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**HIV, viral hepatitis
and sexually transmissible
infections in Australia
Annual surveillance
report 2023**



HIV



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HIV, viral hepatitis and sexually transmissible infections in Australia

Annual surveillance report 2023

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 2013 to 2022 unless the focus is the impact of the COVID-19 pandemic, where the years for comparison are 2013 to 2019, and 2019 to 2022.

1 Summary data

HIV notifications

- There were 555 HIV notifications with a first ever diagnosis in Australia in 2022 a 46% decline in notifications since 2013 (1068 notifications), and a 38% decline since 2019 (895 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 317 (57%) HIV notifications in 2022 (including those reporting male-to-male sex and injection drug use), with heterosexual sex reported for 166 (30%) notifications, and injection drug use for 18 (3%) 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 463 in 2013 to 296 in 2019, a decline of 36%. In the same period, there was a 10% decline in the number of HIV notifications among men born in other countries outside Asia (from 143 to 129 notifications). By comparison, there was a 59% increase among Asian-born men (99 in 2013 to 157 in 2019). All regions of birth showed declines in notifications attributed to male-to-male sex between 2019 and 2022.
- Between 2013 and 2016, the HIV notification rate among Aboriginal and Torres Strait Islander peoples increased from 4.4 to 6.5 per 100 000, then declined to 3.2 per 100 000 in 2022. By comparison, in 2022, 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), 44% of HIV notifications in 2022 were classified as late diagnoses (having a CD4+ cell count of less than 350 cells/ μ L). These diagnoses are likely to have been in people who acquired HIV at least four years prior to diagnosis.
- Over the past five years (2018–2022) the proportion of late HIV diagnoses was higher among people born in Sub-Saharan Africa (58%), Southeast Asia (56%), and Latin America or the Caribbean (44%). For the years 2021 and 2022, the proportion of late HIV diagnoses was higher among people who reported heterosexual sex as their HIV risk exposure (60%).
- Between 1993 and 2022, 940 cases of perinatal HIV exposure among children born in Australia were reported. For the period 2018–2022, the HIV vertical transmission rate was 0.6%, compared with 26.4% in the period 1993–1997 and 5.8% in the period of 1998–2002. There was one reported case of vertical HIV transmission from 2018 to 2022, in 2022.

HIV testing

- Among participants in the Gay Community Periodic Surveys, the proportion of non-HIV-positive gay and bisexual men who reported having had a HIV test in the 12 months prior to the survey increased from 69% in 2013, to 71% in 2019. Between 2019 and 2022 this proportion dropped from 71% to 57%, likely due to the impacts of the COVID-19 pandemic.
- Among gay and bisexual men attending general practice clinics in ACCESS (Australian Collaboration for Coordinated Enhanced Sentinel Surveillance), the proportion who were tested for HIV at least once in the previous 12 months increased from 57% in 2013 to 74% in 2019 and reduced to 66% in 2022.

HIV prevalence and incidence

- In 2022, 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 6.6% in 2022.
- HIV prevalence among people who inject drugs attending needle and syringe programs was estimated to be 2.1% in 2022, and 0.6% if gay and bisexual men were 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 ACCESS, reduced between 2013 and 2019 (from 0.44 to 0.14 new infections per 100 person-years). In 2022, 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 2013 and 2022 and was 0.0 per 100 person-years in 2022.

HIV testing and care cascade

- There were an estimated 28 870 people living with HIV in Australia at the end of 2022. Of those, an estimated 93% (26 850 people) had received an HIV diagnosis. Of those diagnosed, 97% (25 960) were retained in care and 95% (25 430 people) were receiving antiretroviral therapy (ART). Of those receiving ART, 98% (25 030) had a suppressed viral load (less than 200 HIV-1 RNA copies/mL). Of all people living with HIV in Australia, an estimated 87% had a suppressed viral load.
- There were an estimated 2020 (7%) people living with HIV in Australia in 2022 who were unaware of their HIV status (undiagnosed). The estimated proportion with undiagnosed HIV was highest among people born in Southeast Asia (26%). The estimated proportion with undiagnosed HIV was also higher in people with reported risk exposures of heterosexual sex (16%) and injection drug use (10%), and lower among Australian-born men with male-to-male sex as their HIV risk exposure (3%).

Prevention

- In 2022, according to the Gay Community Periodic Surveys, the majority (79%) of HIV-negative gay and bisexual men who reported 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% in 2014. Conversely, this means 21% were not consistently using any of these strategies in 2022.
- 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 2022, 62 632 people had ever taken PrEP. At the end of December 2022, 24 054 had taken PrEP in the last three months and 29 643 people had taken PrEP in the last 12 months.
- Among participants in the Gay Community Periodic Surveys, 34% were eligible for PrEP in 2022, slightly down from 37% in 2018. Of those eligible for PrEP in 2022, 96% were aware of PrEP up from 87% in 2018 and 66% reported using prescribed PrEP in the previous six months, up from 40% in 2018.

2 Interpretation

The 46% decline in HIV notifications in Australia between 2013 and 2022 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 both PrEP and treatment as prevention (TasP). However, the decline in HIV notifications has not been equal across all populations. 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 2022 was influenced by COVID-19 restrictions. These restrictions influenced sexual behaviour, healthcare access, testing practices, and travel. At the end of 2022, there were an estimated 28 870 people living with HIV in Australia. Australia has yet to meet the first UNAIDS 2025 target of 95% of people living with HIV being diagnosed (in 2022 93% or 26 850 people in Australia had been diagnosed). For the first time, Australia has met the second target of 95% of those diagnosed being on antiviral treatment (95% or 25 430 people in 2022) and has again met the third target of 95% of those on antiviral treatment having a suppressed viral load (98% or 25 030 people in 2022).

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 87% of all people living with HIV having achieved viral suppression, Australia has also surpassed the UNAIDS 2025 target of 86%. To further improve against this benchmark, 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 (59%) 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 2022 (44%) was one of 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. Continuing effects of the COVID-19 pandemic may also have influenced the proportion of notifications classified as late, for example, by reducing the number of people undergoing routine testing which possibly led 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 2013 and 2016 and then declined from 2016 to 2022. In 2022, the HIV notification rate among Aboriginal and Torres Strait Islander peoples (3.2 per 100 000) was higher than among the non-Indigenous population (2.2 per 100 000) but is based on small numbers (15 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 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.

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

HIV notifications with a previous diagnosis overseas

In 2022, there were 339 HIV cases previously diagnosed overseas with subsequent diagnostic testing conducted in Australia; 33% were in Victoria 27%, were in New South Wales, and 24% were in Queensland (Table 1). Among HIV notifications previously diagnosed overseas, 265 (78%) were male, 252 (74%) were aged 30 years or over, and 54% 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, 2022

State/Territory	Place of first ever diagnosis of HIV		
	Australia	Overseas	Total cases
Australian Capital Territory	3	5	8
New South Wales	170	90	260
Northern Territory	3	2	5
Queensland	100	83	183
South Australia	22	21	43
Tasmania	8	2	10
Victoria	187	112	299
Western Australia	62	24	86
Australia	555	339	894

Source: State and territory health authorities.

Table 2 Characteristics of HIV notifications previously diagnosed overseas, 2013–2022

Characteristic	Year first Australian HIV diagnosis									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total cases^a	211	259	222	260	290	291	345	322	193	339
Gender^b										
Male	154	177	162	186	228	222	269	240	135	265
Female	56	81	60	73	60	69	76	81	54	71
Transgender ^c	0	1	0	0	2	0	0	1	4	3
Median age (years)										
Male	37.5	38.0	34.0	35.0	34.0	32.0	35.0	36.0	39.0	34.0
Female	33.0	37.0	38.0	34.0	38.0	39.0	36.0	43.0	44.5	38.0
Age group (years)^d										
0-14	4	1	0	10	1	0	3	0	1	3
15-19	1	4	2	2	1	7	3	2	1	2
20-29	51	53	59	60	81	78	80	68	19	82
30-39	78	95	86	99	104	108	139	110	74	127
40-49	45	74	50	52	63	59	68	70	49	71
50+	32	32	25	37	40	38	52	72	49	54
State/Territory										
ACT	3	2	6	10	6	2	3	4	8	5
NSW	48	77	67	85	105	99	99	92	56	90
NT	6	2	1	1	2	3	4	3		2
QLD	55	63	49	63	67	64	99	78	38	83
SA	11	16	14	11	18	9	20	9	16	21
TAS	1	1	0	0	4	7	1	0	2	2
VIC	58	69	66	74	57	82	88	102	50	112
WA	29	29	19	16	31	25	31	34	23	24
HIV exposure risk category										
Male-to-male sex ^e	97	115	111	116	142	139	165	161	84	177
Male-to-male sex and injection drug use	2	1	6	4	1	5	8	6	1	7
Heterosexual sex	99	108	85	105	95	89	109	80	51	80
Injection drug use	2	4	5	5	0	1	2	4	2	2
Mother with/at risk of HIV	5	4	2	7	3	2	9	1	3	5
Receipt of blood/tissue ^f	1	1	4	1	1	0	5	2	5	2
Other/undetermined	5	26	9	22	48	55	47	68	47	66

a. Includes notifications missing gender and age.

b. Not including notifications missing gender.

c. Does not include transgender people recorded as either male or female.

d. Not including notifications missing age at diagnosis.

