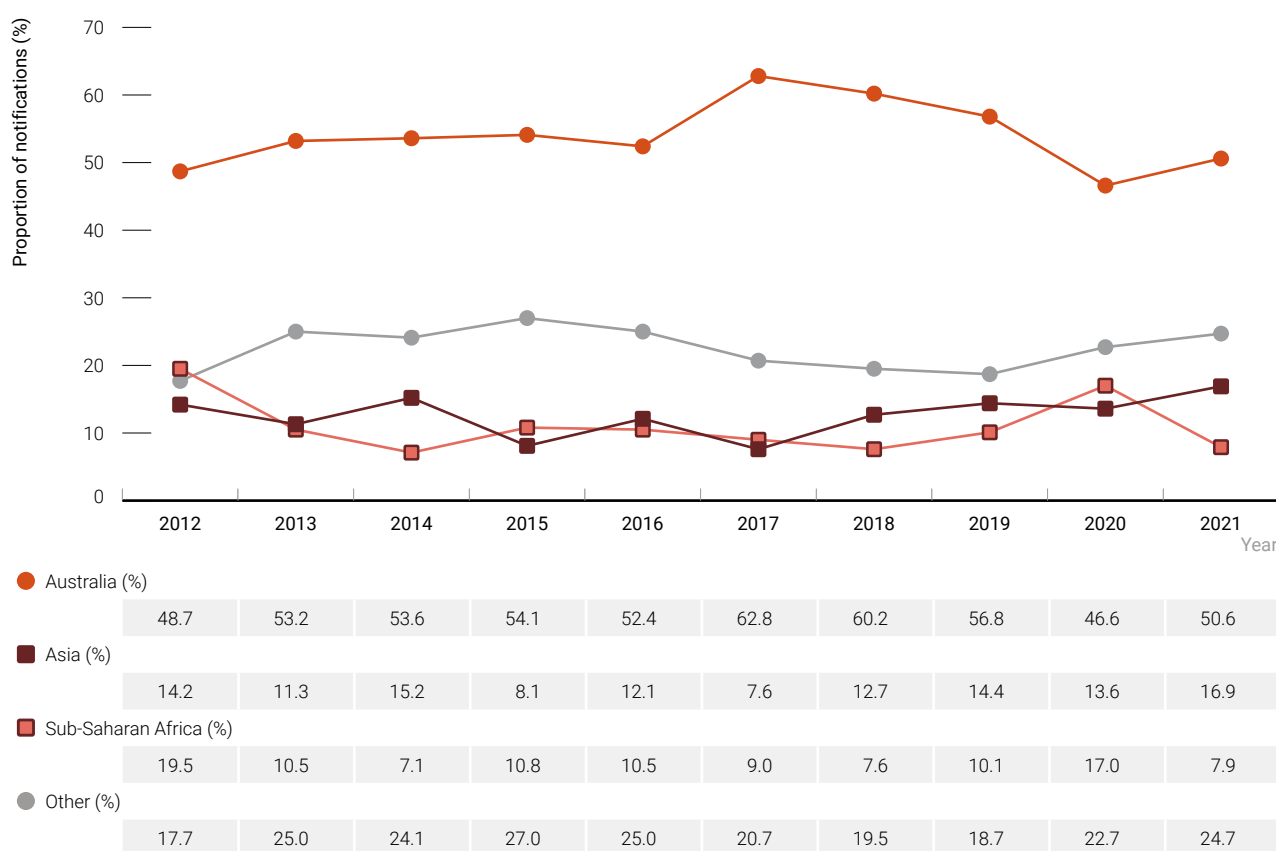


Source: State and territory health authorities; see [Methodology](#) for detail.

Over the eight-year period 2012–2019, the number of HIV notifications reporting heterosexual sex remained relatively stable in most Australian states and territories with some fluctuations. Between 2019 and 2021, the number of HIV notifications attributed to heterosexual sex declined in all jurisdictions except for Queensland, where notifications increased by 18% from 34 to 40. In the Australian Capital Territory, the Northern Territory, South Australia and Tasmania, the number of HIV notifications in this category remained low. Caution should be applied when interpreting these figures due to small numbers of notifications reported by some jurisdictions. Breakdowns of HIV notifications by exposure and jurisdiction can be found on the [Kirby Institute data site](#).

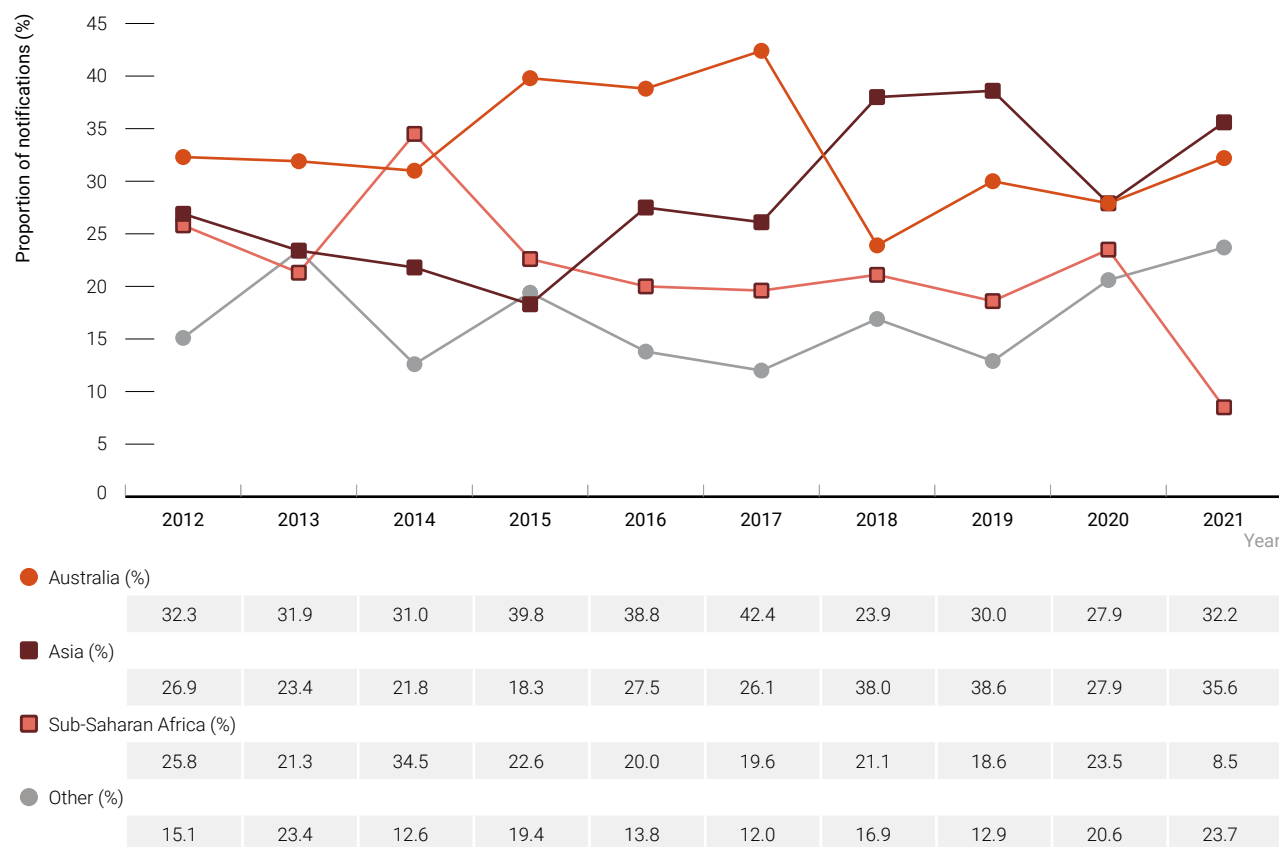
By gender, for HIV notifications attributed to heterosexual sex, the proportion born in Australia fluctuated among men and women between 2012 and 2021, and in 2021, was 32% among men and 51% among women. Between 2012 and 2021, among HIV notifications attributed to heterosexual sex, the proportion of those born in Asia, Sub-Saharan Africa and other countries fluctuated among men and women (Figure 7, Figure 8).

Figure 7 Proportion of HIV notifications in men who report heterosexual sex as exposure risk, by region/country of birth, 2012–2021



Source State and territory health authorities; see [Methodology](#) for detail.

Figure 8 Proportion of HIV notifications in women who report heterosexual sex as exposure risk by region/country of birth, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

Trans and gender diverse people: Between 2012 and 2021, there were 42 HIV notifications among people whose gender was reported as trans or gender diverse (Table 3). Of these, 10% were Aboriginal and/or Torres Strait Islander people, the median age at diagnosis was 37 years, and 86% of notifications were attributed to male-to-male sex or male-to-male sex and injection drug use. Of those with recorded CD4+ T-cell counts taken within three months of diagnosis, 28% were diagnosed late with HIV (indicated by a CD4+ cell count less than 350 cells/ μ L at diagnosis) (data not shown).

It is likely that these 42 notifications are an underrepresentation of the true number of trans and gender diverse people newly diagnosed with HIV, as until 2021, the national HIV notification form only had one variable related to gender which captured if the person is male, female or transgender. This single variable is inadequate as trans and gender diverse people may position 'being trans' as a history or experience, rather than an identity, and consider their gender identity as simply female, male or a non-binary identity. Some trans people connect strongly with their trans experience, whereas others do not. The processes of transition may or may not be part of a trans or gender diverse person's life⁽¹⁾. Thus, many people who identify as a different gender to what sex they were registered as at birth do not identify as transgender⁽²⁾. This means that there is potential for underreporting in the number of transgender people diagnosed with HIV.

Aboriginal and Torres Strait Islander peoples: In 2021 there were 17 HIV notifications among Aboriginal and Torres Strait Islander peoples, representing 3% of the total 553 notifications. The majority (64%) of Aboriginal and/or Torres Strait Islander notifications were among males and the median age at diagnosis was 38 years (Table 5).

Between 2012 and 2016, the HIV notification rate among Aboriginal and Torres Strait Islander peoples increased from 4.9 to 6.5 per 100 000 and then declined to 3.3 per 100 000 in 2019. In 2021, the HIV notification rate was 2.3 per 100 000 among Aboriginal and Torres Strait Islander peoples and was 2.2 per 100 000 among non-Indigenous people. HIV notification rates for Aboriginal and Torres Strait Islander peoples and non-Indigenous people were similar between 2017 and 2021. Trends in HIV notification rates in the Aboriginal and Torres Strait Islander population are based on small numbers and may reflect localised occurrences rather than national patterns (see Figure 2 for notification rates by jurisdiction).

For the years 2019–2021, by exposure classification, a higher proportion of notifications were attributed to injection drug use among Aboriginal and Torres Strait Islander peoples than among non-Indigenous people (11.9% and 2.3%, respectively, data not shown).

Table 5 Characteristics of cases of HIV notifications in Aboriginal and Torres Strait Islander peoples, 2012–2021

Characteristic	Year of HIV diagnosis										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	
Total cases^a	35	27	34	40	47	31	33	25	17	17	
Gender											
Male	28	23	25	36	41	23	30	20	15	17	
Female	7	4	8	4	5	7	3	5	1	0	
Transgender	0	0	1	0	1	1	0	0	1	0	
Median age in years	27.0	36.0	33.5	35.5	31.0	33.0	28.0	31.0	36.0	38.0	
Newly acquired HIV^b	11	9	8	12	14	7	8	9	7	3	
(% of new diagnoses)	31.4%	33.3%	23.5%	30.0%	29.8%	22.6%	24.2%	36.0%	41.2%	17.6%	
Late and advanced HIV infection status at HIV diagnosis (%)^c											
Late HIV diagnosis, %	31.0%	40.0%	32.3%	30.6%	25.0%	29.6%	26.9%	23.8%	6.7%	42.9%	
Advanced HIV diagnosis, %	24.1%	25.0%	19.4%	16.7%	13.6%	7.4%	23.1%	9.5%	0.0%	21.4%	
State/Territory^d											
Australian Capital Territory	0	0	1	0	0	0	1	0	0	0	
New South Wales	12	8	7	7	10	8	11	7	5	1	
Northern Territory	2	1	1	1	5	1	1	0	0	1	
Queensland	14	9	14	13	20	11	13	9	7	6	
South Australia	1	2	0	2	2	5	1	2	2	0	
Tasmania	0	2	2	2	0	1	0	1	0	1	
Victoria	5	5	6	8	6	2	4	4	1	3	
Western Australia	1	0	3	7	4	3	2	2	2	5	
HIV exposure category, %											
Male-to-male sex ^e	68.6%	29.6%	38.2%	55.0%	57.4%	41.9%	54.5%	48.0%	52.9%	52.9%	
Male-to-male sex and injection drug use	5.7%	18.5%	8.8%	10.0%	14.9%	6.5%	12.1%	20.0%	29.4%	11.8%	
Heterosexual sex	17.1%	29.6%	17.6%	17.5%	21.3%	25.8%	24.2%	16.0%	11.8%	17.6%	
Injection drug use	5.7%	22.2%	26.5%	15.0%	4.3%	22.6%	3.0%	16.0%	0.0%	17.6%	
Mother with/at risk of HIV infection	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other/undetermined exposure	0.0%	0.0%	8.8%	2.5%	2.1%	3.2%	6.1%	0.0%	5.9%	0.0%	

a Includes gender of 'Other' and 'Not reported'.

b Newly acquired HIV was defined as a new HIV diagnosis with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV within one year before HIV diagnosis.

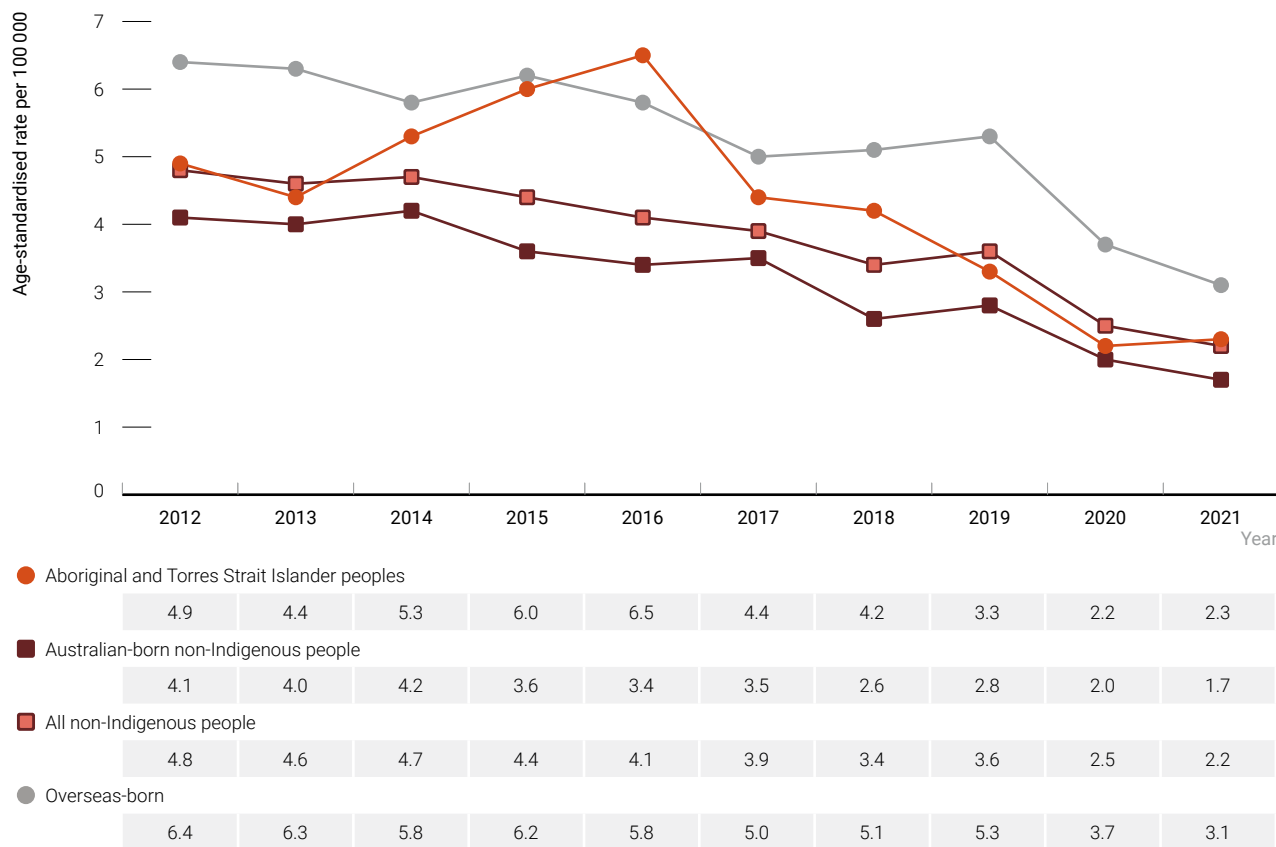
c Late HIV diagnosis was defined as newly diagnosed HIV with a CD4+ cell count of less than 350 cells/ μ L, and advanced HIV as newly diagnosed infection with a CD4+ cell count of less than 200 cells/ μ L. Newly acquired HIV was categorised as not late or advanced diagnosis irrespective of CD4+ cell count.

d Numbers may differ to those reported by state and territory health authorities due to ongoing data cleaning and revision.

e Includes men who had sex with both men and women.

Source: State and territory health authorities.