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

f. 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.

HIV notifications with a first ever diagnosis in Australia

The following section focuses on people diagnosed with HIV for the first time in Australia. In 2022, there were 555 HIV notifications in Australia: 462 (83%) among males, 435 (78%) among people aged 30 years and above, and 25 (5%) among Aboriginal and Torres Strait Islander peoples. Around a fifth of all notifications (143) were classified as newly acquired (evidence of HIV acquisition in the 12 months prior to diagnosis), while 44% were classified as late diagnoses (Table 3).

A total of 41 652 notifications of HIV with first ever diagnosis in Australia have been reported since 1984, of which 37 375 (91%) were among males, 3422 (8%) among females and 141 (<1%) among trans and gender diverse people. Between 2013 and 2019 the number of notifications decreased by 14%. A decline of 38% between 2019 and 2022 from 895 to 555 notifications was likely influenced by the impacts of the COVID-19 pandemic, alongside targeted prevention measures, and should be interpreted with caution (Table 3). A similar pattern was seen among males, with HIV notifications stable between 2013 and 2016, a 21% decrease between 2016 and 2019, followed by a 42% decrease between 2019 and 2022. Notifications among females were relatively stable between 2013 and 2019 followed by a 33% decline between 2019 and 2022 with 85 notifications in 2022. Between 2013 and 2022 there were 55 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 2022 was among people aged 30 to 39 years (198), followed by those 50 years or older (121), and those aged 40 to 49 years (116). The number of notifications remains low among younger age groups in 2022, with six notifications among those aged under 20 years (Table 3).

Table 3 Characteristics of HIV notifications with a first ever diagnosis in Australia, 2013–2022

Characteristic	Year of first ever HIV diagnosis									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total cases^a	1037	1079	1029	1006	962	840	895	626	541	555
Gender										
Male	928	974	919	913	846	755	791	540	475	462
Female	106	102	108	88	107	81	94	78	63	85
Transgender ^b	3	3	2	5	9	4	10	8	3	8
Aboriginal and Torres Strait Islander Status										
Aboriginal and/or Torres Strait Islander	27	34	40	47	31	33	25	16	17	25
Non-Indigenous	996	1030	970	955	919	799	857	603	524	522
Not reported	14	15	19	4	12	8	13	7	0	8
Median age (years)										
Male	37	35	35	34	35	35	35	35	37	37
Female	34	35	36	34	34	35	37	36	34	38
Transgender	40	0	0	29	40	30	38	38	36	30
Age group (years)										
0-14	6	3	3	5	2	3	1	1	0	3
15-19	22	14	20	11	12	8	7	10	2	3
20-29	273	315	296	310	253	262	244	162	139	114
30-39	287	345	304	308	313	237	287	198	172	198
40-49	249	217	210	194	170	159	159	127	111	116
50+	200	185	196	178	212	171	197	128	117	121
Language spoken at home										
English	534	833	737	729	539	529	576	490	416	416
Other language	76	103	131	134	136	149	158	101	103	103
Not reported	427	143	161	143	287	162	161	35	22	36
Newly acquired^c	349	443	418	384	309	278	283	153	113	143
(% of new diagnoses)	33.7%	41.1%	40.6%	38.2%	32.1%	33.1%	31.6%	24.4%	20.9%	25.8%
Diagnosed late	274	277	264	260	284	269	276	225	225	215
Late HIV diagnosis, % ^d	30.4%	27.0%	27.4%	29.3%	32.5%	36.0%	35.8%	41.5%	47.5%	44.1%
Advanced HIV diagnosis, %	17.5%	16.1%	15.2%	17.5%	20.5%	18.9%	22.4%	28.2%	33.3%	29.1%
Median CD4+ cell count, cells/ μ L	420.0	440.0	441.0	420.0	390.0	390.0	378.0	330.0	320.0	317.0
State/Territory										
ACT	21	18	14	13	13	6	12	8	14	3
NSW	356	344	348	318	310	282	282	208	178	170
NT	13	8	9	23	11	13	7	3	2	3
QLD	181	245	203	195	185	180	158	107	124	100
SA	58	39	44	42	43	30	30	29	21	22
TAS	11	16	17	19	12	11	17	6	7	8
VIC	306	302	285	304	309	260	290	194	140	187
WA	91	107	109	92	79	58	99	71	55	62
HIV exposure risk category										
Male-to-male sex ^e	686	756	700	707	604	516	527	351	323	273
Male-to-male sex and injection drug use	44	48	49	50	49	57	62	61	43	44
Heterosexual sex	220	200	204	205	237	189	209	157	147	166
Injection drug use	28	31	32	14	32	28	23	20	9	18
Mother with/at risk of HIV	4	3	4	5	3	2	1	1	0	2
Receipt of blood/tissue ^f	3	0	8	1	0	0	2	2	2	2
Other/undetermined	52	41	32	24	37	48	71	34	17	50

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

b. Does not include transgender people recorded as either male or female.

c. 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.

d. 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 neither late or advanced diagnosis, irrespective of CD4+ cell count. HIV diagnoses classified as advanced include those classified as late.

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

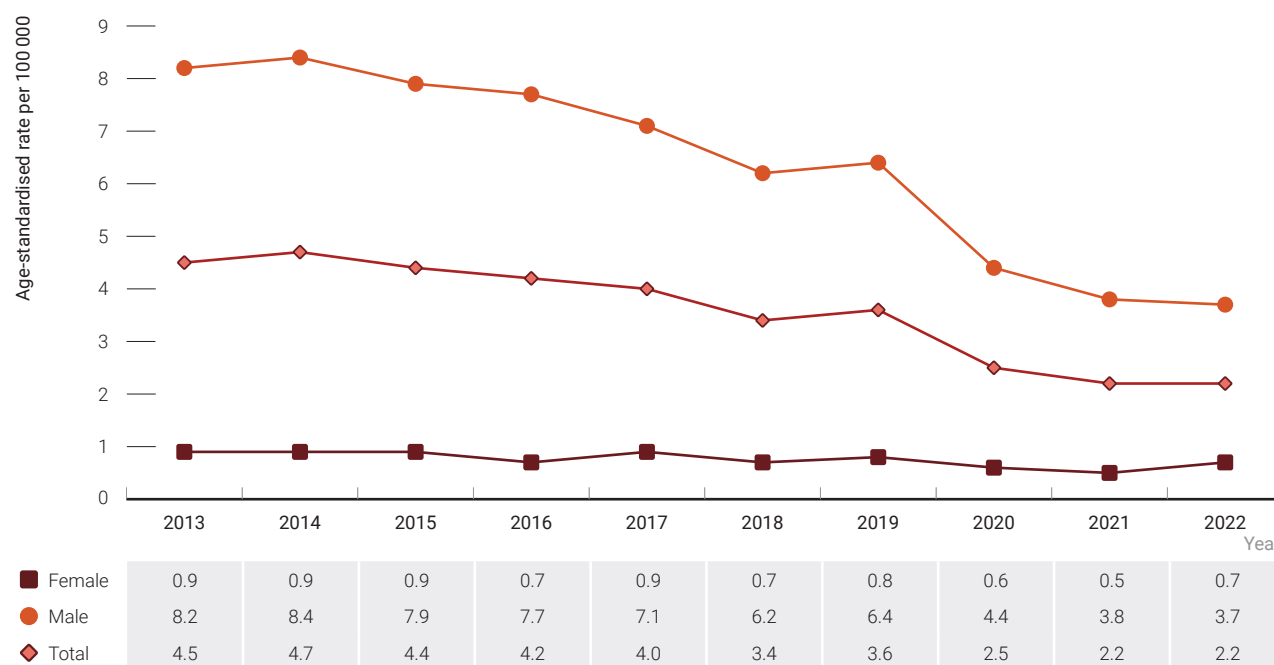
f. Includes receipt of blood/tissue overseas, so does not indicate transmission through blood products in Australia.