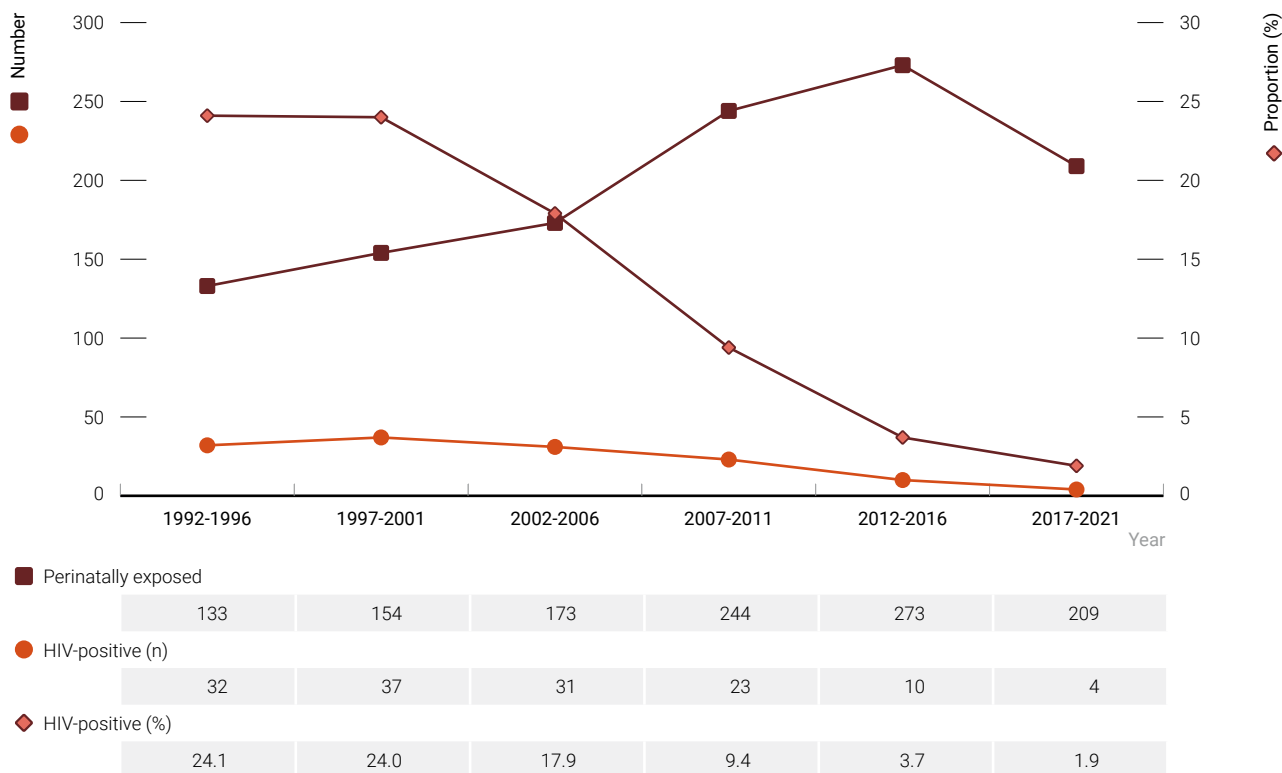
Figure 9 HIV notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

Pregnant women: Between 1992 and 2021, 1186 cases of perinatal HIV exposure among children born in Australia were reported. For the period 2017–2021, the HIV vertical transmission rate was 1.9%, compared with 24.1% in the period 1992–1996 and 24.0% in the period of 1997–2001 (Figure 10). There have been three reported cases of vertical HIV transmission from 2017 to 2021, including two cases in 2018, and one case in 2019. There were no cases reported in 2021 (data not shown).

Figure 10 Number of Australian-born children perinatally exposed to HIV and proportion HIV-positive by five-years grouping of birth year, 1992–2021



Source: Australian Paediatric Surveillance Unit; see [Methodology](#) for detail.

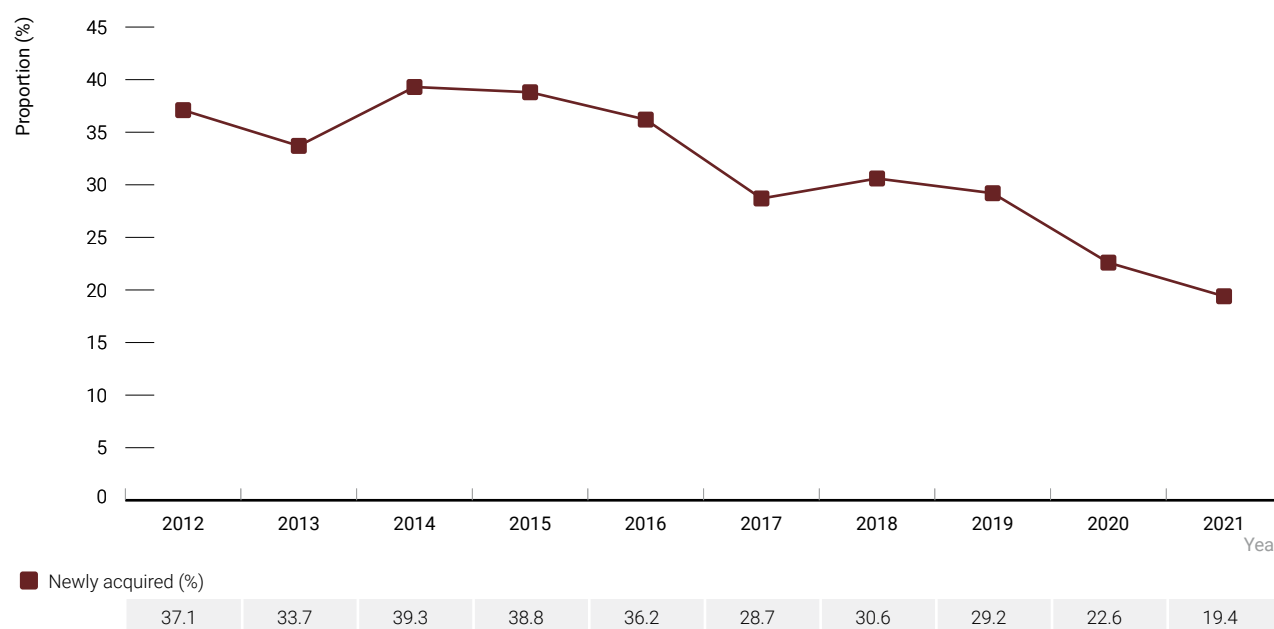
Clinical and immunological markers indicating timing of HIV diagnosis

HIV notifications classified as newly acquired

For some newly diagnosed HIV notifications, it is possible to determine whether HIV was acquired in the 12 months prior to diagnosis, on the basis of a recent prior negative or indeterminate HIV test and clinical markers (see [Methodology](#) for further details). The proportion of all new notifications that were reported to be newly acquired decreased from 37.1% in 2012 to 29.2% in 2019. Between 2019 and 2021, the proportion of HIV notifications classified as newly acquired declined from 29.2% to 19.4% (Table 3, Figure 11). Trends in the proportion of HIV notifications classified as newly acquired need to be interpreted cautiously as rises could reflect increases in regular testing (allowing determination of recent infection) rather than an actual increase in the number of newly acquired infections. When considering these data, it is important to also note that fewer indeterminate results were recorded after 2016 due to changes in testing practices across several jurisdictions. These changes have reduced the number of results which were previously used to provide evidence for newly acquired HIV infections. In general, HIV testing rates are higher among gay and bisexual men and other men who have sex with men meaning that HIV notifications are more likely to be classified as newly acquired among this population.

The rates of newly acquired HIV notifications in 2021 varied by jurisdiction, with the highest in New South Wales (0.6 per 100 000) (Figure 12). In the Australian Capital Territory, Tasmania and the Northern Territory the numbers of notifications reported annually are smaller, so trends by jurisdiction need to be interpreted with caution.

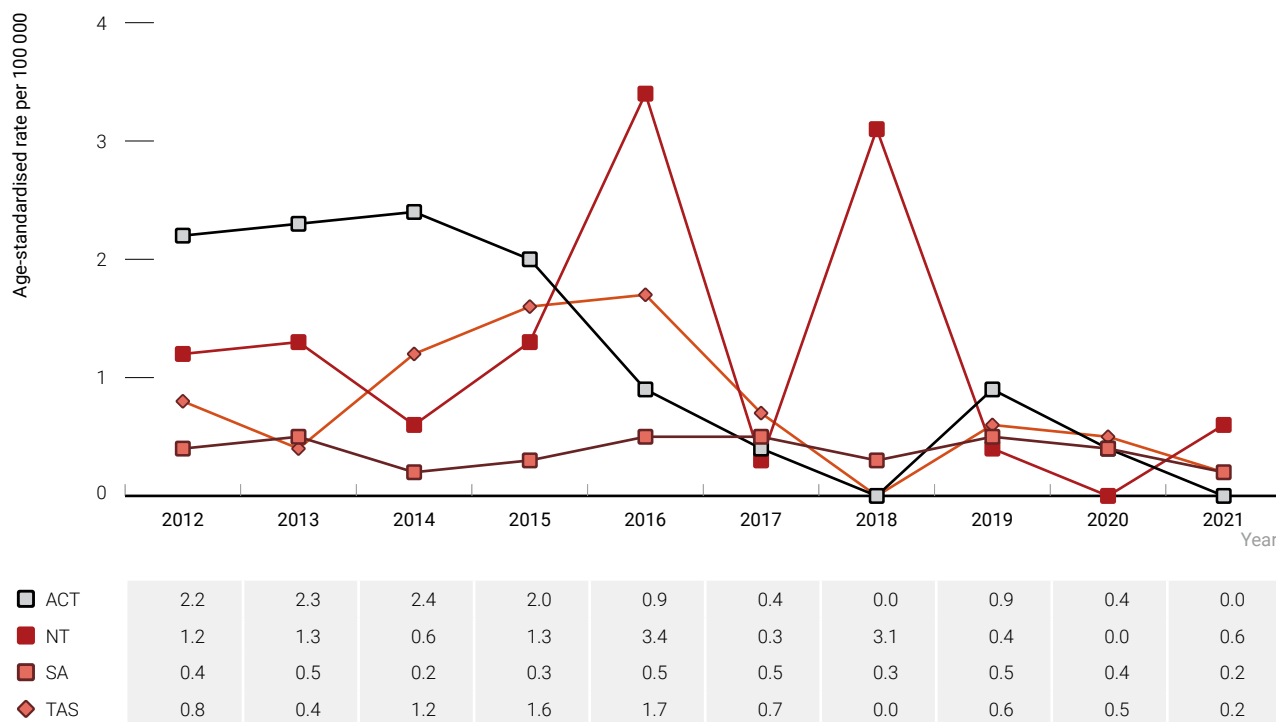
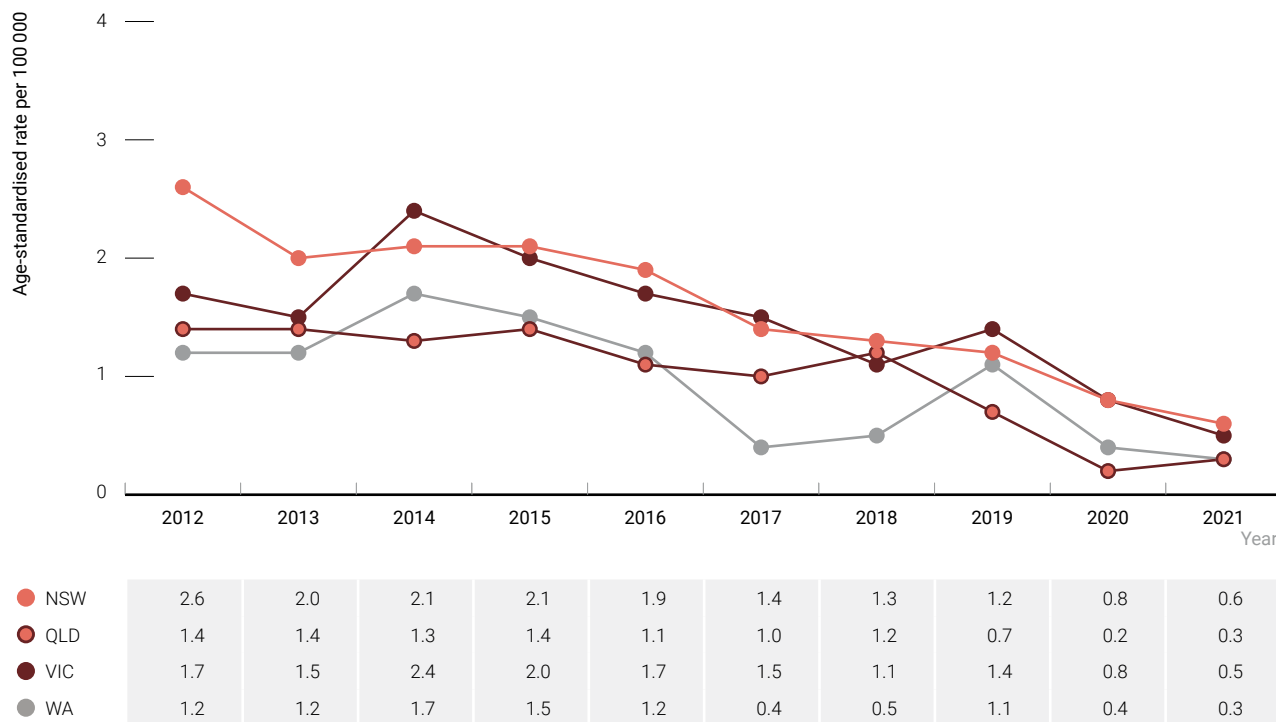
Figure 11 The proportion of HIV notifications classified as newly acquired, 2012–2021



Note: Newly acquired HIV was defined as newly diagnosed infection with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV within one year before HIV diagnosis.

Source: State and territory health authorities; see [Methodology](#) for detail.

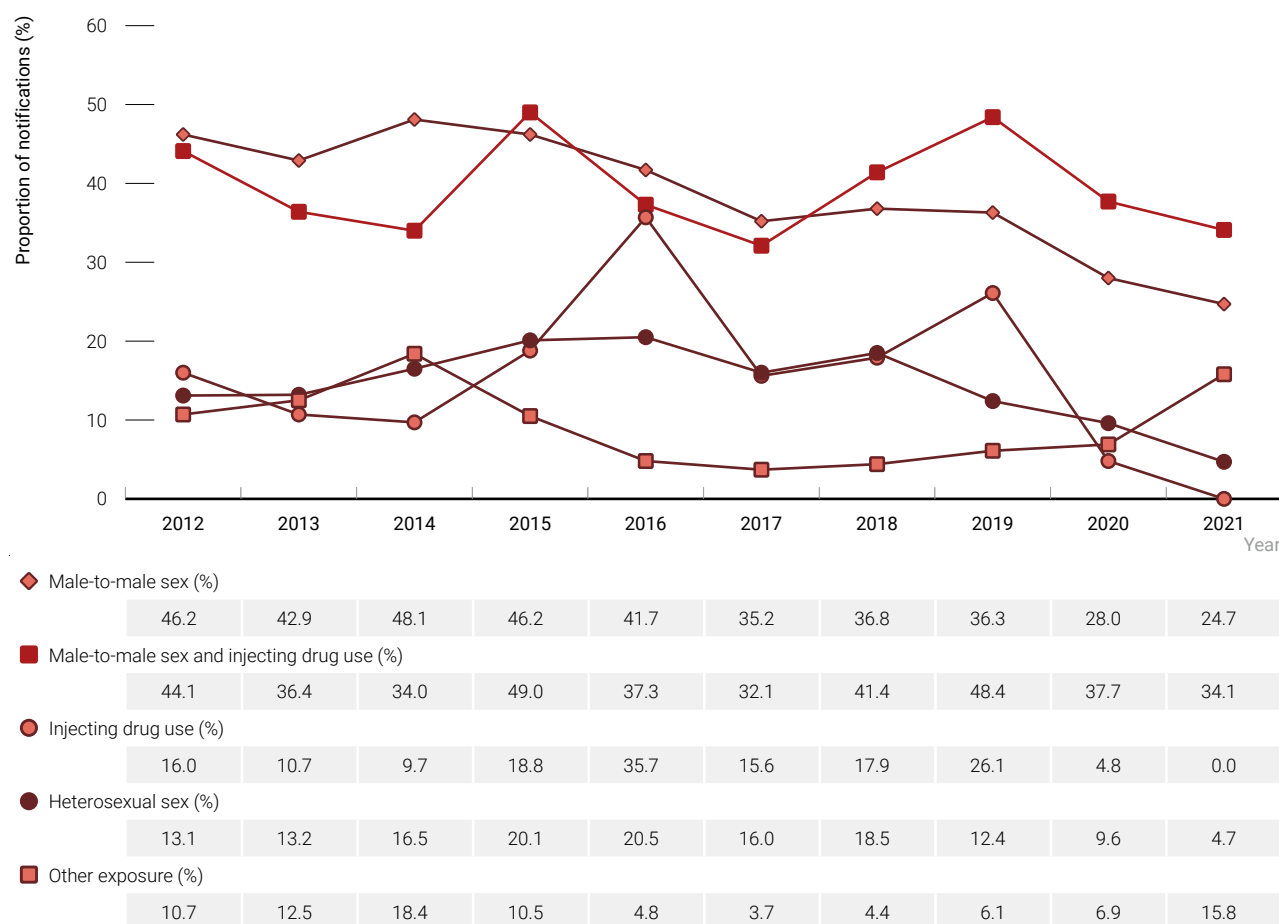
Figure 12 HIV notification rates classified as newly acquired per 100 000 population, by state/territory, 2012–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

Between 2012 and 2019 among HIV diagnoses attributed to male-to-male sex, the proportion classified as newly acquired, declined from 46.2% to 36.3%. In the same period, for all other exposure classifications, the proportions of newly acquired HIV notifications fluctuated. Between 2019 and 2021, the proportion of HIV notifications classified as newly acquired declined for all exposure classifications, except for those attributed to 'Other exposure'. Due to small numbers of notifications, trends in newly acquired HIV notifications classified as 'Other exposure' should be interpreted with caution (Figure 13).

Figure 13 Proportion of HIV notifications classified as newly acquired by HIV exposure category, 2012–2021



Note: Newly acquired HIV was defined as newly diagnosed infection with a negative or indeterminate HIV antibody test result or a diagnosis of primary HIV within one year before HIV diagnosis.

Source: State and territory health authorities; see [Methodology](#) for detail.

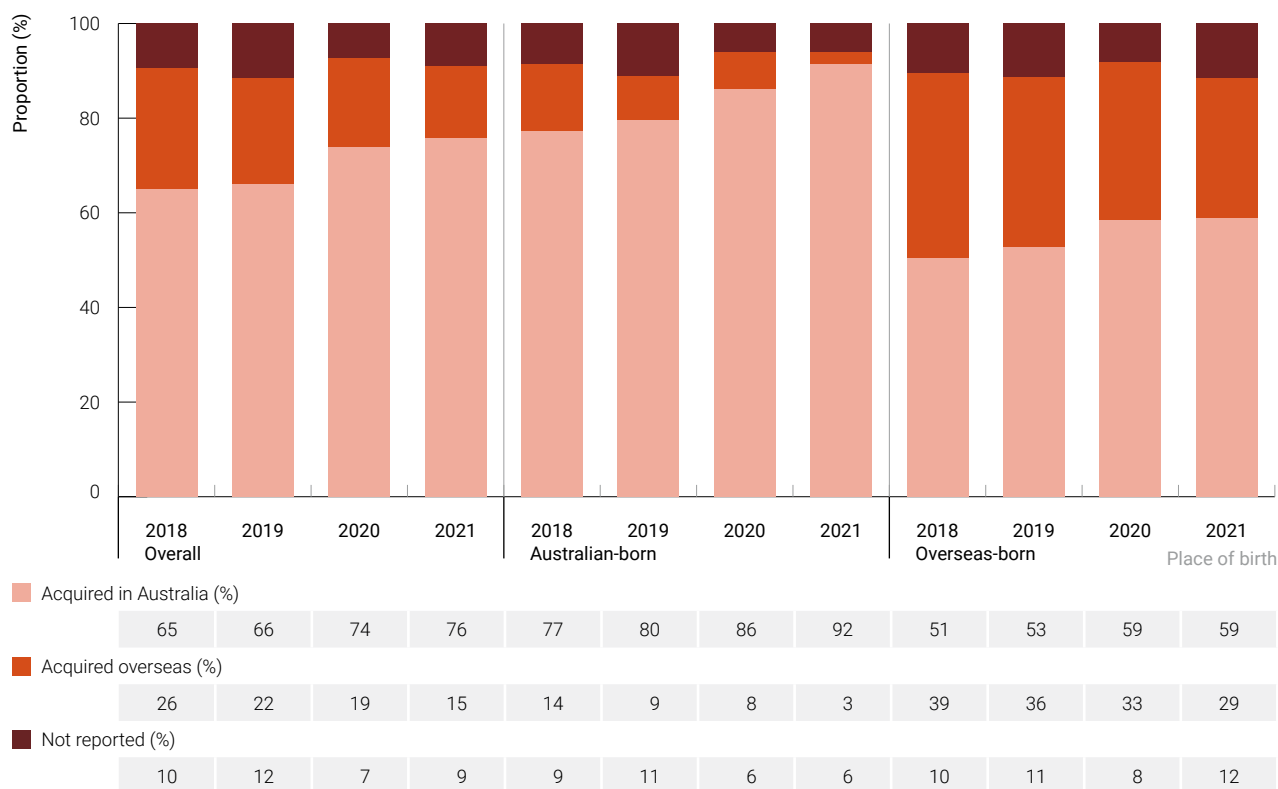
Monitoring the likely place of HIV acquisition and HIV subtype can provide information to enhance understanding of the potential influence of travel and migration on HIV diagnosis trends. Since 2014, notifications of HIV have included the likely place of HIV acquisition reported by the clinician, i.e., acquired in Australia, acquired overseas or place of acquisition unknown (see [Methodology](#) for further details). Data for place of acquisition are more complete for the years 2018–2021. From 2020, trends in place of HIV acquisition were likely influenced by COVID-19 related border closures.

Likely place of HIV acquisition

Of HIV notifications attributed to male-to-male sex, among Australian-born men, the proportion who likely acquired HIV in Australia increased steadily from 77% in 2018 to 92% in 2021. Conversely, among this population, the proportion who likely acquired HIV overseas decreased from 14% to 3%. Among men born outside Australia newly diagnosed with HIV, the proportion who likely acquired HIV overseas also steadily decreased, from 39% in 2018 to 29% in 2021 while the proportion who likely acquired HIV in Australia increased from 51% in 2018 to 59% in 2021 (Figure 14).

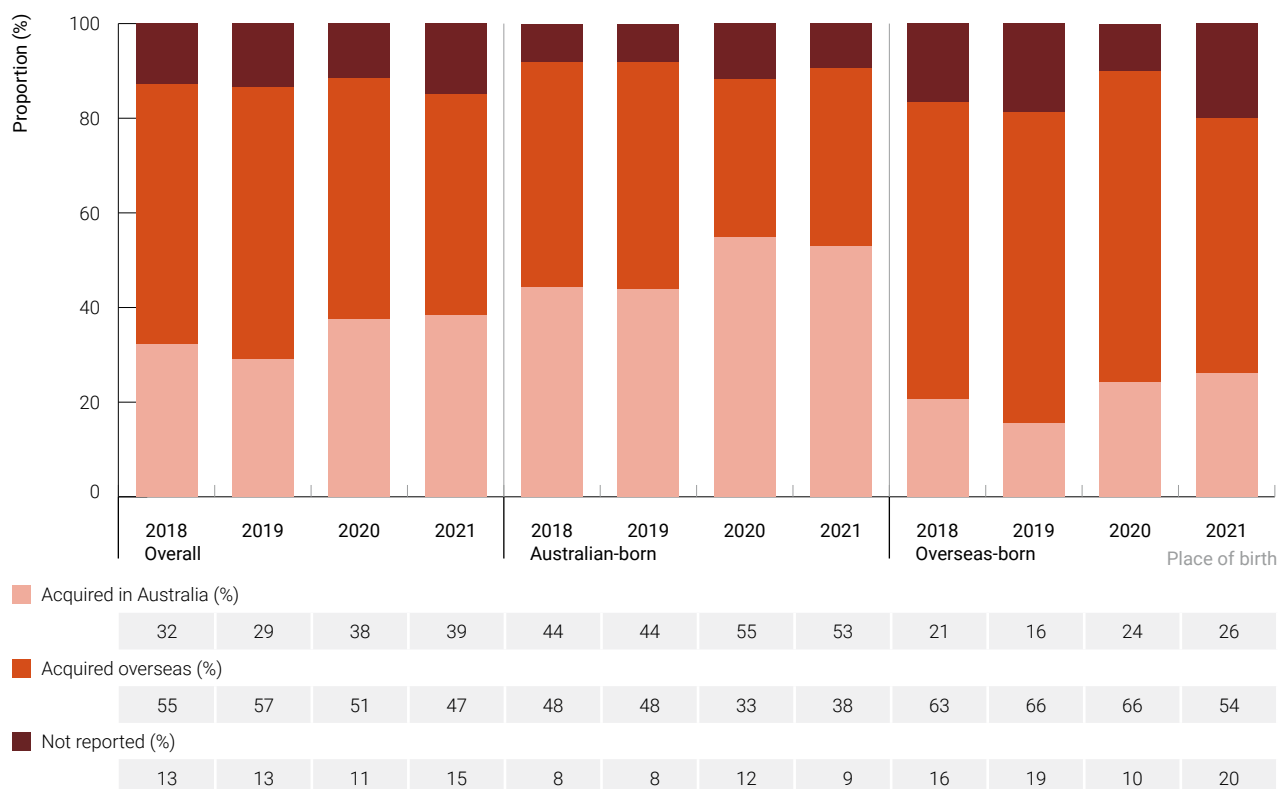
Of HIV notifications attributed to heterosexual sex, among Australian-born people, the proportion who likely acquired HIV in Australia increased from 44% in 2018 to 53% in 2021. Conversely, among this population, the proportion who likely acquired HIV overseas decreased from 48% to 38%. Among people born overseas newly diagnosed with HIV, the proportion who likely acquired HIV overseas fluctuated between 16% (in 2019) and 26% (in 2021) (Figure 15).

Figure 14 Likely place of HIV acquisition in HIV notifications attributed to male-to-male sex by country of birth, 2018–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

Figure 15 Likely place of HIV acquisition in HIV notifications attributed to heterosexual sex by country of birth, 2018–2021



Source: State and territory health authorities; see [Methodology](#) for detail.

HIV subtype

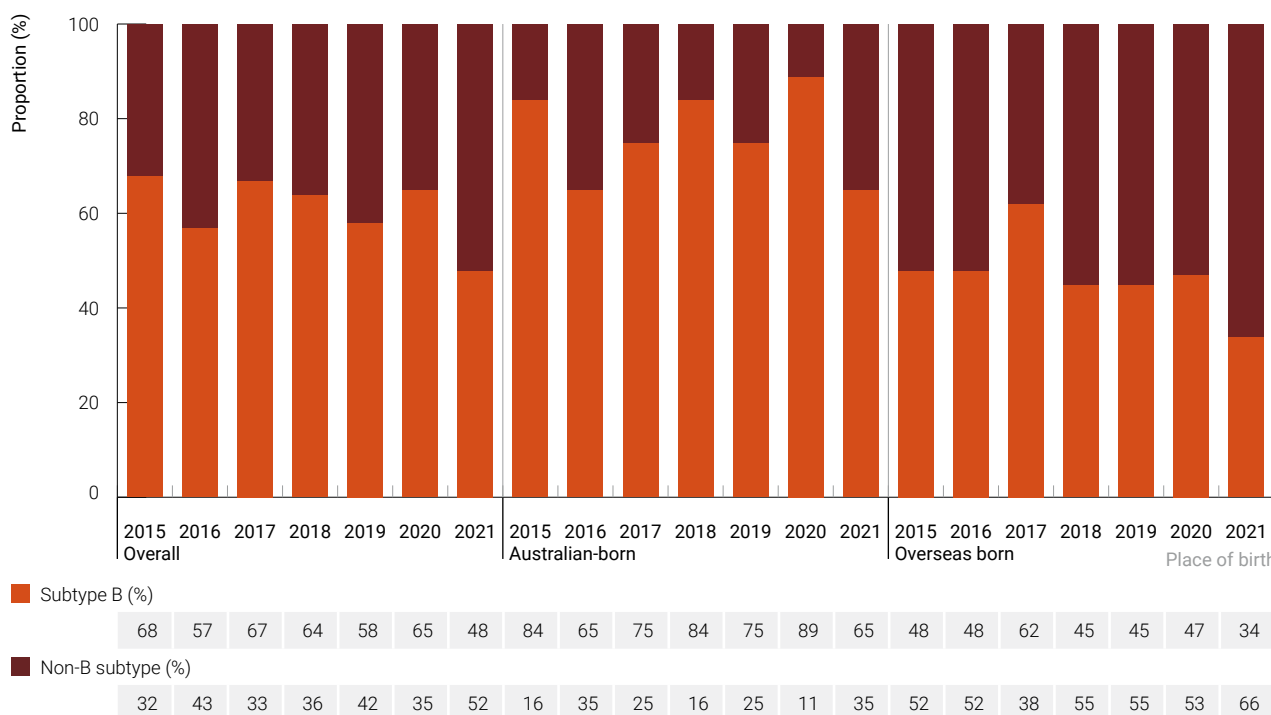
HIV subtype has been included in this report for the second time, as changes in the distribution of subtypes at a population level can inform prevention programs. There are at least nine subtypes of HIV-1 virus globally, A, B, C, D, F, G, H, J and K. Additionally, different subtypes can combine, creating what is known as a ‘circulating recombinant form’. The dominant HIV subtype in the Americas, Western Europe and Australasia is subtype B^(3,4). Subtype C is more common in India and high-prevalence countries of Sub-Saharan Africa⁽⁵⁾.

In this report we have included HIV subtype based on HIV notifications with a reported subtype in New South Wales and South Australia from 2015 to 2021. These data may not be representative of all new infections Australia-wide, and therefore these figures should be interpreted with caution. Future reports will aim to include data from all jurisdictions (see [Methodology](#) for further details).

Between 2015 and 2021, for HIV notifications attributed male-to-male sex, most HIV notifications (between 48% and 68%) were subtype B (compared with non-B subtypes), with higher proportions among Australian-born men than among overseas-born men. In 2021, among HIV notifications attributed to male-to-male sex, non-B subtypes made up the majority (52%) of notifications, compared with subtype B notifications (48%), with a lower proportion of subtype B among both Australian-born and overseas-born notifications than in the preceding six years (Figure 16).

Between 2015 and 2021, for HIV notifications attributed to heterosexual sex, the proportions of subtype B notifications fluctuated between 25% and 38%. In 2021 subtype B accounted for 14% of notifications, the lowest proportion since before 2015. Small numbers of HIV subtypes for notifications attributed to heterosexual sex mean that these numbers should be interpreted with caution (Figure 17).

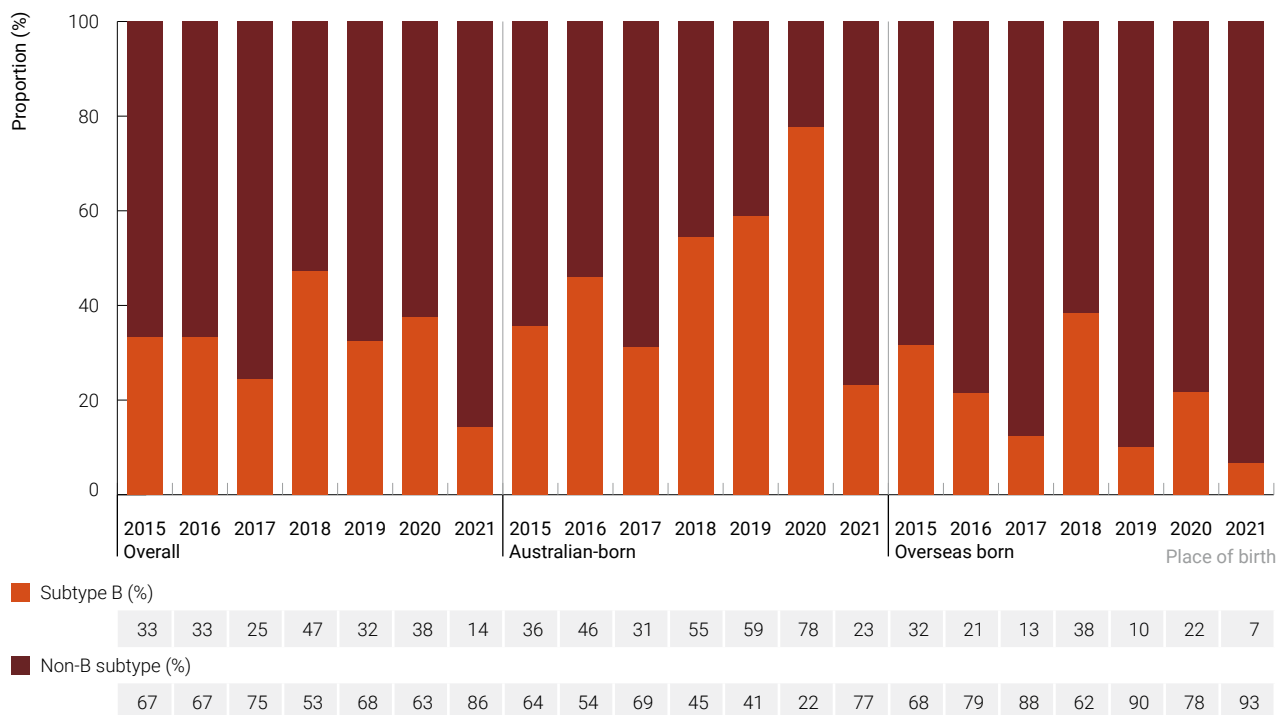
Figure 16 HIV subtype distribution in HIV notifications attributed to male-to-male sex by place of birth, 2015-2021



Note: Includes notifications from New South Wales and South Australia. Excludes notifications where HIV subtype was not reported.

Source: State/territory health authorities, NSW NHMRC Partnership Project; see [Methodology](#) for detail.

Figure 17 HIV subtype distribution in HIV notifications attributed to heterosexual sex by place of birth, 2015-2021



Note: Includes notifications from New South Wales and South Australia. Excludes notifications where HIV subtype was not reported.

Source: State/territory health authorities, see [Methodology](#) for detail.

Late and advanced HIV diagnoses

CD4+ cell count at the time of HIV diagnosis can indicate how long a person has had HIV before being diagnosed. CD4+ cell count is above 500 cells/ μ L in most people without HIV and declines on average by 50 to 100 cells/ μ L per year in people with HIV⁽⁶⁾. Late HIV diagnosis is defined as CD4+ cell count less than 350 cells/ μ L at diagnosis without evidence of a newly acquired HIV infection. Advanced HIV is defined as newly diagnosed infection with a CD4+ cell count of less than 200 cells/ μ L without evidence of a newly acquired HIV infection (see [Methodology](#) for further details).