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

Demographics

Between 2013 and 2019, the HIV notification rate declined by 20% from 4.5 to 3.6 per 100 000 population. Between 2019 and 2022 the HIV notification rate declined by 39% from 3.6 to 2.2 per 100 000 (Figure 1). Similar trends were seen among males and females and in 2022, notification rates were 3.7 per 100 000 males and 0.7 per 100 000 females.

Figure 1 HIV notification rate per 100 000 population by gender, 2013–2022



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



What does this mean?

HIV diagnosis rates have fallen considerably since 2013, especially over the peak of the COVID-19 pandemic.

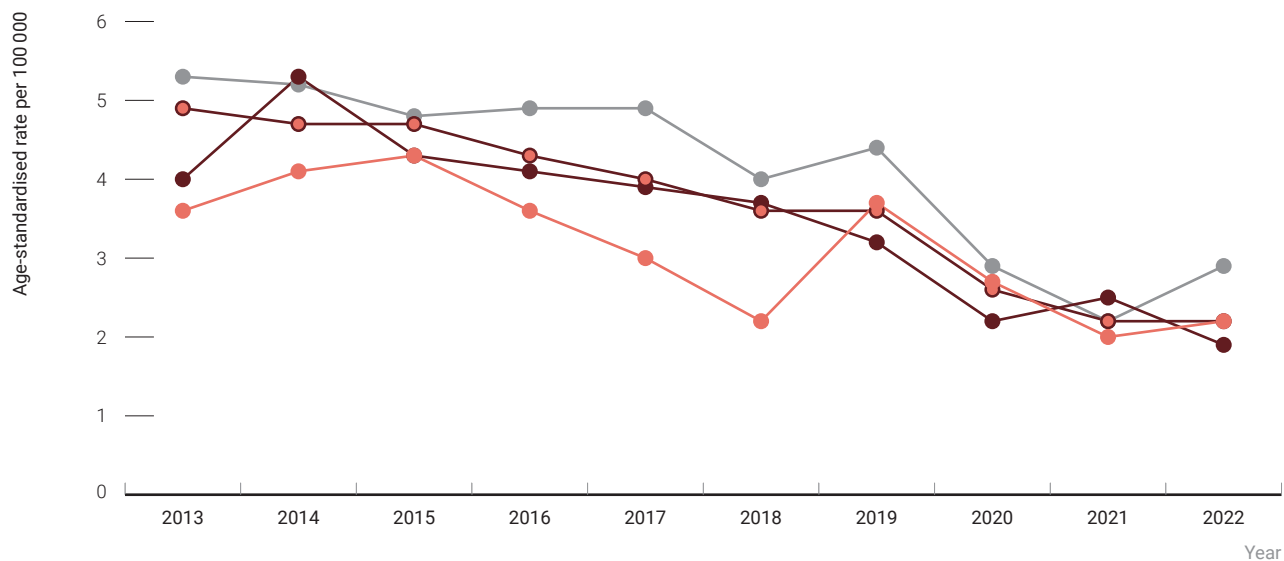
In 2022, HIV notification rates were highest among those aged 30 to 39 years (6.8 per 100 000), 20 to 29 years (4.5 per 100 000) and 40 to 49 years (4.1 per 100 000). Between 2013 and 2019 there was a 39% decline in the notification rate for those aged 40 to 49, a 19% decline for those aged 20 to 29 years and a 15% 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 2013 and 2022. In 2022, HIV notification rates among females were highest for those aged 30 to 39 years (1.8 per 100 000), followed by those aged 40 to 49 years (1.2 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](#).

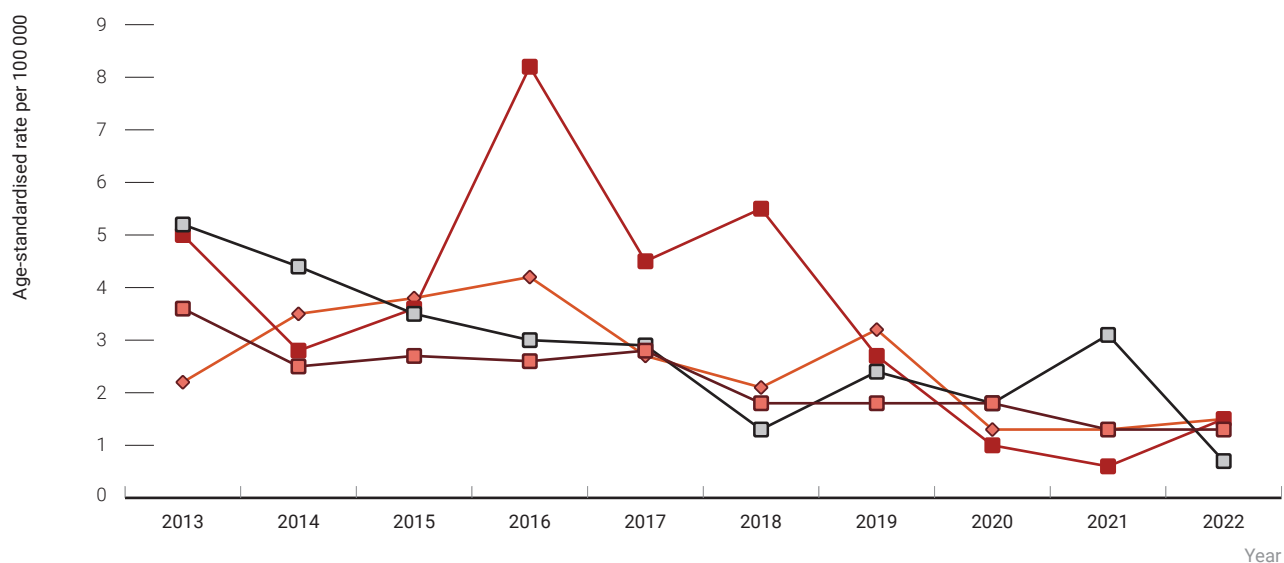
Between 2013 and 2019, the HIV notification rate declined by 27% in New South Wales from 4.9 to 3.6 per 100 000, 20% in Queensland from 4.0 to 3.2 per 100 000, 17% in Victoria from 5.3 to 4.4 per 100 000, and fluctuated in Western Australia (2.2 per 100 000 in 2019). All four states had a decline in notification rates between 2019 and 2022. In 2022, the HIV notification rate was highest in Victoria at 2.9 per 100 000, followed by New South Wales and Western Australia, both at 2.2 per 100 000, and Queensland at 1.9 per 100 000 (Figure 2).

In the Australian Capital Territory, the Northern Territory, South Australia, and Tasmania, numbers of notifications each year are low, so trends need to be interpreted with caution. Between 2013 and 2019, HIV notification rates fluctuated in all four states and territories, followed by declines between 2019 and 2022. In 2022 the HIV notification rate was 1.5 per 100 000 in both the Northern Territory and Tasmania, 1.3 per 100 000 in South Australia, and 0.7 per 100 000 in the Australian Capital Territory (Figure 2).