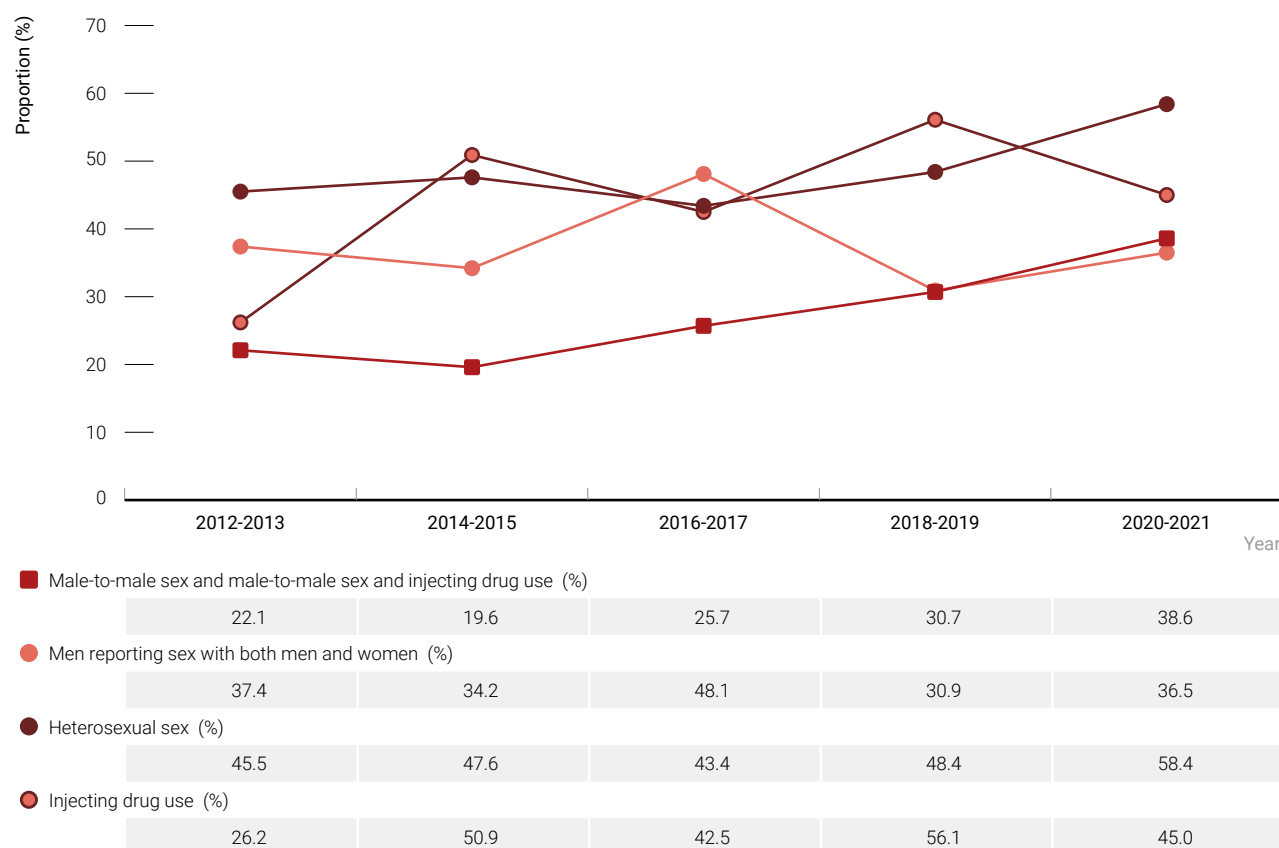
The proportion of newly diagnosed HIV cases with a late diagnosis increased from 29.3 % in 2012 to 48.0% in 2021 (see Table 3).

For the years 2019 to 2021, the proportion of HIV notifications with late diagnosis was highest in people born in Sub-Saharan Africa (59%), Southeast Asia (57%), and Central or South America (44%) (data not shown).

Late HIV diagnoses by key characteristics and exposure category

By exposure category, condensed into two-year groups to account for small numbers of notifications, late diagnoses attributed to heterosexual sex, male-to-male sex and injection drug use have fluctuated. For the years 2020/2021 and for diagnoses attributed to heterosexual sex and injection drug use, the proportions diagnosed late remain high at 58.4% and 45.0%, respectively (Figure 18).

Figure 18 Proportion of late HIV diagnoses by selected exposure category, 2012–2021

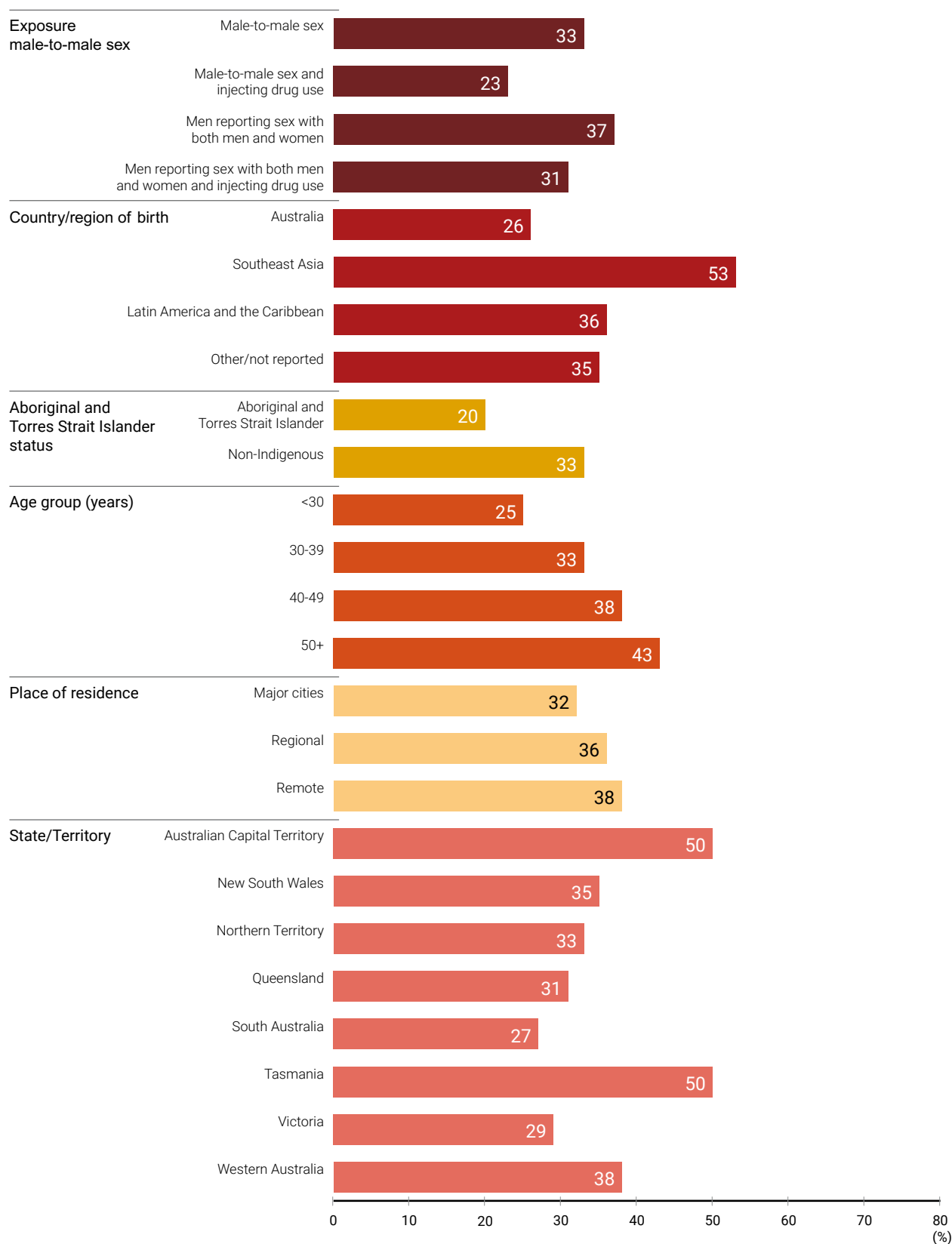


Note: Late HIV diagnosis was defined as new HIV diagnoses with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was not categorised as late or advanced diagnoses irrespective of CD4+ cell count. Notifications without a CD4+ cell count available were excluded.

Source: State and territory health authorities

Among HIV notifications attributed to male-to-male sex for the years 2017 to 2021, late diagnosis was more common among men who reported sex with both men and women (37%), men aged 50 years and older (43%), men born in Southeast Asia (53%), and men living in remote areas (38%) (Figure 19).

Figure 19 Proportion of late HIV diagnoses among men reporting an exposure category that included male-to-male sex by subcategory, 2017–2021 (n = 2352)

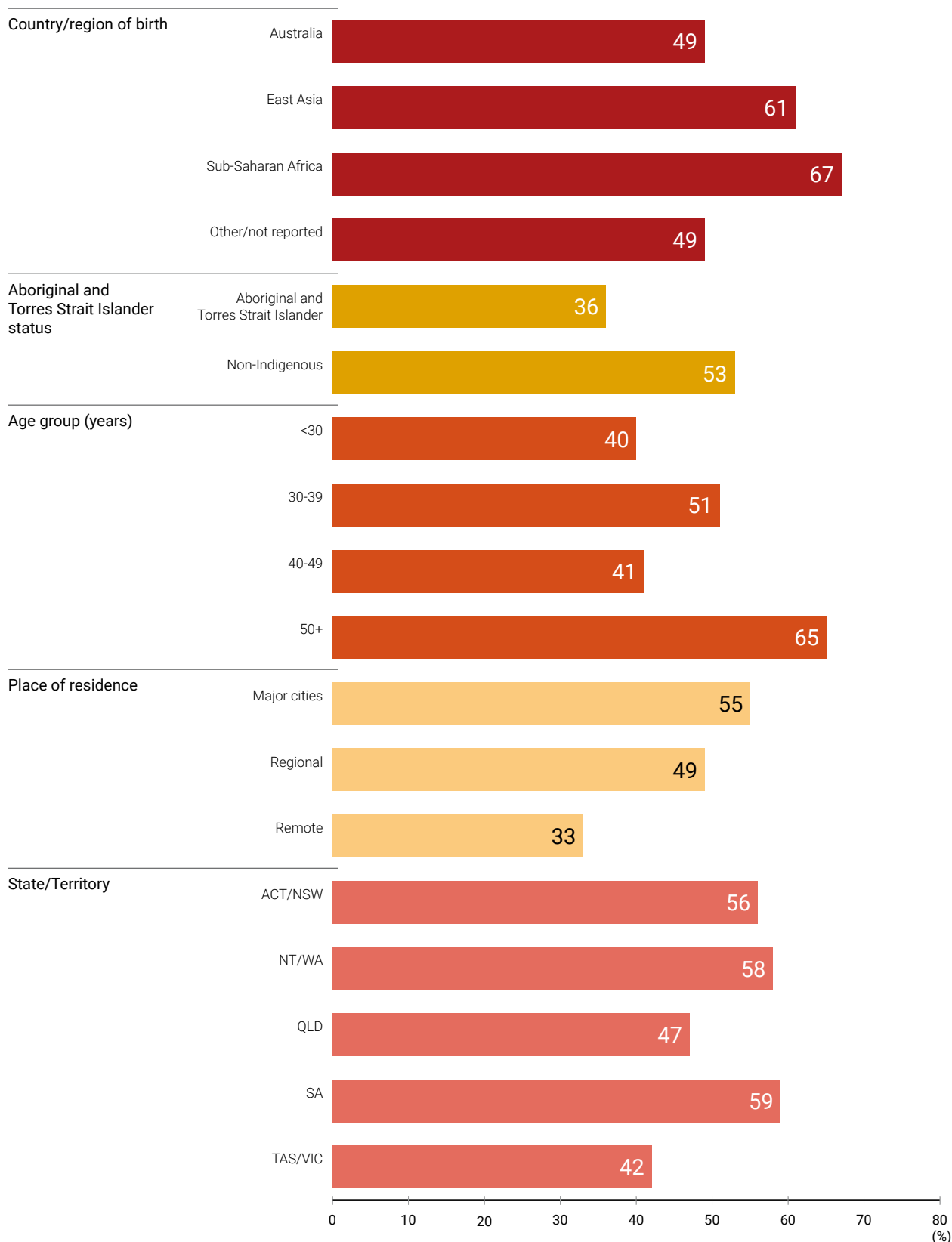


Note: Late HIV diagnosis was defined as an HIV notification with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was categorised as neither late or advanced diagnoses, irrespective of CD4+ cell count. Notifications without a CD4+ cell count recorded within three months of diagnosis were excluded.

Source: State and territory health authorities.

A high proportion of late diagnoses were reported among people with heterosexual sex as an exposure risk (51% overall, 53% among men and 49% among women), with variation by key demographic characteristics and HIV risk exposure (Figure 20, Figure 21).

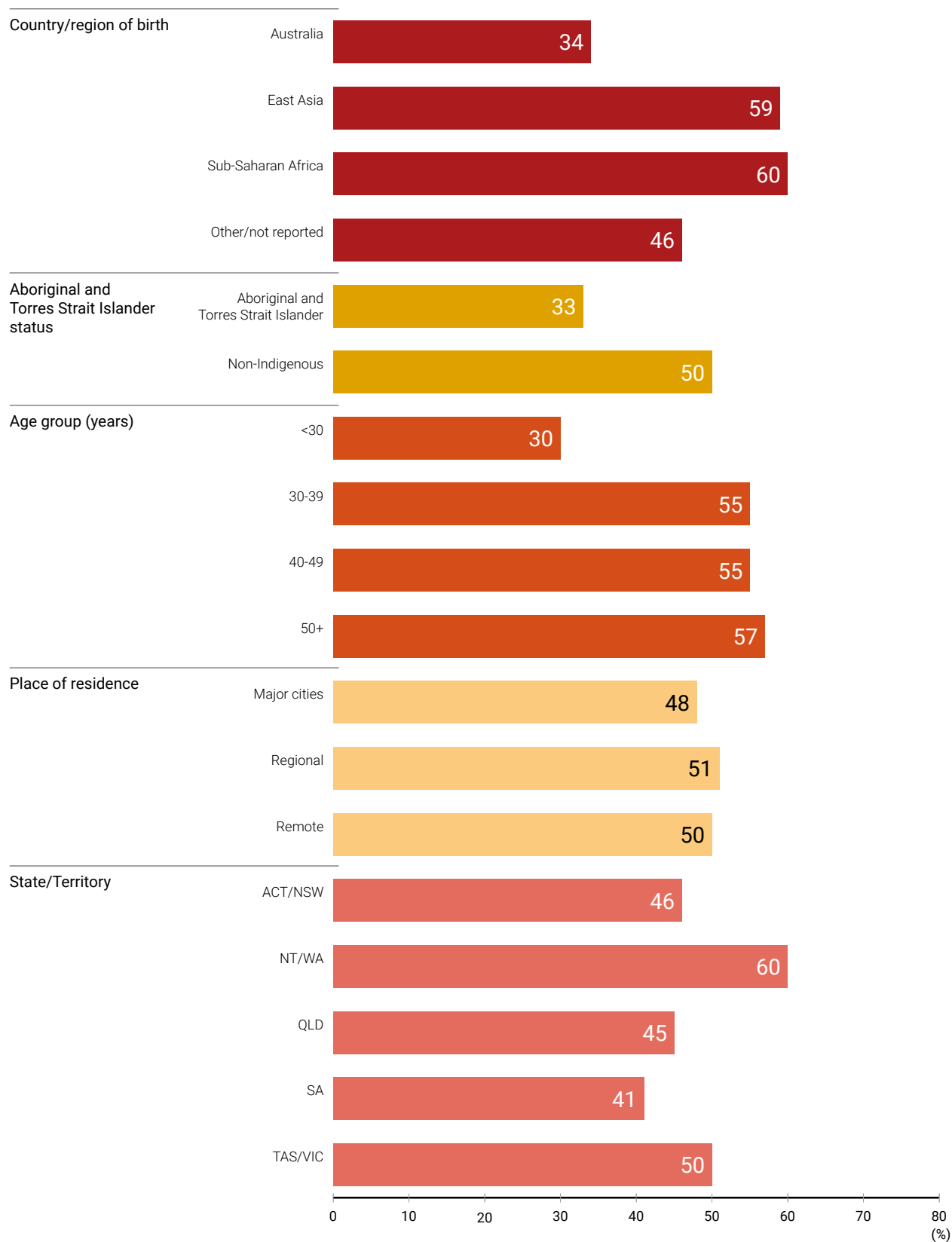
Figure 20 The proportion of late HIV diagnoses among men who reported heterosexual sex as an exposure risk, 2017–2021, by subcategory (n = 796)



Note: Late HIV diagnosis was defined as an HIV notification with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was not categorised as late or advanced diagnoses irrespective of CD4+ cell count. Notifications without a CD4+ cell count recorded within three months of diagnosis were excluded.

Source: State and territory health authorities.

Figure 21 The proportion of late HIV diagnoses among women who reported heterosexual sex as an exposure risk by subcategory, 2017–2021 (n = 304)



Note: Late HIV diagnosis was defined as an HIV notification with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was not categorised as late or advanced diagnoses irrespective of CD4+ cell count. Notifications without a CD4+ cell count available were excluded. Caution should be applied when interpreting these data due to low numbers.

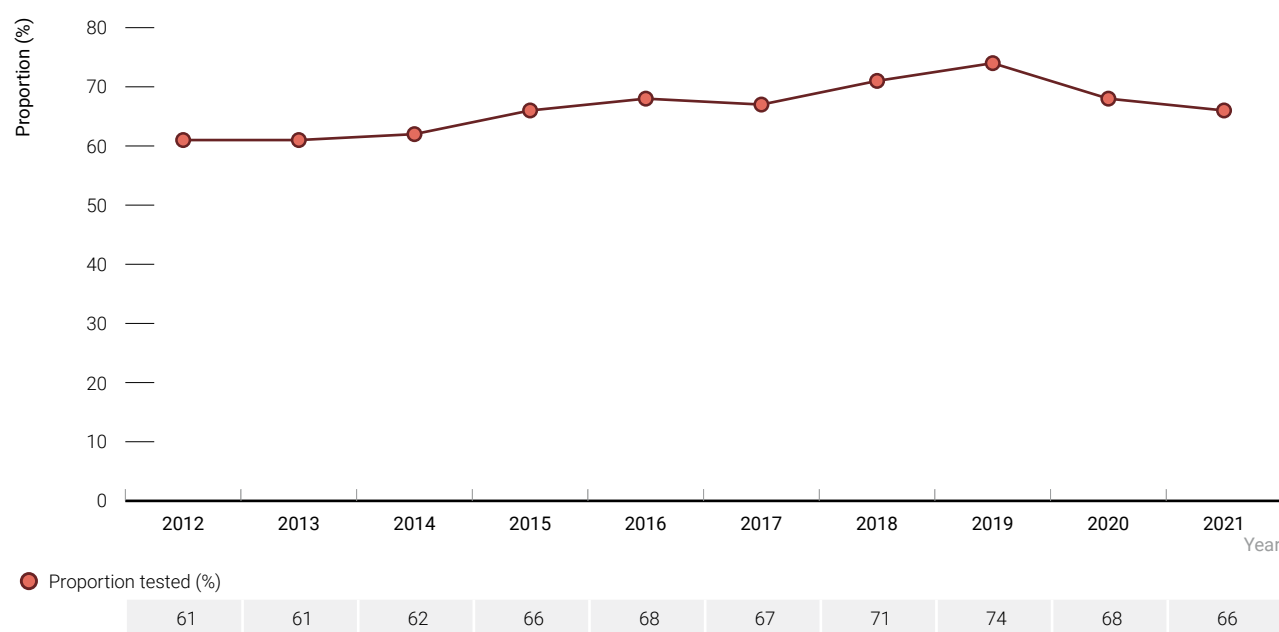
Source: State and territory health authorities

4 HIV testing

National testing guidelines recommend HIV testing in a number of contexts, such as according to exposure risk, during antenatal care and for particular priority populations⁽⁷⁾. Guidelines recommend all sexually active men who have sex with men in the previous three months should be tested every three months⁽⁸⁾.

Behavioural surveys show the proportion of people tested in a year in Australia among selected priority populations. In the Gay Community Periodic Surveys⁽⁹⁾, the proportion of non-HIV-positive gay and bisexual men who reported having had an HIV test in the 12 months prior to the surveys increased from 61% in 2012 to 74% in 2019. Between 2019 and 2021 this proportion dropped to 66%, likely due to the impacts of the ongoing COVID-19 pandemic (Figure 22).

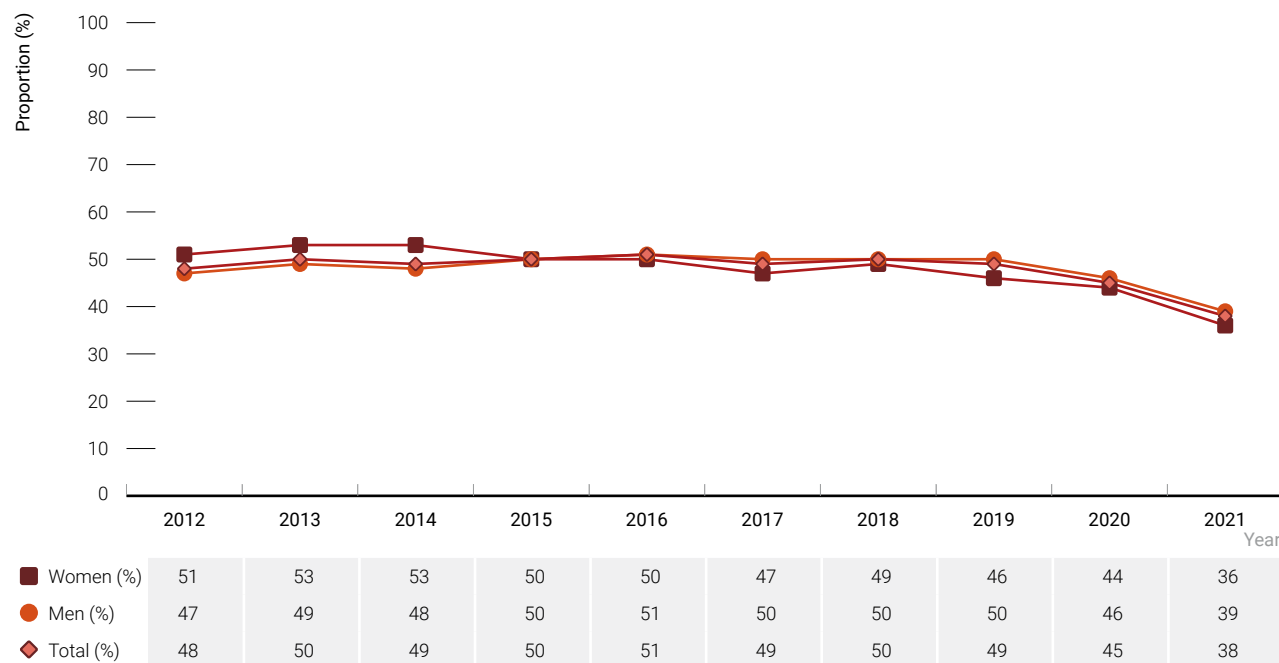
Figure 22 Proportion of non-HIV-positive gay and bisexual men tested for HIV in the 12 months prior to completing the surveys, 2012–2021



Source: Gay Community Periodic Surveys; see [Methodology](#) for detail.

Based on data from the Australian Needle Syringe Program Survey, in 2021, 38% of people who inject drugs attending needle and syringe programs self-reported having had an HIV test in the 12 months prior to the survey, with similar proportions among men and women (Figure 23). The number of participants in the 2020 and 2021 Australian Needle Syringe Program Survey were lower than in previous years due to the impacts of the COVID-19 pandemic and trends over time should be interpreted with caution.

Figure 23 Proportion of people who inject drugs attending needle and syringe programs who reported an HIV test in the past 12 months by gender, 2012–2021



Source: Australian Needle Syringe Program Survey; see Methodology for detail.

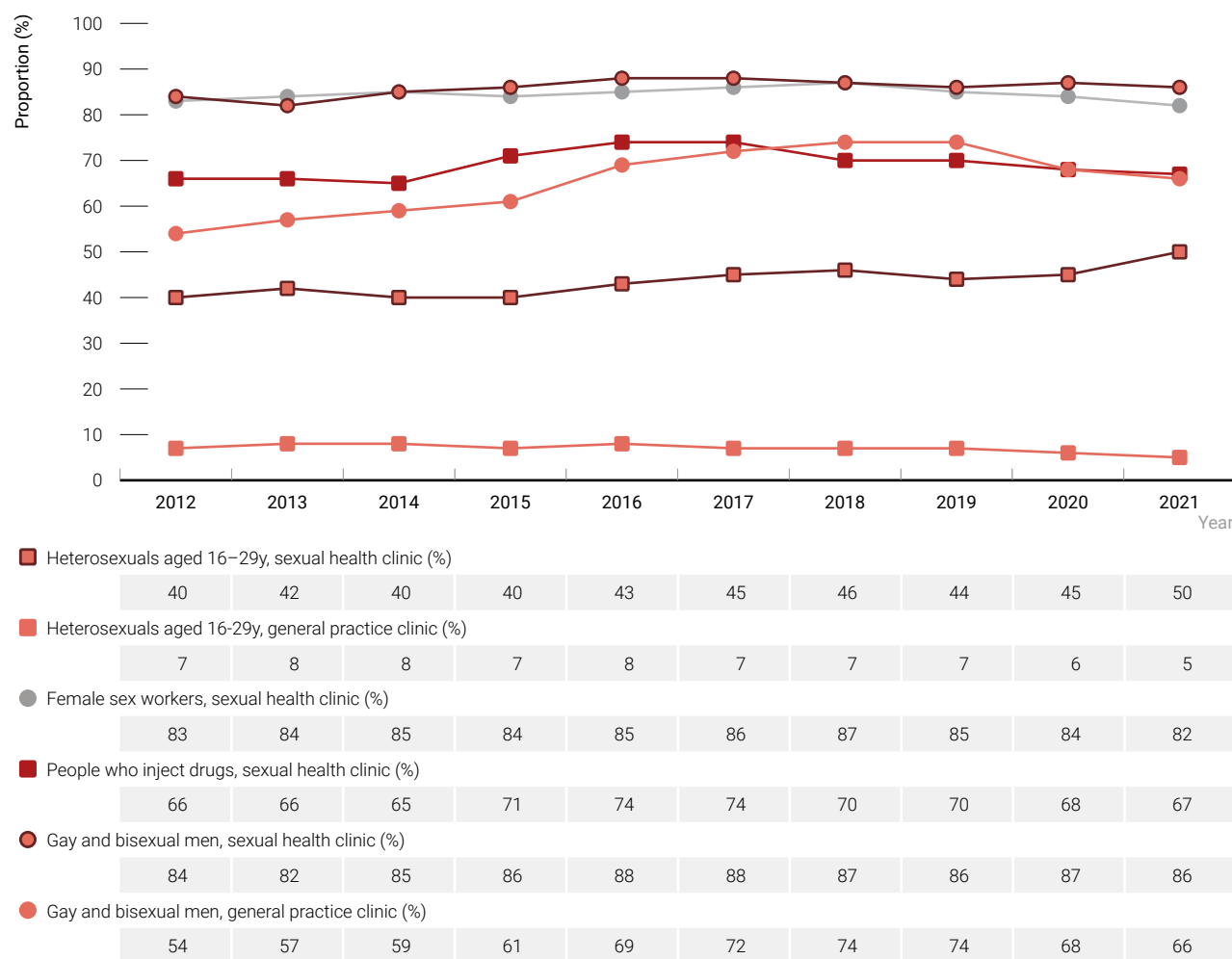
According to the Gay Community Periodic Surveys, the most common locations for their latest HIV testing in the previous 12 months among non-HIV-positive gay and bisexual men in 2021 were a general practice (43%) and a sexual health clinic (29%). Data from these clinical services therefore provide further information about HIV testing patterns.

At 44 sentinel sexual health clinics across Australia participating in the ACCESS network (see [Methodology](#) for further detail), between 2012 and 2021 the proportion of gay and bisexual men who were tested for HIV at least once in the previous 12 months fluctuated between 82% and 88% (Figure 24). Among gay and bisexual men attending high-caseload general practice clinics, the proportion who were tested for HIV at least once in a year increased from 54% in 2012 to 74% in 2019 but declined to 66% in 2021 (Figure 24). Declines in the numbers of gay and bisexual men attending sexual health clinics and general practice clinics declined after 2019 meaning that trends to 2021 should be interpreted with caution.

Among other priority populations attending sexual health clinics participating in the ACCESS network, the proportion of female sex workers who were tested for HIV at least once in a year remained greater than 80% for each year from 2012 to 2021 and was 82% in 2021 (Figure 24). In 2021, among people attending sexual health clinics who were recorded as recently injecting drugs, 67% received an HIV test in the previous twelve months. Among young heterosexuals attending sexual health clinics, 50% received an HIV test in the previous 12 months in 2021. By contrast, among young heterosexuals attending general practice clinics in 2021, only 5% received an HIV test in the previous 12 months (Figure 24).

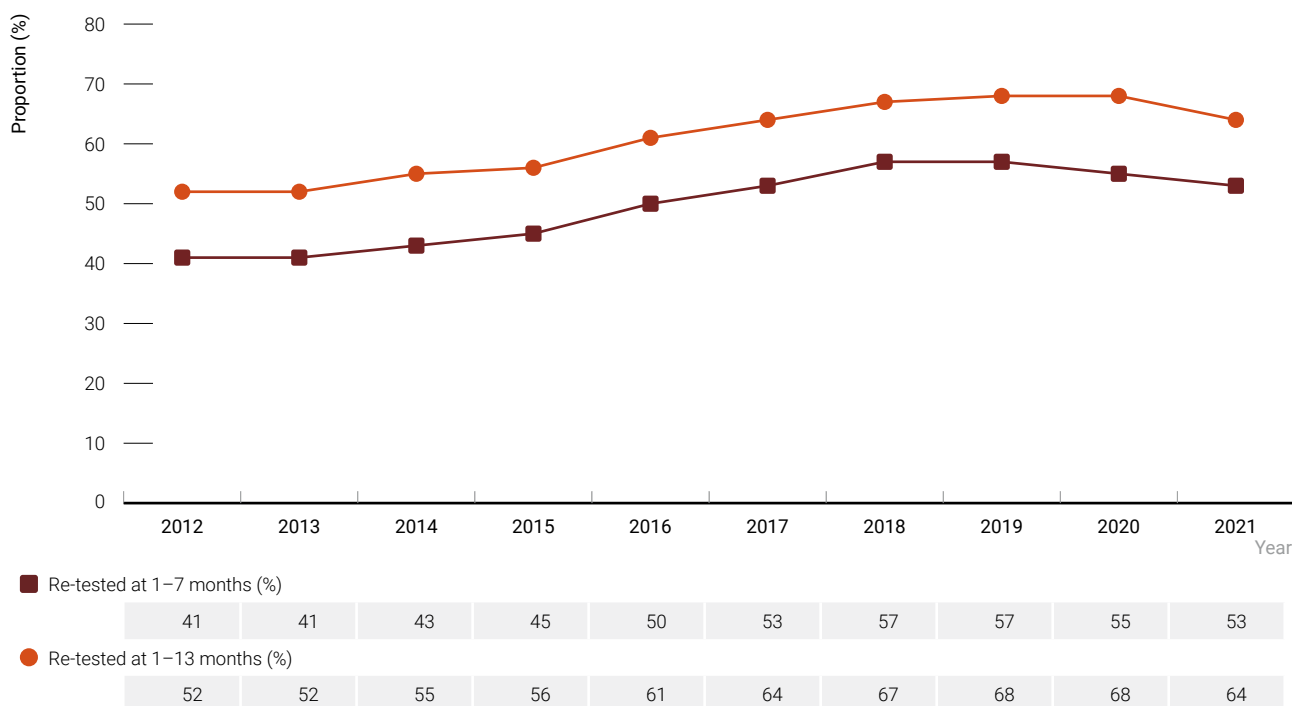
Among gay and bisexual men attending sexual health clinics, the proportion who had a repeat HIV test within 13 months of a previous HIV test increased from 52% in 2012 to 68% in 2019 and then declined to 64% in 2021. In this period, the proportion retested within seven months of a previous HIV test increased from 41% in 2012 to 55% in 2019 and then declined to 53% in 2021 (Figure 25).

Figure 24 Proportion of sexual health and high-caseload general practice clinic attendees tested for HIV in a year by priority population, 2012–2021



Note: High-caseload general practice clinics include primary healthcare general practice clinics with a high caseload of gay and bisexual men.
 Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); see [Methodology](#) for detail.

Figure 25 HIV retesting among gay and bisexual men attending sexual health clinics, 2012–2021



Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); see [Methodology](#) for detail.

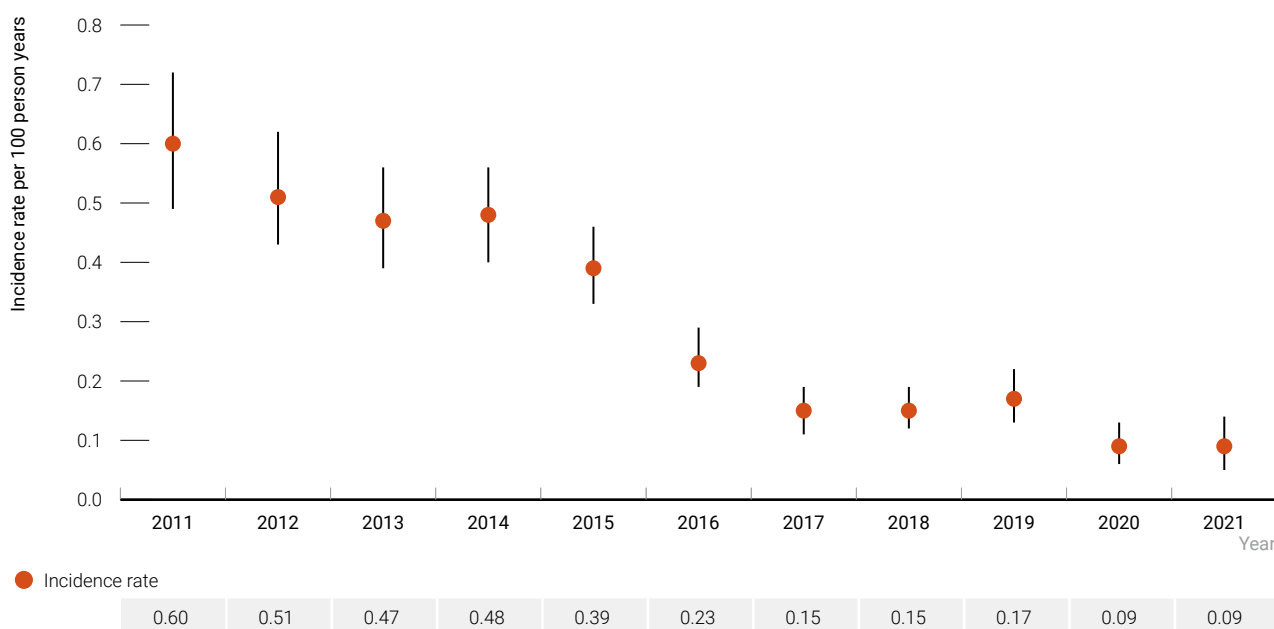
5 HIV incidence

HIV incidence is the best indicator of changes in transmission in a population. HIV incidence is calculated from the ACCESS project by dividing the number of seroconversions among people undergoing repeat HIV testing at sexual health services by total time at risk for those undergoing testing (determined by the time between repeat HIV tests). Further details about the methods used can be found in the [Methodology](#).

For the years 2011–2021, among gay and bisexual men attending sexual health services and general practice clinics who had at least one repeat HIV test ($n = 86\,442$), there were 965 seroconversions during 347 834 person-years at risk. The HIV incidence rate in 2019 was 0.17 new infections per 100 person-years down from 0.60 per 100 person-years in 2011. In 2020 and 2021, the HIV incidence rate was 0.09 per 100 person-years (Figure 26).