Figure 2 HIV notification rates per 100 000 population by state/territory, 2013–2022



● NSW	4.9	4.7	4.7	4.3	4.0	3.6	3.6	2.6	2.2	2.2
● QLD	4.0	5.3	4.3	4.1	3.9	3.7	3.2	2.2	2.5	1.9
● VIC	5.3	5.2	4.8	4.9	4.9	4.0	4.4	2.9	2.2	2.9
● WA	3.6	4.1	4.3	3.6	3.0	2.2	3.7	2.7	2.0	2.2



■ ACT	5.2	4.4	3.5	3.0	2.9	1.3	2.4	1.8	3.1	0.7
■ NT	5.0	2.8	3.6	8.2	4.5	5.5	2.7	1.0	0.6	1.5
■ SA	3.6	2.5	2.7	2.6	2.8	1.8	1.8	1.8	1.3	1.3
◆ TAS	2.2	3.5	3.8	4.2	2.7	2.1	3.2	1.3	1.3	1.5

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

HIV notification rates over the 10-year period 2013–2022 differed by region of birth. Between 2013 and 2019, among Australian-born people, the HIV notification rate declined by 32% from 3.8 to 2.6 per 100 000. HIV notification rates declined or remained stable for all regions of birth between 2019 and 2022 apart from North Africa and the Middle East, and Latin America and the Caribbean (Table 4). Among people born overseas, the highest HIV notification rates in 2022 were among people born in Southeast Asia (7.4 per 100 000), Sub-Saharan Africa (6.6 per 100 000), and Latin America and the Caribbean (5.3 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 2013 to the end of 2022 should be interpreted with caution.

Table 4 HIV notification rates per 100 000 population by region of birth, 2013–2022

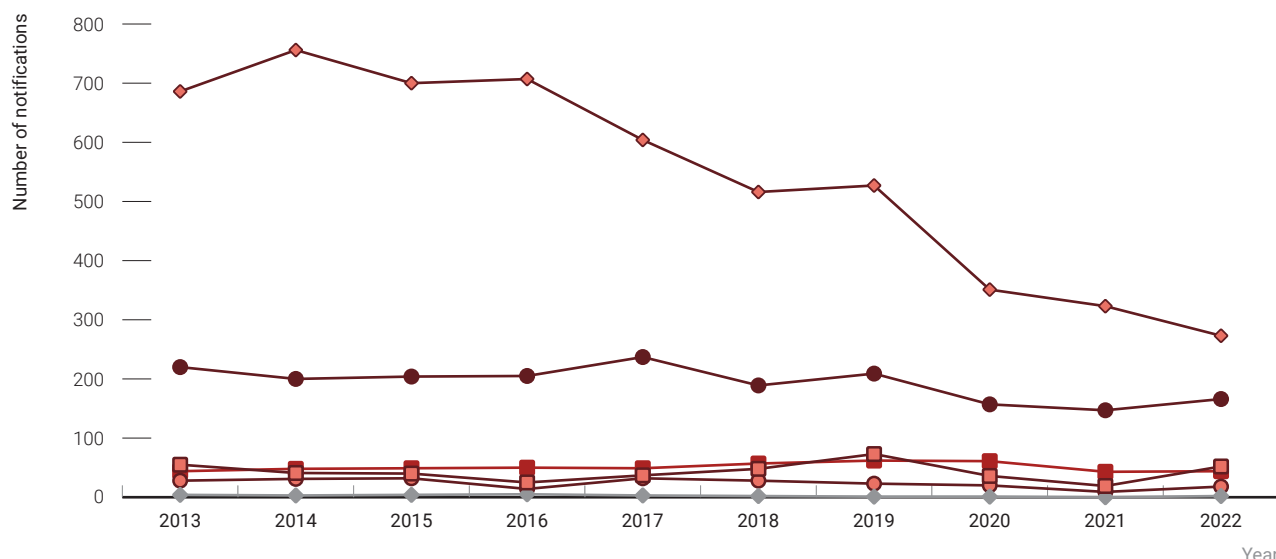
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Region of birth										
Australia	3.8	4.1	3.6	3.4	3.2	2.6	2.6	1.9	1.6	1.6
North Africa and the Middle East	6.5	4.4	6.0	2.2	3.0	2.4	1.3	2.0	2.1	2.7
Northeast Asia	3.3	4.3	4.8	3.9	2.3	3.5	2.9	0.8	1.7	1.5
North-West Europe, USA & Canada	4.4	5.1	6.0	4.8	2.5	3.3	4.3	1.5	1.9	1.4
Oceania	7.7	5.7	4.0	5.5	4.7	5.3	4.6	4.9	3.3	2.2
Latin America and the Caribbean	11.7	7.1	4.8	11.4	10.0	10.2	12.7	6.6	5.9	5.3
Southeast Asia	9.8	9.4	12.1	12.6	10.9	10.5	13.4	8.3	8.3	7.4
Southern and Central Asia	2.4	2.0	1.8	2.4	2.0	2.5	1.9	2.0	1.4	2.3
Southern and Eastern Europe	5.0	5.8	5.7	2.6	5.3	3.1	3.0	1.1	1.1	2.7
Sub-Saharan Africa	13.8	14.3	11.8	11.3	9.8	8.5	9.1	13.6	3.4	6.6

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 555 new HIV notifications in 2022, 57% (317) were attributed to male-to-male sex or male-to-male sex and injection drug use, a decline from 70% (730) since 2013. Heterosexual sex accounted for 30% (166) of notifications, an increase from 21% (220) since 2013. In 2022, injection drug use accounted for 3% (18) of notifications (Table 3, Figure 3).

Figure 3 Number of HIV notifications by exposure category, 2013–2022



◆ Male-to-male sex

686	756	700	707	604	516	527	351	323	273
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■ Male-to-male sex and injection drug use

44	48	49	50	49	57	62	61	43	44
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● Heterosexual contact

220	200	204	205	237	189	209	157	147	166
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● Injection drug use

28	31	32	14	32	28	23	20	9	18
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◆ Vertical transmission

4	3	4	5	3	2	1	1	0	2
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■ Other

55	41	40	25	37	48	73	36	19	52
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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 2013–2022 and was grouped in the 'Other' category.

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



What does this mean?

Although overall numbers of new HIV diagnoses have declined among gay and bisexual men, most HIV diagnoses continue to be among this population.