In the same time period, among female sex workers attending sexual health services and general practice clinics who had at least one repeat HIV test ($n=13\,058$), there were six seroconversions during 36 467 person-years at risk. Between 2011 and 2021, the HIV incidence rate among female sex workers remained low, between 0 and 0.5 per 100 person-years and was 0.01 per 100 person-years in 2021. Smaller numbers of female sex workers tested for HIV after 2019 mean that trends in incidence rates to 2021 should be interpreted with caution.

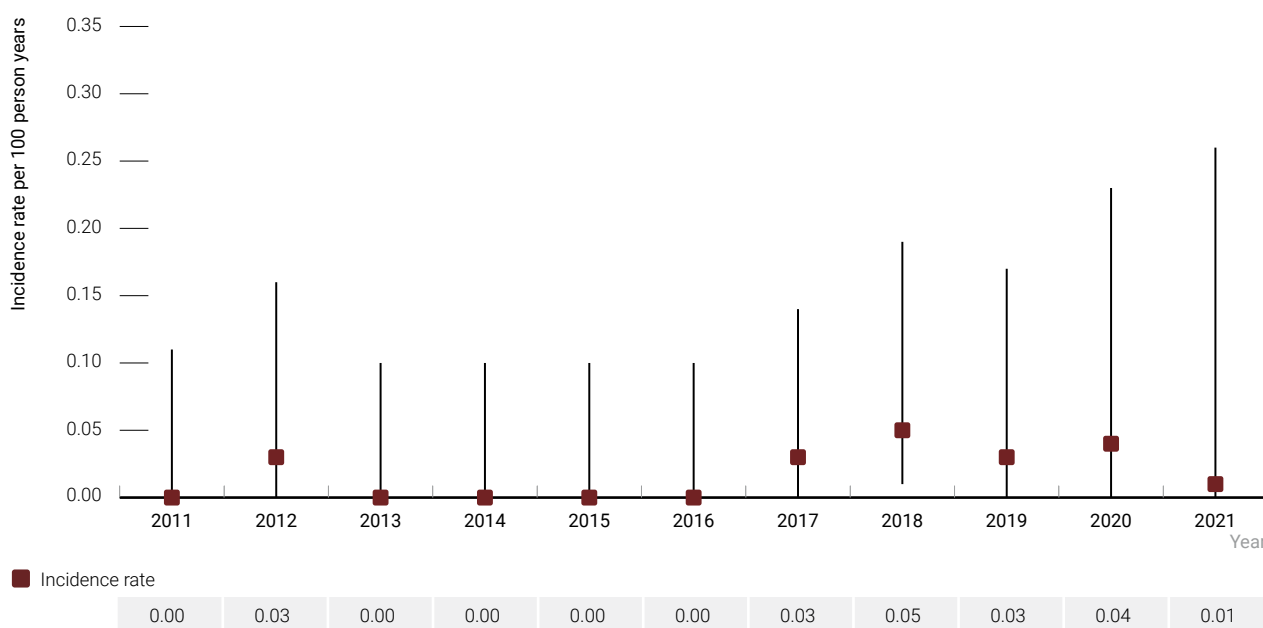
Figure 26 HIV incidence rate per 100 person-years among gay and bisexual men attending sexual health clinics, 2011–2021



Note: These incidence estimates represent populations attending sexual health clinics and may not be generalised to broader priority populations.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); see [Methodology](#) for detail.

Figure 27 HIV incidence rate per 100 person-years among female sex workers attending sexual health clinics, 2011–2021



Note: These incidence estimates represent populations attending sexual health clinics and may not be generalised to broader priority populations.

Source: ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); see [Methodology](#) for detail.

6 Number of people living with HIV and prevalence

Number of people living with HIV

At the end of 2021, among the 29 460 people estimated to be living with HIV in Australia, 21 530 people were estimated to have acquired HIV through to male-to-male sex, 7120 through heterosexual sex, and 640 through injection drug use (Table 6).

There were an estimated 580 Aboriginal and Torres Strait people living with HIV in Australia at the end of 2021. After adjusting for missing country of birth data, there were an estimated 3100 people living with HIV born in Southeast Asia, 1710 born in Sub-Saharan Africa, and 960 people born in Latin America or the Caribbean (Table 6).

HIV prevalence

The estimated HIV prevalence in Australia (the proportion of people who are living with HIV) in 2021 was 0.14% among adults aged older than 15 years (Table 6). The prevalence in Australia is low compared with that reported to UNAIDS by other high-income countries including the United States (0.4% in 2019) as well as the Asia-Pacific region (0.2% in 2020)⁽¹⁰⁾. HIV prevalence among Aboriginal and Torres Strait Islander peoples was estimated to be 0.10% in 2021 (Table 6).

Undiagnosed HIV infection

At the end of 2021, there were an estimated 2630 people (9% of all people living with HIV) living with HIV who were unaware of their HIV status (undiagnosed). The proportion undiagnosed was higher among males (9%) than among females (8%), and similar between Aboriginal and Torres Strait Islander peoples (3%) and Australian-born non-Indigenous people (5%). People living with HIV born in Southeast Asia and Latin America had the highest proportion of people who were undiagnosed (25% each), followed by people living with HIV born in Sub-Saharan Africa and other countries of birth (10% each) (Figure 28, Table 6).

The proportion with undiagnosed HIV was lower among men with male-to-male sex as an exposure risk (7%) than in people with heterosexual risk exposure (15%) and people who inject drugs (13%) (Table 6, Figure 28). Time trends of estimates for the proportion of undiagnosed HIV by subpopulation are available on the [Kirby Institute data site](#).

Table 6 Estimated number of people living with HIV and HIV prevalence by selected exposure classification and subpopulation, 2021

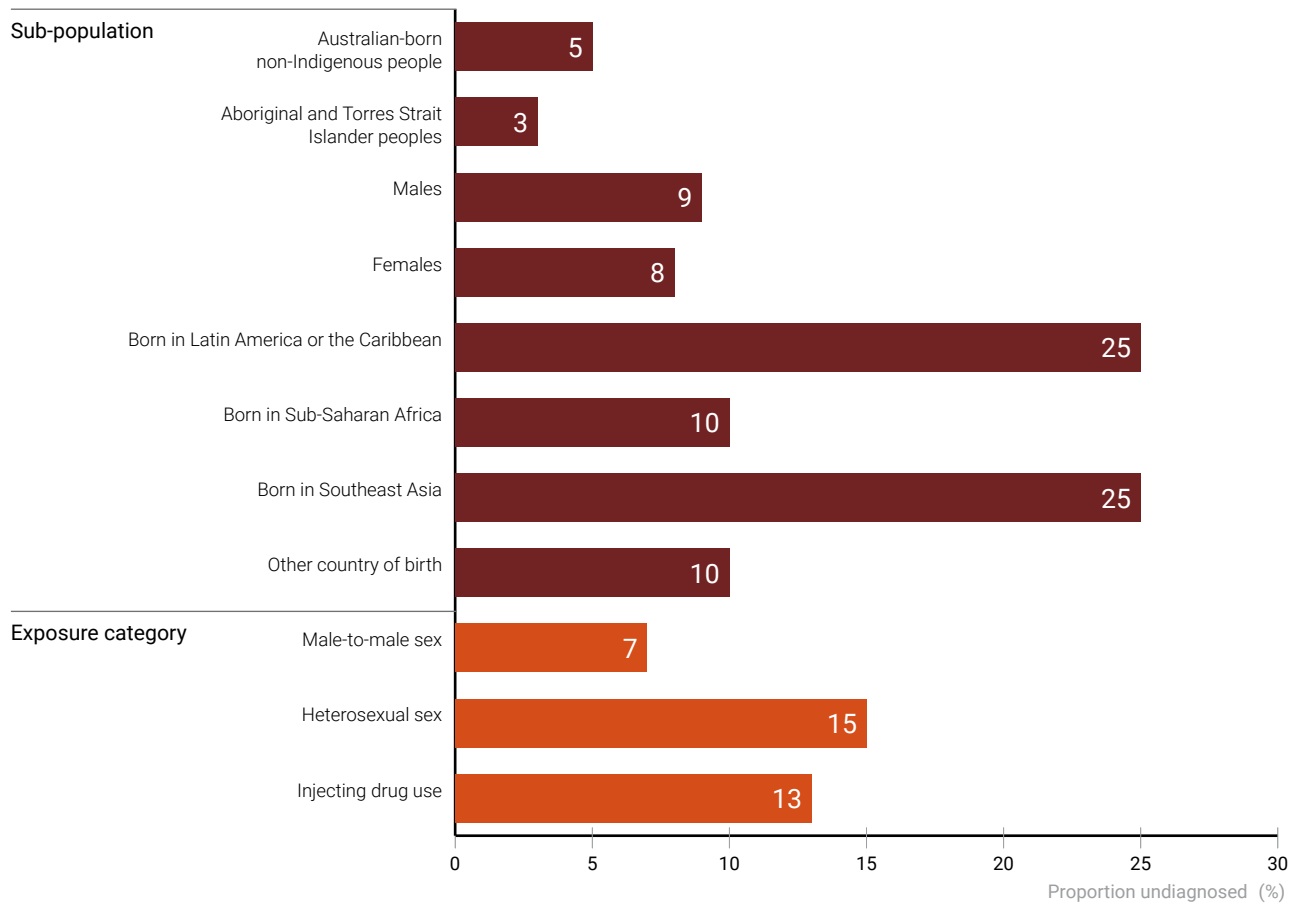
	People living with HIV (range)	Number diagnosed (range)	Number undiagnosed (range)	Proportion undiagnosed	HIV prevalence (range)	Population size ² (>15 years of age)
Demographics						
Total¹	29 460 (25 230 to 34 070)	26 830 (24 170 to 30 640)	2 630 (1 060 to 3 430)	9%	0.14% (0.12% to 0.16%)	21 014 596
Exposure risk category						
Men who have sex with men	21 530 (18 340 to 25 200)	20 030 (16 920 to 23 240)	1 500 (1 420 to 1 960)	7%		
Heterosexuals	7 120 (5 950 to 8 630)	6 030 (5 180 to 6 960)	1 090 (770 to 1 670)	15%		
People who inject drugs	640 (470 to 880)	560 (430 to 760)	80 (40 to 120)	13%		
Sub-population						
Men	25 750 (22 000 to 29 830)	23 350 (21 120 to 26 830)	2 400 (880 to 3 000)	9%	0.25% (0.21% to 0.29%)	10 344 492
Women	3 630 (3 120 to 4 150)	3 330 (3 050 to 3 690)	300 (70 to 460)	8%	0.03% (0.03% to 0.04%)	10 670 104
Australian born non-Indigenous	16 910 (14 390 to 19 330)	16 030 (13 860 to 18 120)	880 (530 to 1 210)	6%	0.13% (0.11% to 0.15%)	13 247 253
Aboriginal and Torres Strait Islander peoples	580 (520 to 630)	560 (490 to 610)	30 (20 to 30)	5%	0.10% (0.09% to 0.11%)	593 407
Born in Latin America or the Caribbean	960 (820 to 1 120)	720 (630 to 830)	240 (190 to 290)	25%	0.47% (0.40% to 0.55%)	203 760
Born in Sub-Saharan Africa	1 710 (1 400 to 2 100)	1 540 (1 290 to 1 820)	170 (110 to 280)	10%	0.44% (0.36% to 0.54%)	387 690
Born in Southeast Asia	3 100 (2 580 to 3 840)	2 330 (1 980 to 2 720)	770 (660 to 1 120)	25%	0.30% (0.25% to 0.37%)	1 029 620
Other country of birth	7 040 (5 340 to 9 400)	6 330 (4 820 to 8 360)	710 (520 to 1 040)	10%	0.13% (0.10% to 0.17%)	5 503 460

1 Sum of subpopulations will not add to the total estimated people living with HIV due to different death rate assumptions for Aboriginal and Torres Strait Islander people.

2 Population estimates not available for men who have sex with men, heterosexuals or people who inject drugs

Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

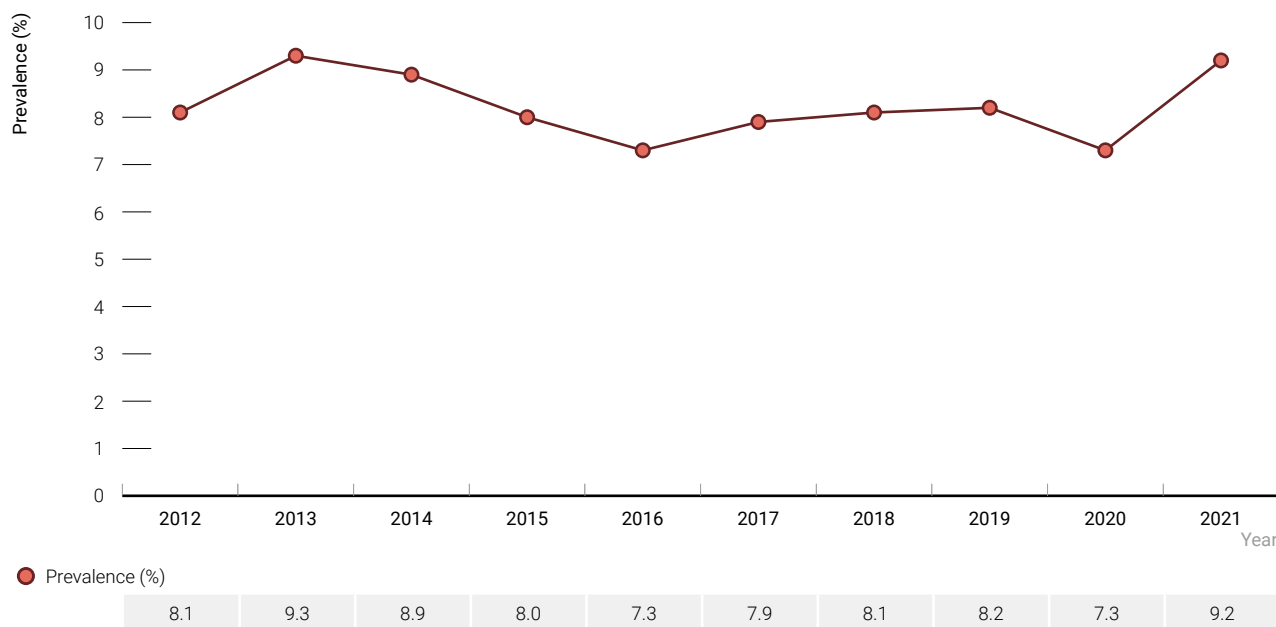
Figure 28 Estimated proportion of people living with HIV who are undiagnosed by demographic group and exposure, 2021



Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

According to the Gay Community Periodic Surveys, between 2012 and 2021, the unadjusted prevalence of self-reported HIV among men in the surveys fluctuated between 7.3% and 9.3% and was 9.2% in 2021 (Figure 29). These data reflect community-attached gay and bisexual men and are based on self-reported HIV status and therefore need to be interpreted with caution.

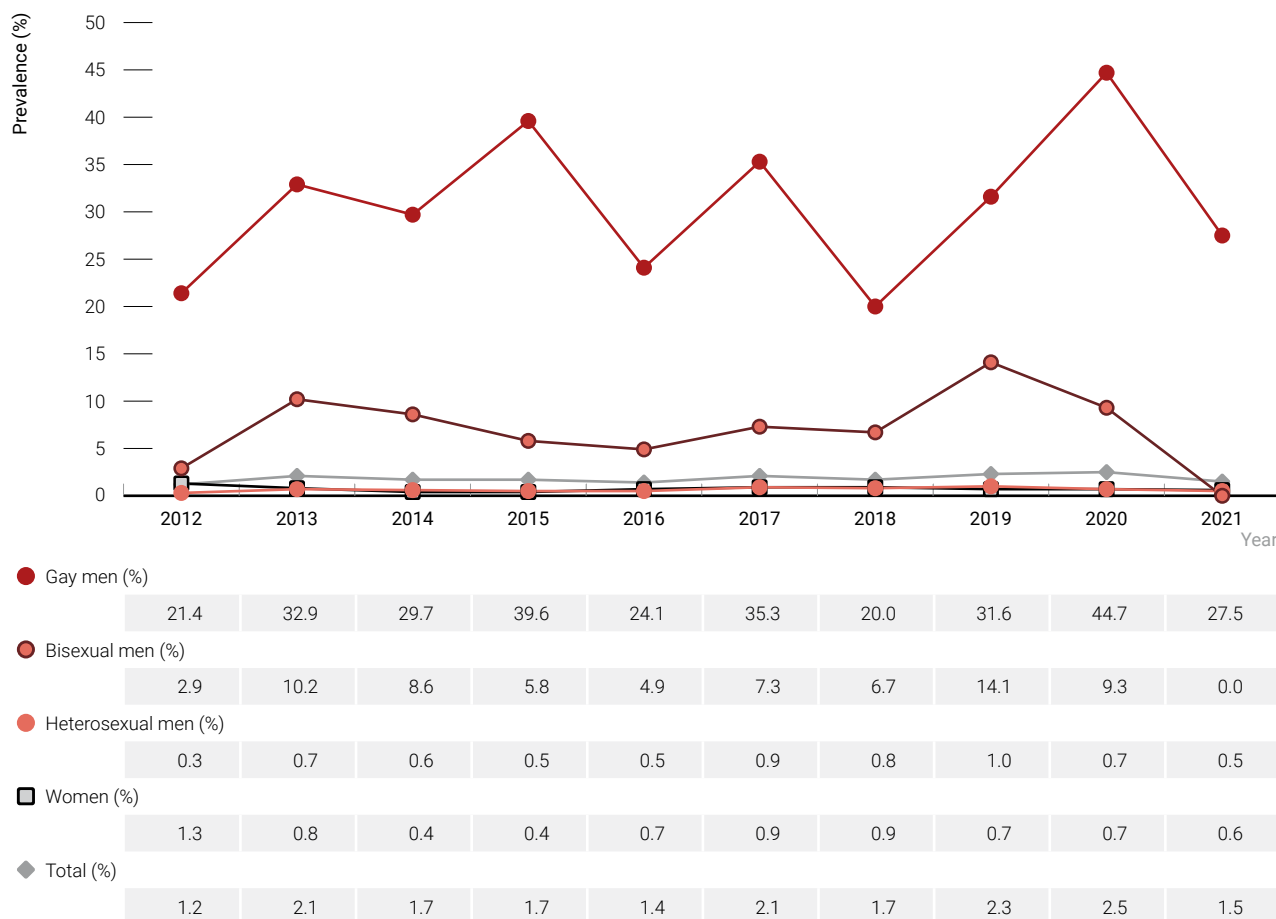
Figure 29 Self-reported HIV prevalence among men participating in the Gay Community Periodic Surveys, 2012-2021



Source: Gay Community Periodic Surveys; see [Methodology](#) for detail.

HIV prevalence is low among people who inject drugs, ranging between 1.2% and 2.5% among people attending needle and syringe programs in the past 10 years and was 1.5% in 2021 (0.5% if gay and bisexual men are excluded from the sample) (Figure 30). The number of participating Needle Syringe Programs and the number of ANSPS respondents in 2020 and 2021 were lower than in previous years due to the impact of the COVID-19 pandemic and public health measures designed to reduce community transmission during the ANSPS data collection period.

Figure 30 HIV prevalence among people who attend needle and syringe programs by gender and sexual identity, 2012–2021



Source: Australian Needle Syringe Program Survey, see [Methodology](#) for detail.

7 The HIV diagnosis and care cascade

This report includes the 'HIV diagnosis and care cascade', which estimates the number of people living with HIV in Australia, the number and proportion who are diagnosed, receiving antiretroviral treatment, retained in care (having had a viral load or CD4+ cell count in the past year) and have a suppressed viral load (<200 HIV-1 RNA copies/mL). These estimates are used to support the improvement of the delivery of services to people with HIV across the entire continuum of care. Using available data and accounting for uncertainties, the number of people in each stage of the cascade in Australia was estimated (Table 6, Figure 30). Methods and the associated uncertainties are described in detail in the [Methodology](#). The approach and presentation have been refined from previous years based on recommendations from a national stakeholder reference group (see [Acknowledgments](#)), and therefore estimates reported this year cannot be directly compared with estimates reported in previous years.

UNAIDS has set targets for HIV diagnosis and treatment by the year 2025: 95% of all people living with HIV to be diagnosed, 95% of all people with diagnosed HIV to be on antiretroviral therapy, and 95% of all people receiving antiretroviral therapy to have suppressed viral load. This corresponds to 86% of all people living with HIV having a suppressed viral load.

At the end of 2021, there were an estimated 29 460 people living with HIV in Australia. Of these an estimated 91% (26 830) had been diagnosed, increasing from 88% in 2017 (24 230), meaning that Australia has yet to meet the UNAIDS 2025 target. Of those diagnosed at the end of 2021, an estimated 96% (25 820) were retained in care, unchanged from 96% (23 170) in 2017. Also, of those diagnosed 92% (24 560) were receiving antiretroviral therapy, a slight increase from 91% (221 990) in 2017 and 98% (24 030) of those on antiretroviral therapy had a suppressed viral load, a slight increase from 97% (21 310) since 2017. (Table 7, Figure 31). This corresponds to 82% of all people living with HIV (diagnosed and undiagnosed) having a suppressed viral load in 2021, not yet meeting the 2025 UNAIDS target of 86%.

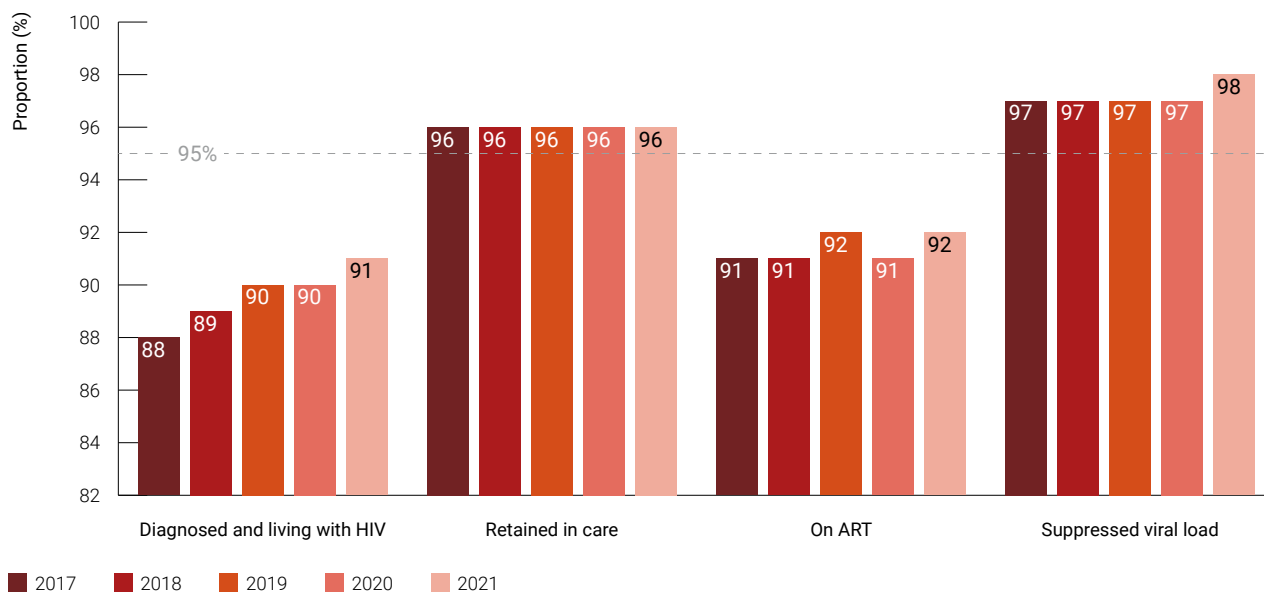
The cascade also shows the gaps at the end of 2021 with an estimated 5430 (9%) of all people living with HIV not having a suppressed viral load. Of these, an estimated 48% were undiagnosed, 19% were diagnosed but not in care, 23% were in care but not on antiretroviral therapy, and 10% were on antiretroviral therapy but had not achieved viral suppression (Figure 32). More detailed cascade estimates, including by gender can be found on the [Kirby Institute data site](#).

Table 7 The HIV diagnosis and care cascade estimates, 2017–2021

	Living with HIV (range)	Living with HIV and diagnosed (range)	Retained in care (range)	Receiving antiretroviral therapy (range)	Suppressed viral load (range)
Year					
2017	27 390 (24 300 to 30 480)	24 230 (21 840 to 27 140)	23 170 (21 840 to 26 840)	21 990 (21 840 to 22 040)	21 310 (21 000 to 21 530)
2018	28 130 (24 820 to 31 480)	25 030 (22 550 to 28 140)	23 980 (22 550 to 27 840)	22 730 (22 550 to 22 790)	22 140 (21 800 to 22 360)
2019	28 880 (25 300 to 32 560)	25 900 (23 470 to 29 240)	24 850 (23 470 to 28 940)	23 710 (23 470 to 23 770)	23 030 (22 620 to 23 270)
2020	29 390 (25 580 to 33 370)	26 570 (23 930 to 30 090)	25 530 (23 930 to 29 780)	24 260 (23 930 to 24 320)	23 470 (22 930 to 23 750)
2021	29 460 (25 230 to 34 070)	26 830 (24 170 to 30 640)	25 820 (24 170 to 30 330)	24 560 (24 170 to 24 620)	24 030 (23 440 to 24 300)

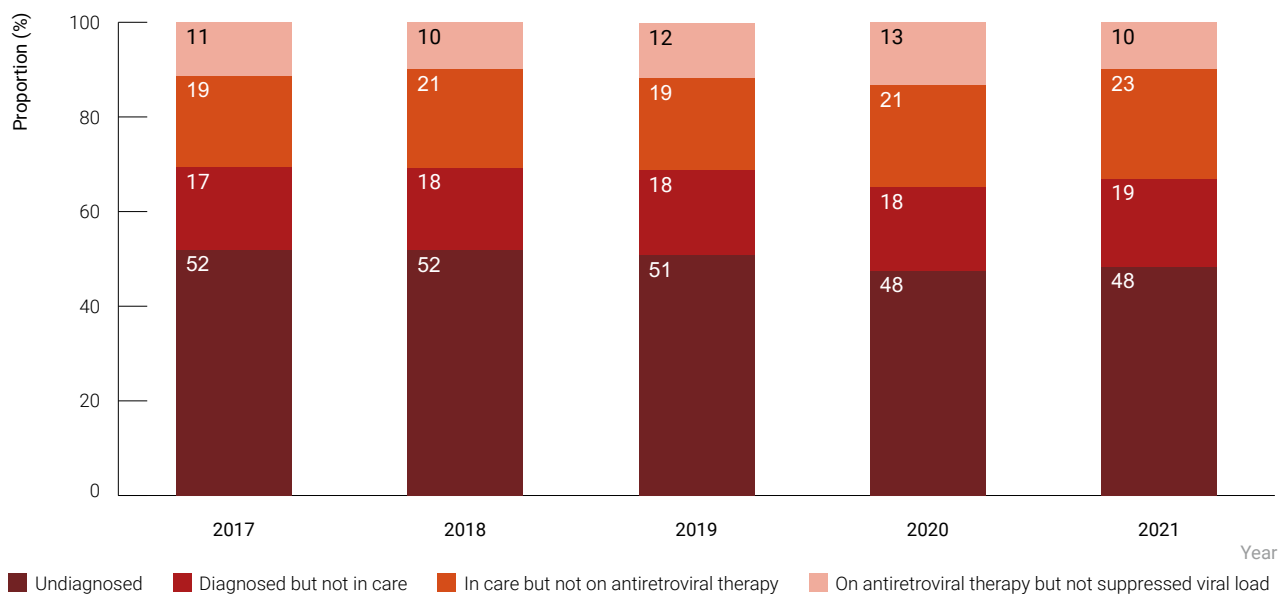
Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

Figure 31 HIV diagnosis and care cascade, 2017–2021



Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

Figure 32 People living with HIV who have not achieved suppressed viral load by cascade stage, 2016–2020



Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

8 HIV treatment

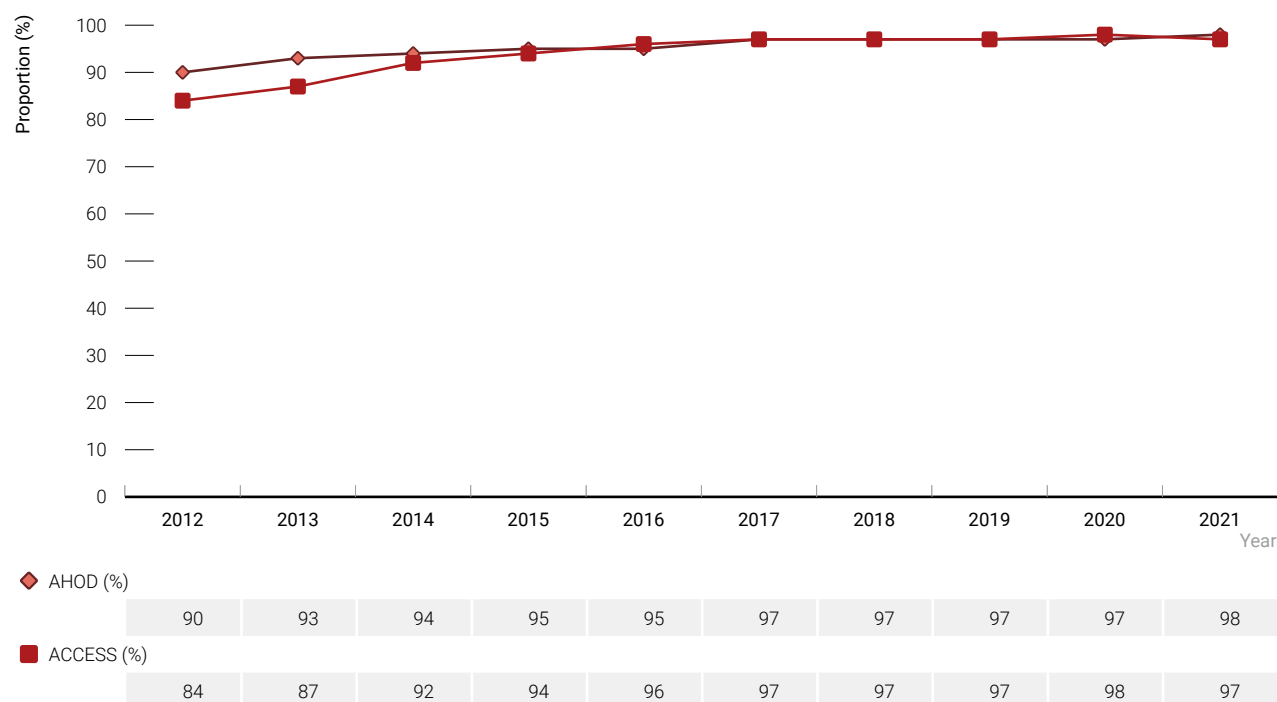
There has been a large increase over the past 10 years in the number of people living with HIV, the proportion taking effective treatments, and the proportion achieving suppressed viral load. HIV treatments do not cure the infection but prevent it from causing illness. HIV treatment that maintains an undetectable viral load also reduces the risk of onward transmission through sexual contact to zero and is referred to as ‘treatment as prevention’ (TasP)⁽¹⁾.

The estimated treatment coverage among people diagnosed with HIV in Australia is presented in the diagnosis and care cascades: 92% of people with diagnosed HIV were receiving antiretroviral therapy in 2021, (92% of males and 93% of females; refer to Figure 31).

Suppressed viral load

HIV viral load represents the amount of HIV in a person’s blood, with higher levels increasing the chances of HIV transmission during risk exposures. Studies have shown that regularly taking combination antiretroviral treatment sustains a suppressed viral load and reduces the likelihood of HIV transmission to zero⁽⁷⁾. As treatment coverage has increased in Australia, there has been a corresponding increase in the proportion of people with suppressed viral load (<200 copies/mL). This increase has been observed consistently in two difference data sources: from 90% in 2012 to 98% in 2021 in the Australian HIV Observational Database and from 84% in 2012 to 97% in 2021 at 44 sexual health clinics across Australia participating in the ACCESS network (Figure 33). All priority populations accessing sexual health clinics had high proportions with a suppressed viral load (>97%) in 2021; however, the number accessing care through the ACCESS network declined in 2021, likely related to the impacts of the ongoing COVID-19 pandemic (data not shown). See [Methodology](#) for further detail.

Figure 33 Proportion of patients with suppressed viral load from patients in the Australian HIV Observational Database, people attending sexual health clinics and high case load GP clinics in ACCESS, 2012–2021

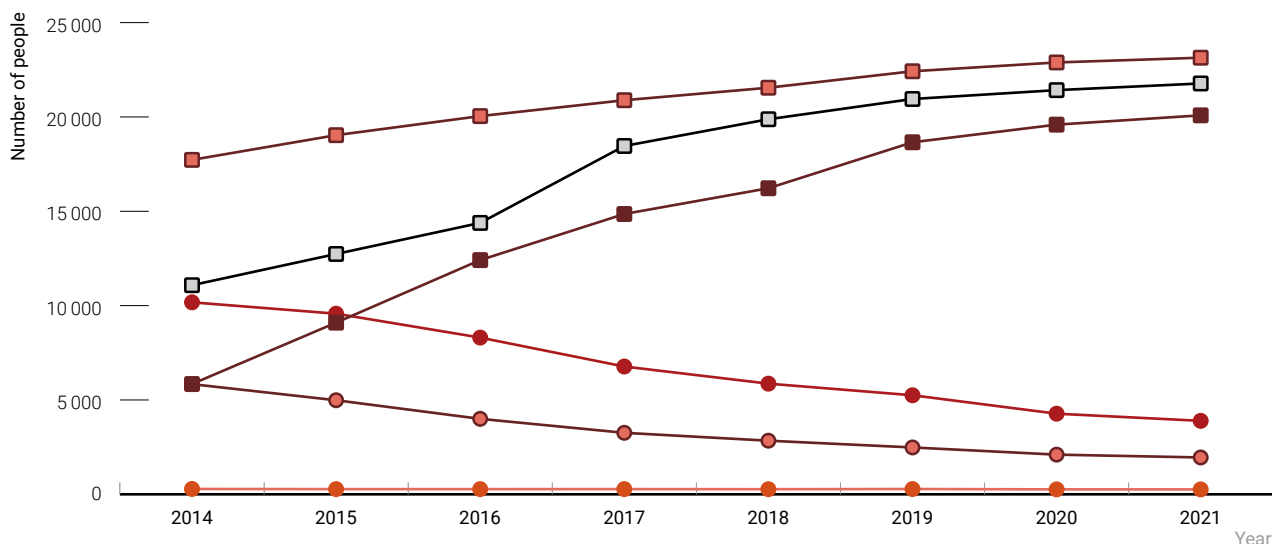


Note: Suppressed viral load equals 200 copies/mL or less.

Source: Australian HIV Observational Database, ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance); see [Methodology](#) for detail.

Antiretroviral treatment guidelines are updated annually in Australia as over time, new drugs and formulations become available. This results in changes to recommended drug combinations. Antiretroviral drugs have differing potency and side-effect profiles, and it is important to monitor their use. Between 2014 and 2021, the number of people receiving integrase inhibitors increased more than three-fold from 5 844 to 20 085. Conversely the number of people receiving non-nucleoside reverse transcriptase inhibitors decreased by nearly two-thirds from 10 175 in 2014 to 3 893 in 2021. In the same period, the number of people receiving any PBS subsidised antiretroviral therapy increased from 17 725 to 23 140 (Figure 34).