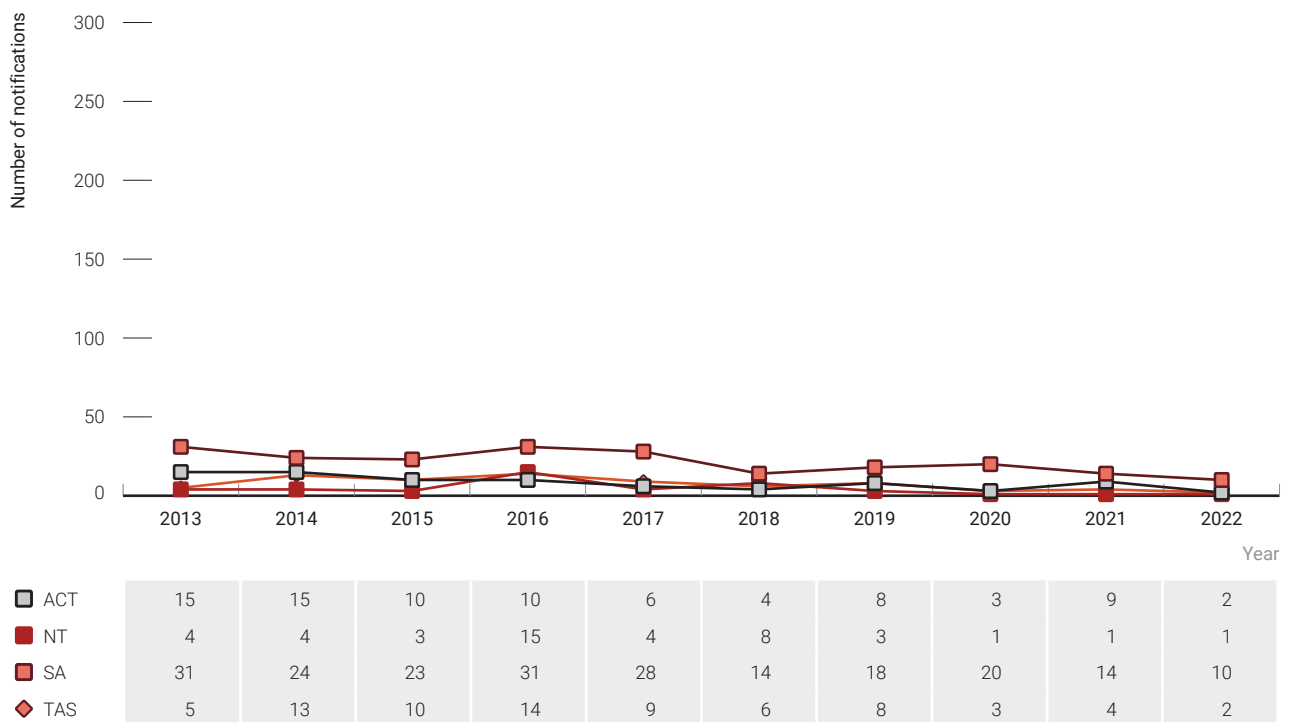
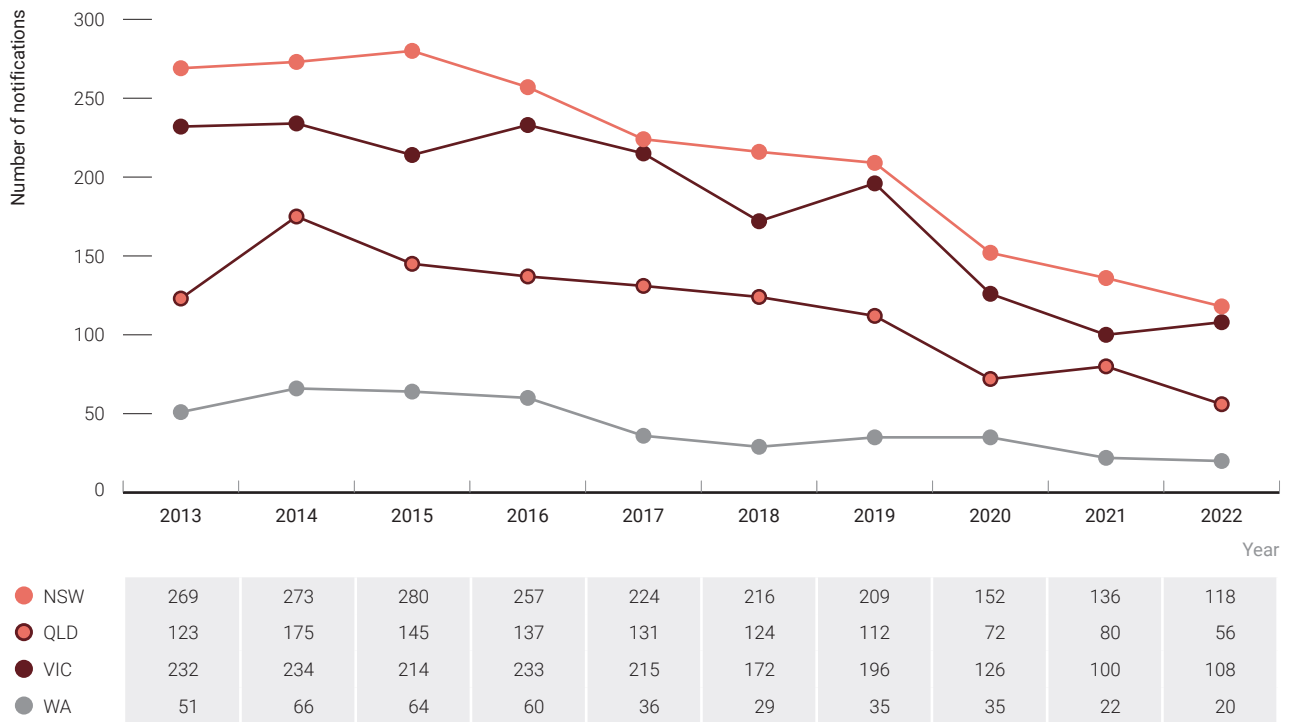
Subpopulations

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.

Between 2013 and 2022, there was a 57% decline in HIV notifications attributed to male-to-male sex. In this period, all jurisdictions saw a reduction in the number of notifications attributed to male-to-male sex (Figure 4).

The median age at HIV diagnosis for men reporting male-to-male sex as an HIV risk exposure was 34 years in both 2013 and 2022 (data not shown). Of the 317 cases of HIV newly diagnosed in 2022 for whom exposure to HIV included male-to-male sex, 56 (18%) also reported sex with women, up from 9% (69 out of 730 notifications) in 2013 (data not shown). There were 44 men for whom HIV risk exposure included male-to-male sex and injection drug use in 2022 (Table 3).

Figure 4 HIV notifications among men who reported male-to-male-sex as an exposure risk by state/territory, 2013–2022

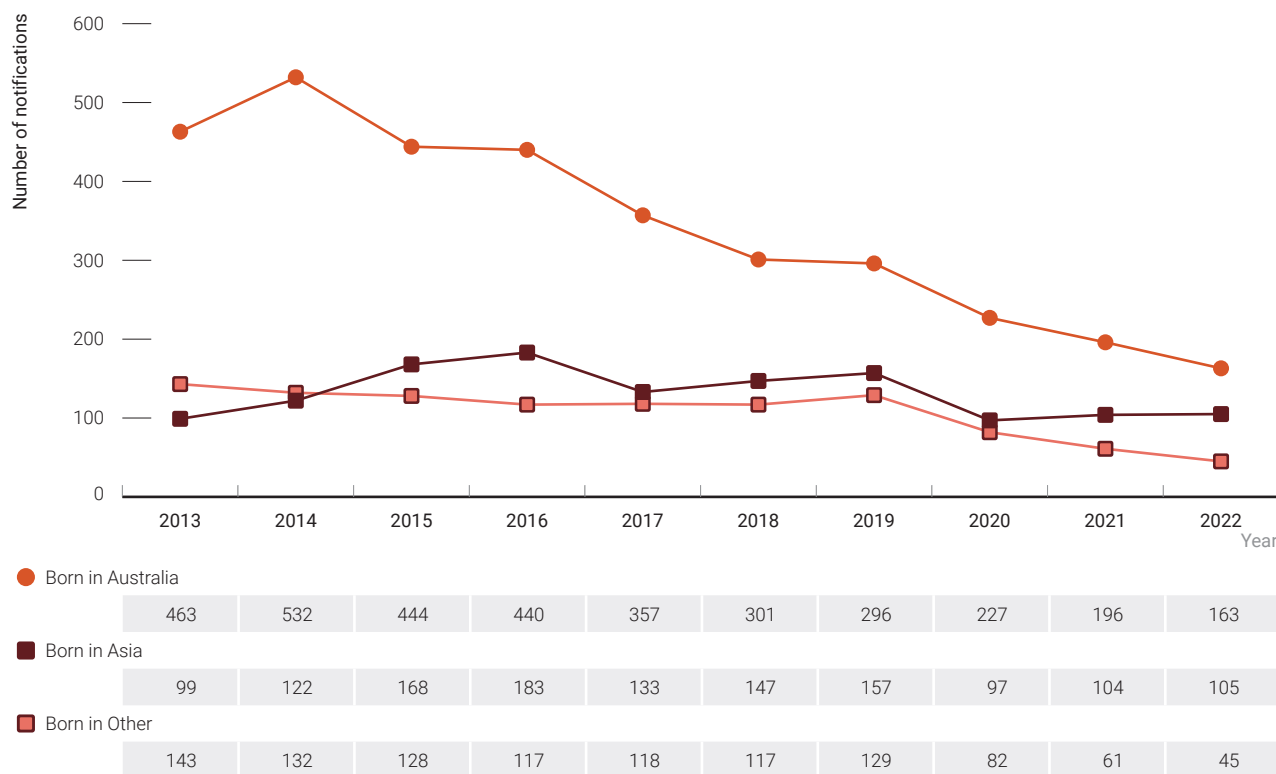


Notes: Includes notifications where the exposure classification was reported as male-to-male sexual contact and injection drug use.

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

Between 2013 and 2022, the number of HIV notifications among Australian-born men attributed to male-to-male sex decreased 65% from 463 to 163 (52% of all notifications attributed to male-to-male sex in 2022). The declines seen among Australian-born men from 2016 onwards are likely due to the availability of PrEP (see [HIV prevention on page 45](#) for further detail). Between 2013 and 2022, the number of HIV notifications among men born in Asia (Southeast Asia, Northeast Asia, and Southern and Central Asia) fluctuated between 99 (in 2013) and 183 (in 2016), with 105 notifications in 2022 (34% of all notifications attributed to male-to-male sex). The number of HIV notifications among men born in countries other than Asia declined by 68% from 143 notifications in 2013 to 45 notifications in 2022 (14% of all notifications attributed to male-to-male sex) (Figure 5). International travel was strongly affected by COVID-19 related border closures between 2020 and 2022, which also likely impacted HIV notifications among people born overseas.

Figure 5 HIV notifications among men who reported male-to-male sex as an exposure risk by region of birth, 2013–2022



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



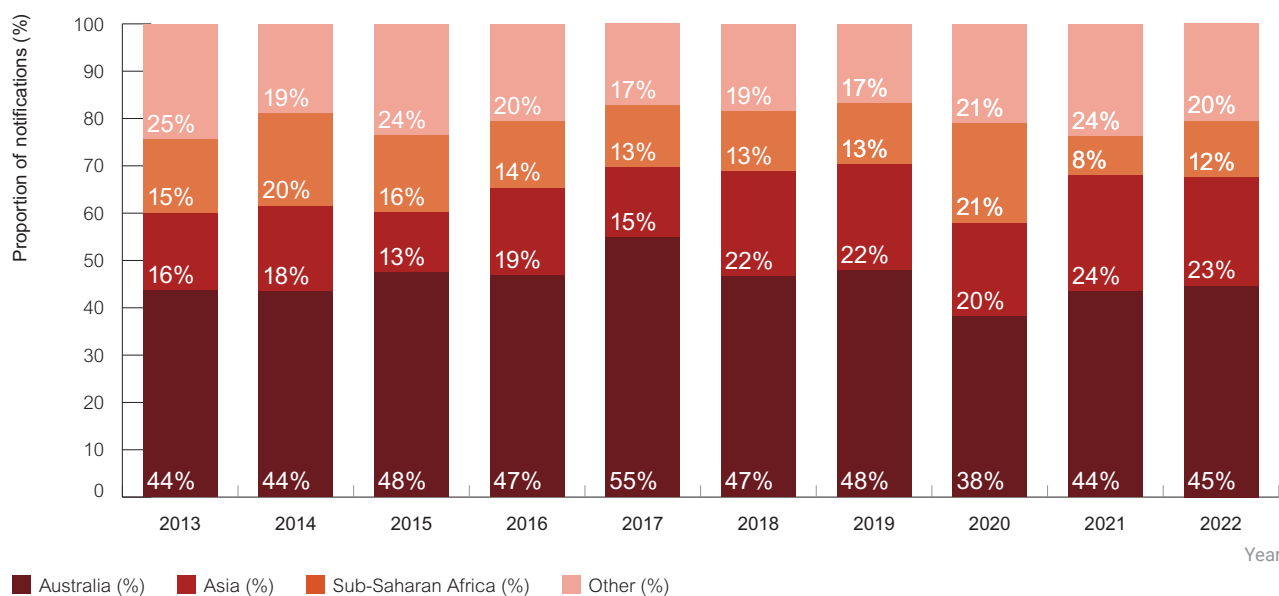
What does this mean?

HIV diagnoses among Australian-born gay and bisexual men have been declining steadily since 2014. Among overseas-born gay and bisexual men, this decline has been less evident, especially among men born in Asia.

Heterosexuals: Over the 10-year period 2013–2022, the number of HIV notifications reporting heterosexual sex fluctuated in most Australian states and territories with declines between 2019 and 2022, likely related to the COVID-19 pandemic. 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](#).

For HIV notifications attributed to heterosexual sex, the proportion born in Australia fluctuated between 2013 and 2022, and in 2022, was 45% (56% among men and 30% among women). Between 2013 and 2022, among HIV notifications attributed to heterosexual sex, the proportion of those born in Asia, Sub-Saharan Africa and other countries fluctuated (Figure 6).

Figure 6 Proportion of HIV notifications reporting heterosexual sex as exposure risk, by region/country of birth, 2013–2022



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

Trans and gender diverse people: Between 2013 and 2022, there were 55 HIV notifications among people whose gender was reported as trans or gender diverse (Table 3). Of these, 93% identified as non-Indigenous, 33% were Australian-born, and the median age at diagnosis was 36 years. 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 55 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 identified was male, female, or transgender. This single variable was 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 there is potential for underreporting in the number of transgender people diagnosed with HIV.

Aboriginal and Torres Strait Islander peoples: In 2022 there were 25 HIV notifications among Aboriginal and Torres Strait Islander peoples, representing 5% of the total 555 notifications. The majority (88%) of Aboriginal and/or Torres Strait Islander notifications were male and the median age at diagnosis was 34 years (Table 5).

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. Between 2013 and 2016, the HIV notification rate among Aboriginal and Torres Strait Islander peoples increased from 4.4 to 6.5 per 100 000 and then declined to 3.3 per 100 000 in 2019. In 2022, the HIV notification rate was 3.2 per 100 000 among Aboriginal and Torres Strait Islander peoples and 2.2 per 100 000 among non-Indigenous people.

For the years 2010–2022, 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 (14% and 2%, respectively, data not shown).

Table 5 Characteristics of cases of HIV notifications in Aboriginal and Torres Strait Islander peoples, 2013–2022

Characteristic	Year of HIV diagnosis									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total cases^a	27	34	40	47	31	33	25	16	17	25
Gender										
Male	23	25	36	41	23	30	20	14	17	22
Female	4	8	4	5	7	3	5	1	0	3
Transgender ^b	0	1	0	1	1	0	0	1	0	0
Median age in years	36	34	36	31	33	28	31	35	38	34
Newly acquired HIV^c	9	8	13	14	10	9	10	7	3	9
(% of new diagnoses)	33.3%	23.5%	32.5%	29.8%	32.3%	27.3%	40.0%	43.8%	17.6%	36.0%
Late and advanced HIV infection status at HIV diagnosis (%)^d										
Late HIV diagnosis	40.0%	32.3%	29.7%	25.0%	25.0%	25.0%	22.7%	6.7%	46.7%	27.3%
Advanced HIV diagnosis	25.0%	19.4%	16.2%	13.6%	7.1%	21.4%	9.1%	0.0%	20.0%	13.6%
State/Territory										
Australian Capital Territory	0	1	0	0	0	1	0	0	0	0
New South Wales	8	7	7	10	8	11	7	4	1	6
Northern Territory	1	1	1	5	1	1	0	0	1	0
Queensland	9	14	13	20	11	13	9	7	6	5
South Australia	2	0	2	2	5	1	2	2	0	0
Tasmania	2	2	2	0	1	0	1	0	1	0
Victoria	5	6	8	6	2	4	4	1	3	5
Western Australia	0	3	7	4	3	2	2	2	5	9
HIV exposure category										
Male-to-male sex ^e	29.6%	35.3%	55.0%	57.4%	38.7%	54.5%	48.0%	50.0%	52.9%	40.0%
Male-to-male sex and injection drug use ^f	18.5%	8.8%	10.0%	12.8%	6.5%	12.1%	20.0%	31.3%	11.8%	16.0%
Heterosexual sex	29.6%	17.6%	17.5%	21.3%	25.8%	24.2%	16.0%	12.5%	17.6%	20.0%
Injection drug use	22.2%	26.5%	15.0%	4.3%	22.6%	3.0%	16.0%	0.0%	17.6%	20.0%
Mother with/at risk of HIV infection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0%
Other/undetermined exposure	0.0%	11.8%	2.5%	4.3%	6.5%	6.1%	0.0%	6.3%	0.0%	0.0%

a. Includes notification missing gender.

b. Does not include transgender people recorded as either male or female.

c. 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.