Figure 34 Number of people dispensed ART by drug class, 2014–2021



□ Any NRTI	11 082	12 737	14 384	18 461	19 878	20 951	21 421	21 774
● Any NNRTI	10 175	9 573	8 306	6 772	5 864	5 249	4 273	3 893
● Any Protease Inhibitor	5 838	4 985	3 999	3 259	2 841	2 483	2 103	1 952
■ Any Integrase Inhibitor	5 844	9 098	12 413	14 856	16 221	18 658	19 592	20 085
● Any other ART (enfuvirtide or maraviroc)	283	274	274	275	270	280	261	259
■ Any ART	17 725	19 034	20 045	20 886	21 549	22 421	22 888	23 140

Note: Excludes temporary residents who are ineligible for Medicare.

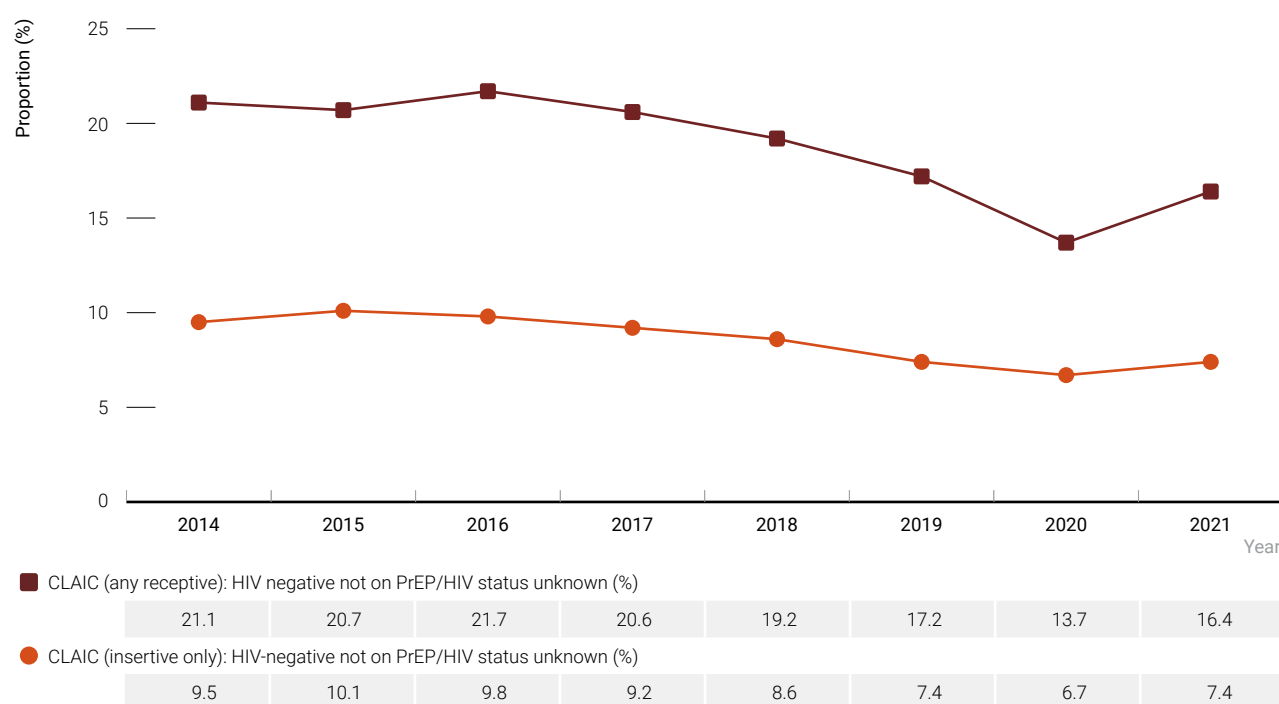
Source: Pharmaceutical Benefits Scheme

9 HIV prevention

Primary prevention strategies aim to protect people from acquiring HIV. They include: condom use; harm reduction strategies such as needle and syringe programs, opioid substitution therapy and peer-based interventions to reduce injecting risk behaviour^(12,13); and biomedical prevention strategies such as post-exposure prophylaxis (PEP) and PrEP. Testing and treatment are secondary prevention strategies, as they prevent transmission to others due to behavioural changes after diagnosis or starting treatment and achieving undetectable (suppressed) viral load, which reduces the risk of onward transmission to zero.

According to the Gay Community Periodic Surveys, the majority (76.2%) of HIV-negative/unknown-HIV-status gay and bisexual men who had casual partners were regularly using strategies in 2021 (avoiding anal sex, using condoms, or biomedical prevention), to protect themselves against acquiring HIV. Inversely, 23.8% of HIV-negative gay and bisexual men engaging in anal intercourse (insertive or receptive) with casual partners in the past six months, reported not consistently using condoms or biomedical preventions with casual partners of unknown HIV or PrEP status, down from 30.6% in 2014, but up from 20.4% in 2020 (Figure 35).

Figure 35 HIV risk behaviour in men with casual partners, 2014–2021



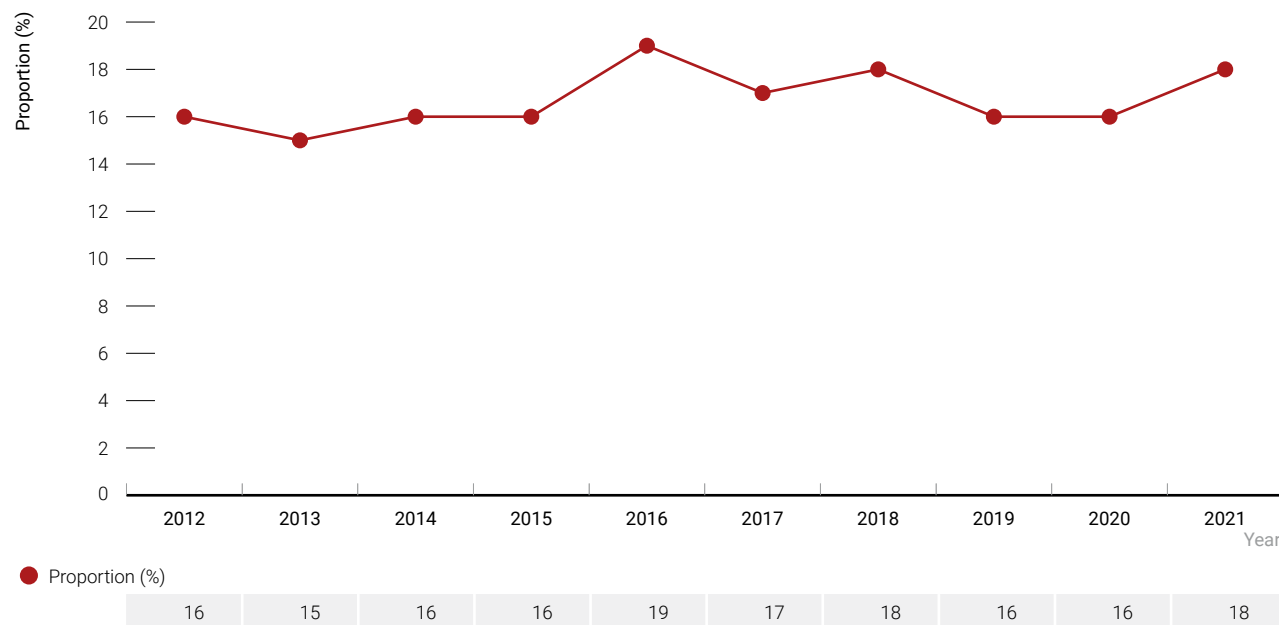
Source: Gay Community Periodic Surveys; see [Methodology](#) for detail.

A greater proportion of men in the past five years reported using biomedical prevention strategies, including treatment as prevention (TasP) and pre-exposure prophylaxis (PrEP) (see section on pre-exposure prophylaxis below).

Use of sterile needles and syringes

The reuse of needles and syringes that have been used by others (receptive syringe sharing) is the major risk factor for the transmission of HIV, hepatitis B, and hepatitis C among people who inject drugs. Harm reduction strategies such as needle and syringe programs, opioid substitution therapy and peer interventions can reduce injecting risk behaviour^(13,14). Opioid substitution therapy has been shown to reduce the incidence of HIV and hepatitis C among people who inject drugs⁽¹⁵⁻¹⁷⁾. Health promotion is important to enhance the effectiveness of these harm reduction strategies and to support people to inject safely. Each year over the 10-year period 2012 to 2021, between 15% and 19% of people who inject drugs attending needle and syringe programs reported receptive syringe sharing in the last month and was 18% in 2021 (Figure 36).

Figure 36 Proportion of people seen at needle and syringe programs reporting receptive syringe sharing in the past month, 2012–2021



Source: Australian Needle Syringe Program Survey; see [Methodology](#) for detail.

Blood screening

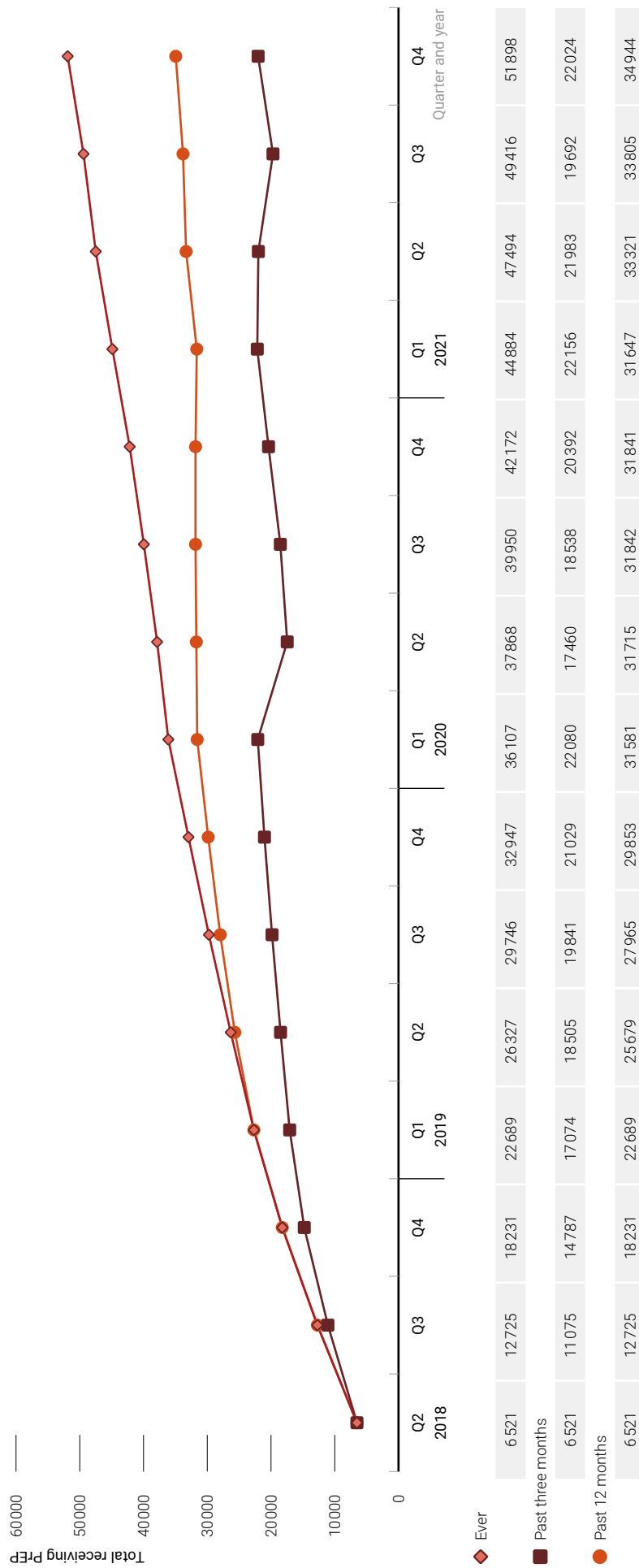
Since 1985, all blood donors have been screened for HIV to prevent onward transmission to recipients of blood products. There has been no known case of HIV acquisition through blood transfusion in Australia since the late 1990s. For further information, see *Transfusion-transmissible infections in Australia: 2022 Surveillance Report*, prepared by the Kirby Institute, UNSW Sydney and Australian Red Cross Lifeblood⁽¹⁸⁾.

Pre-exposure prophylaxis (PrEP)

PrEP is the use of antiretroviral treatment by HIV-negative people to reduce their risk of acquiring HIV. PrEP is highly effective in people who use it according to guidelines. PrEP became available to eligible individuals on 1 April 2018 through listing on the Pharmaceutical Benefits Scheme (PBS). The most recent clinical guidelines describing who may be suitable for PrEP use can be found on the [ASHM website](#).

Between the start of April 2018 to the end of December 2021, 51 898 people have taken PrEP. In the same period, the number of people who had taken PrEP in the previous three months has increased from 6 503 to 22 024. Also, the number of people who have taken PrEP in the previous 12 months has increased from 6 503 to 34 944 (Figure 37). Declines in PrEP use were reported in 2020 and 2021 coinciding with COVID-19 related restrictions across Australia.

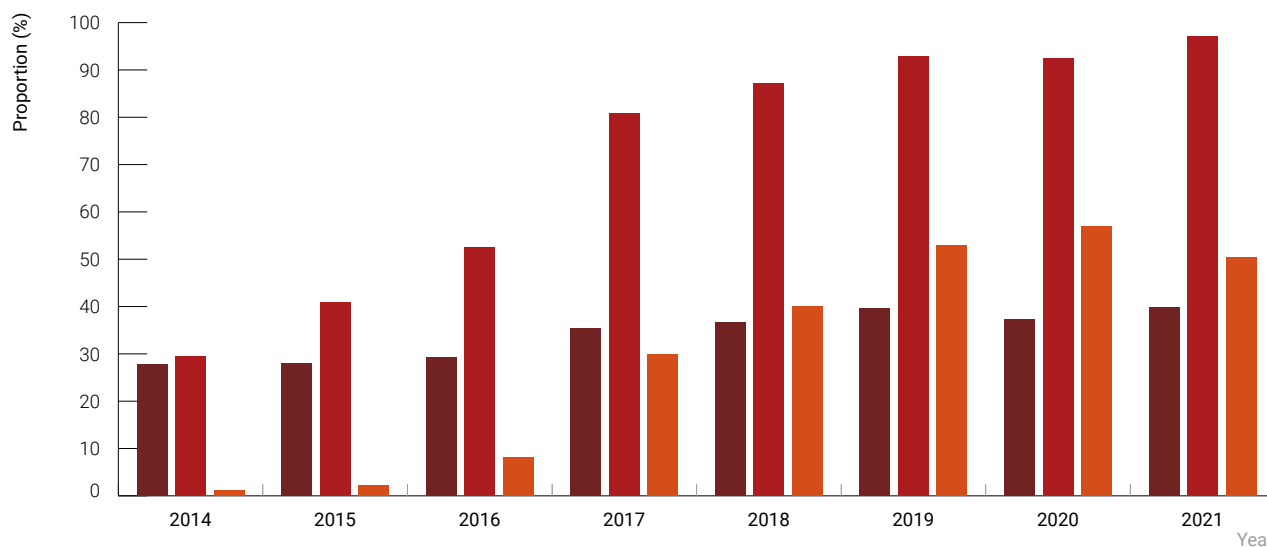
Figure 37 Number of people taking PrEP by recency and quarter, 2018–2021



Source: Monitoring HIV pre-exposure prophylaxis (PrEP) uptake in Australia, Kirby Institute, UNSW Sydney

Among participants of the Gay Community Periodic Surveys, over a third (39.8%) were eligible for PrEP in 2021, up from 36.7% in 2018 when subsidised PrEP became available through the PBS. Of those eligible for PrEP, 97.0% were aware of PrEP, up from 87.1% in 2018, and 50.5% reported using prescribed PrEP in the previous six months, up from 40.1% in 2018. However, between 2019 and 2021 the proportion reporting using prescribed PrEP in the previous six months decline from 53.0% to 50.5%, likely related to the impacts of the COVID-19 pandemic (Figure 38).

Figure 38 PrEP cascade for non-HIV-positive men, 2014–2021



■ Eligible for PrEP* (%)

27.8	27.9	29.3	35.4	36.7	39.6	37.4	39.8
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■ Proportion eligible who were aware of PrEP** (%)

29.5	40.9	52.6	80.8	87.2	92.9	92.5	97.0
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■ Proportion eligible who used prescribed PrEP in the previous 6 months***, (%)

1.1	2.2	8.2	29.9	40.1	53.0	57.0	50.5
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Note:

The eligibility criteria were operationalised as follows:

- Any receptive condomless anal intercourse (CLAI) with casual male partners in the previous six months
- Any CLAI with a HIV-positive regular male partner who did not have an undetectable viral load in the previous six months
- Tested and diagnosed with any sexually transmissible infection (STI) other than HIV in the previous 12 months
- Any use of crystal methamphetamine in the previous six months

* Later guidelines have expanded the [eligibility criteria for PrEP](#).

** Awareness of PrEP was assessed with the question, "What do you know about pre-exposure prophylaxis (PrEP)?" Participants who answered "It's available now" were classified as aware of PrEP.

*** PrEP use was assessed with the question, "In the last 6 months, did you take anti-HIV medication regularly to protect yourself from HIV (PrEP)?" Participants who answered "Yes, I was prescribed anti-HIV medication to take every day" were classified as using PrEP. In 2019, updated answers included "Yes, I took it daily / most days" (i.e., regular users) and "Yes, I took it around the time of sex (but not daily)" (i.e., on-demand users).

Source: Mao, L, Broady, T, Treloar, C, Newman, C & Holt, M 2022, Annual Report of Trends in Behaviour 2022: HIV/STIs and Sexual Health in Australia. <http://doi.org/10.26190/1fhh-ab12>

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