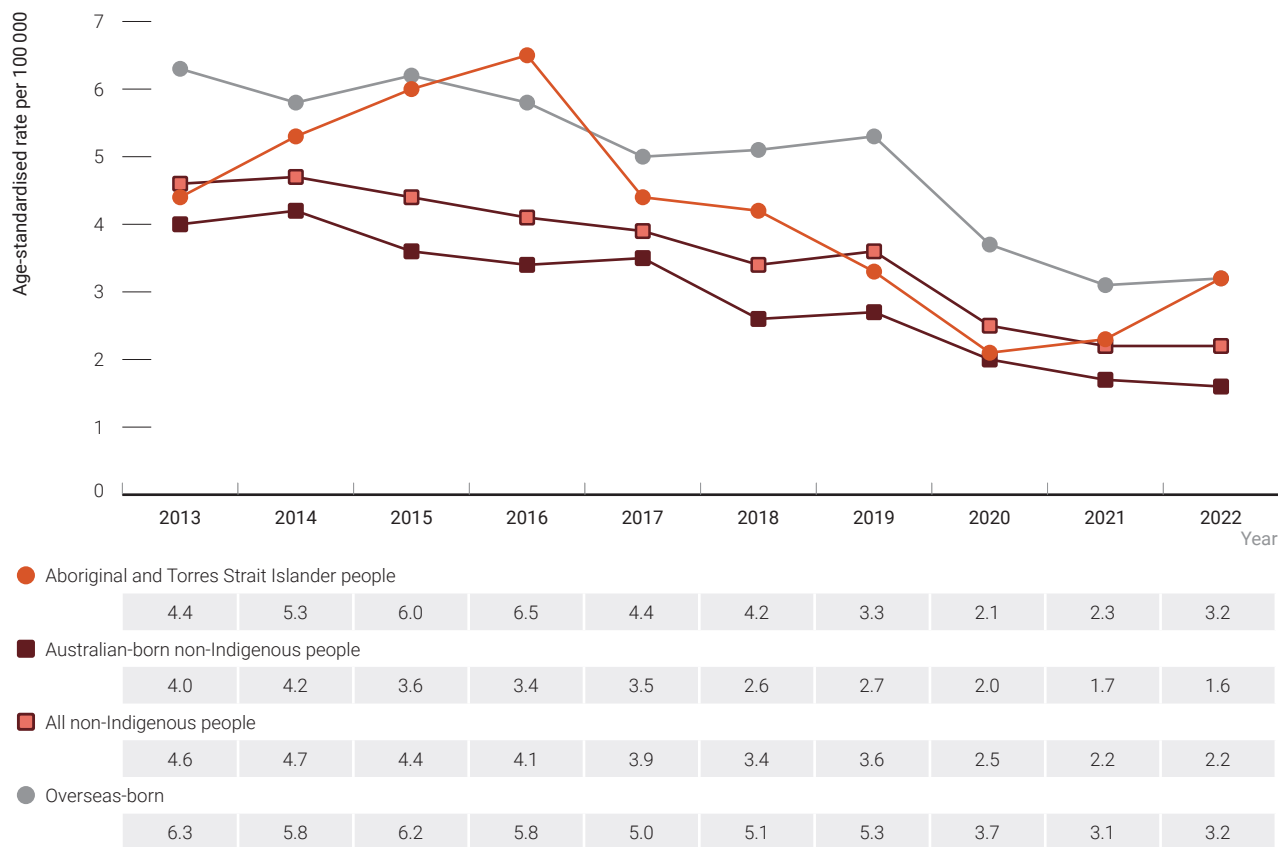
d. Late HIV diagnosis was defined as newly diagnosed HIV with a CD4+ cell count of less than 350 cells/ μ L, and advanced HIV as newly diagnosed infection with a CD4+ cell count of less than 200 cells/ μ L. Newly acquired HIV was categorised as not late or advanced diagnosis irrespective of CD4+ cell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

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

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

Source: State and territory health authorities.

Figure 7 HIV notification rate per 100 000 population by Aboriginal and Torres Strait Islander status, 2013–2022



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

Pregnant women: Between 1993 and 2022, 940 cases of perinatal HIV exposure among children born in Australia were reported. For the period 2018–2022, the HIV vertical transmission rate was 0.6%, compared with 26.4% in the period 1993–1997 and 28.0% in the period of 2008–2012 (Figure 8). There was one reported case of vertical HIV transmission from 2018 to 2022, in 2022.

Figure 8 Number of Australian-born children perinatally exposed to HIV and proportion HIV-positive by five-years grouping of birth year, 1993–2022



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

Clinical and immunological markers indicating timing and place of HIV acquisition

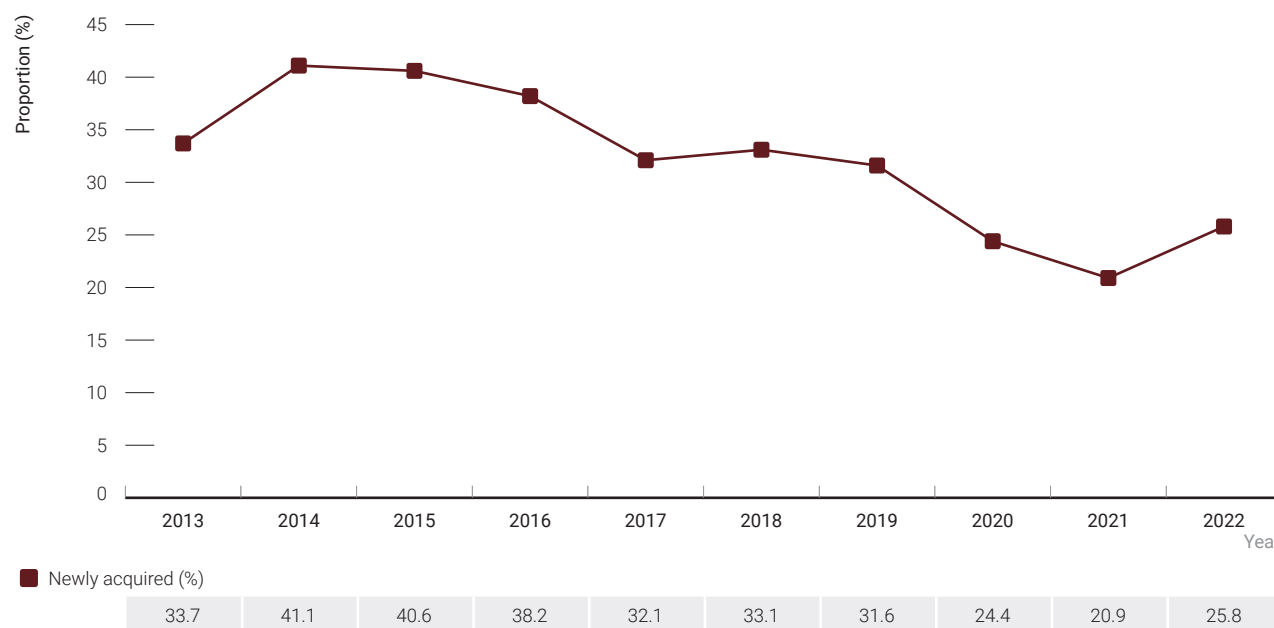
HIV notifications classified as newly acquired

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.

For some 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 33.7% in 2013 to 25.8% in 2022. The decline in the proportion of HIV notifications classified as newly acquired between 2019 and 2021 was likely related to the COVID-19 pandemic (Table 3, Figure 9).

The rates of newly acquired HIV notifications in 2022 varied by jurisdiction, with the highest rate in Victoria (0.9 per 100 000) (Figure 10). 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.

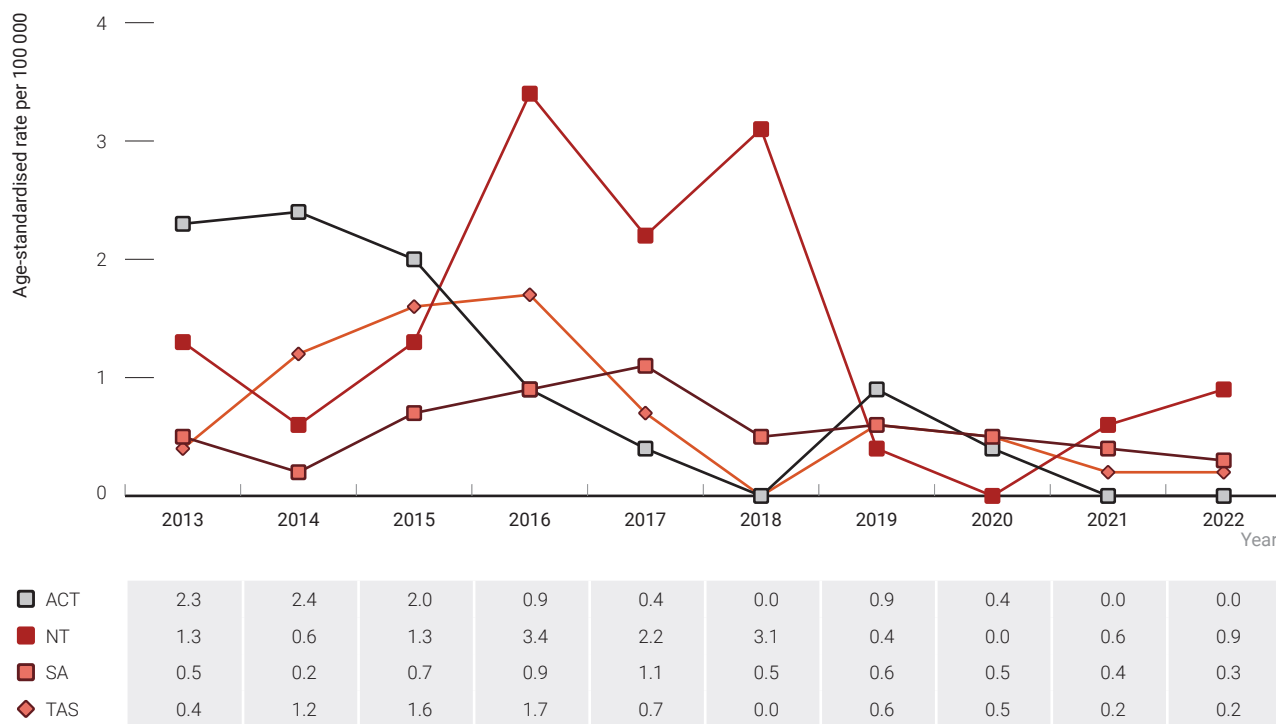
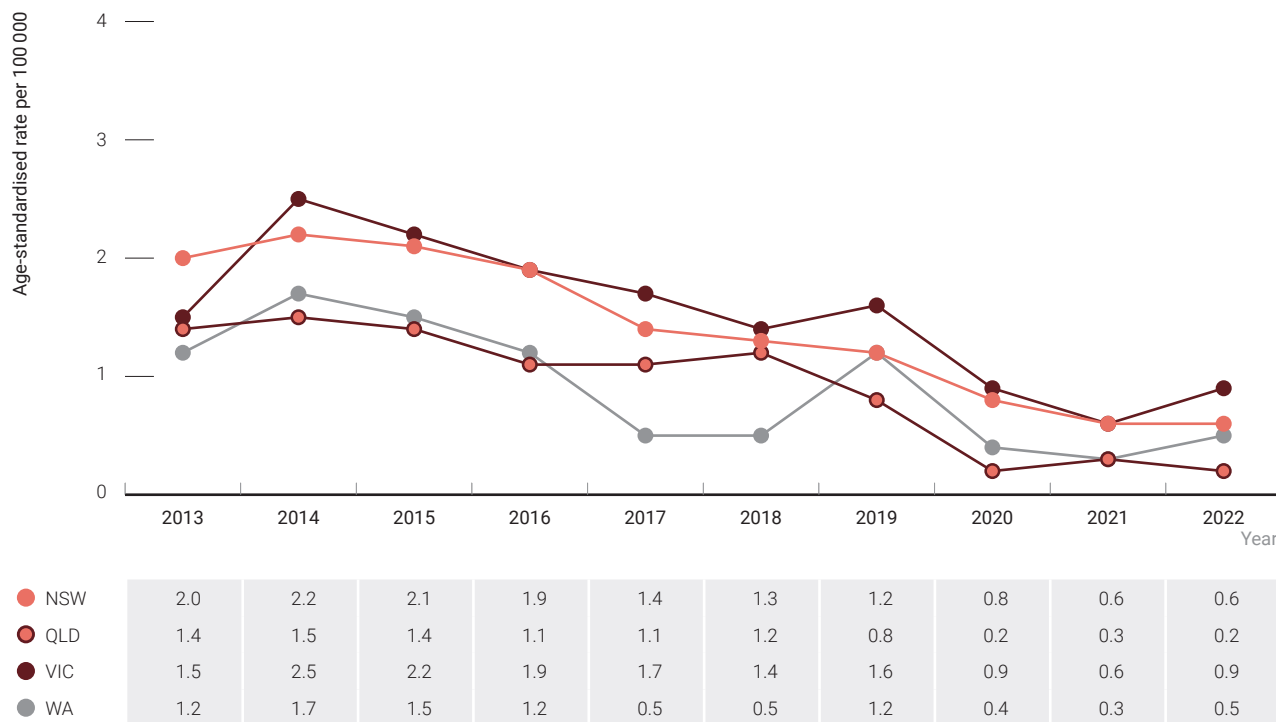
Figure 9 The proportion of HIV notifications classified as newly acquired, 2013–2022



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 10 HIV notification rates classified as newly acquired per 100 000 population, by state/territory, 2013–2022



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

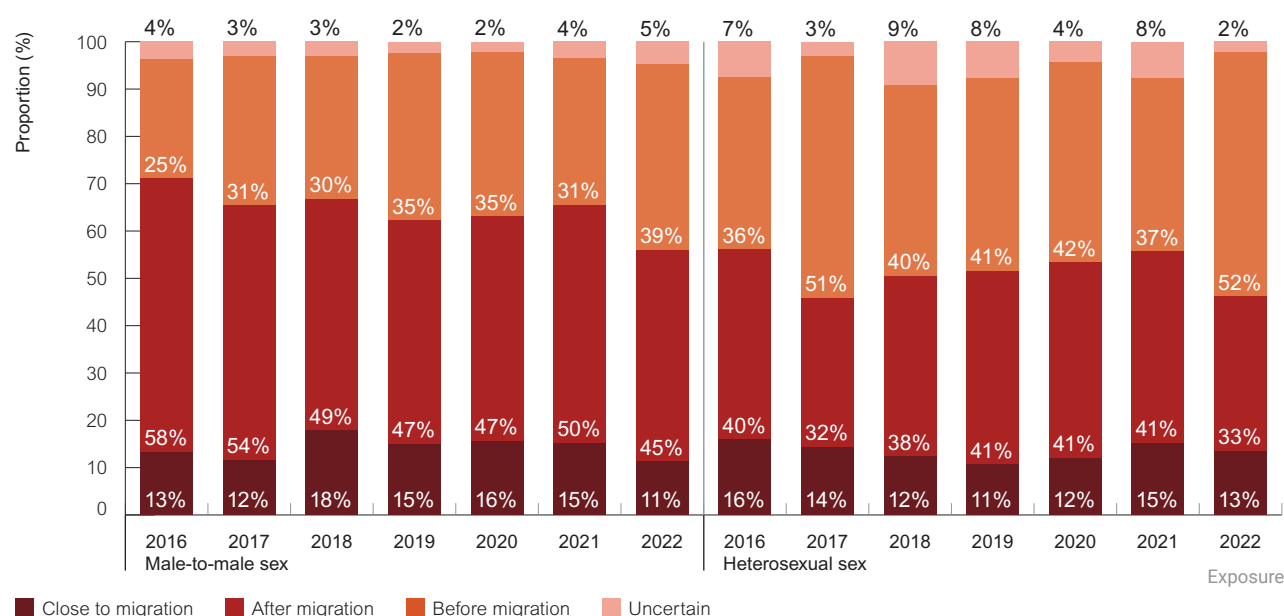
Likely place of HIV acquisition

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. Using HIV notification data of migrants to Australia, timing of HIV acquisition relative to date of migration to Australia can be estimated. South Australia does not collect year of arrival and South Australian HIV notifications are therefore excluded from the analysis⁽³⁾.

Of HIV notifications among migrants to Australia attributed to male-to-male sex, the proportion who likely acquired HIV after migration declined from 58% in 2016 to 45% in 2022. Conversely, among this population, the proportion who likely acquired HIV before migration increased from 25% in 2016 to 39% in 2022 (Figure 11). The increase in the proportion of men who likely acquired HIV before migration should be seen in the context of an overall decline in the number of HIV diagnoses attributed to male-to-male sex (see Table 3, page 11).

Of HIV notifications among migrants to Australia attributed to heterosexual sex, the proportion who likely acquired HIV before or after migration fluctuated between 2016 and 2022. In 2022, an estimated 33% of this population acquired HIV after migration while 52% acquired HIV before migration to Australia (Figure 11). These trends over time were likely affected by the COVID-19 pandemic. Also, small numbers of notifications among migrants diagnosed with HIV attributed to heterosexual sex mean that trends should be interpreted with caution.

Figure 11 Timing of HIV acquisition among migrants to Australia by exposure, 2016–2022



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



What does this mean?

Among people born overseas and diagnosed with HIV, an increasing proportion likely acquired HIV before migrating to Australia. This trend likely reflects the impact of Australian HIV prevention strategies.

HIV subtype

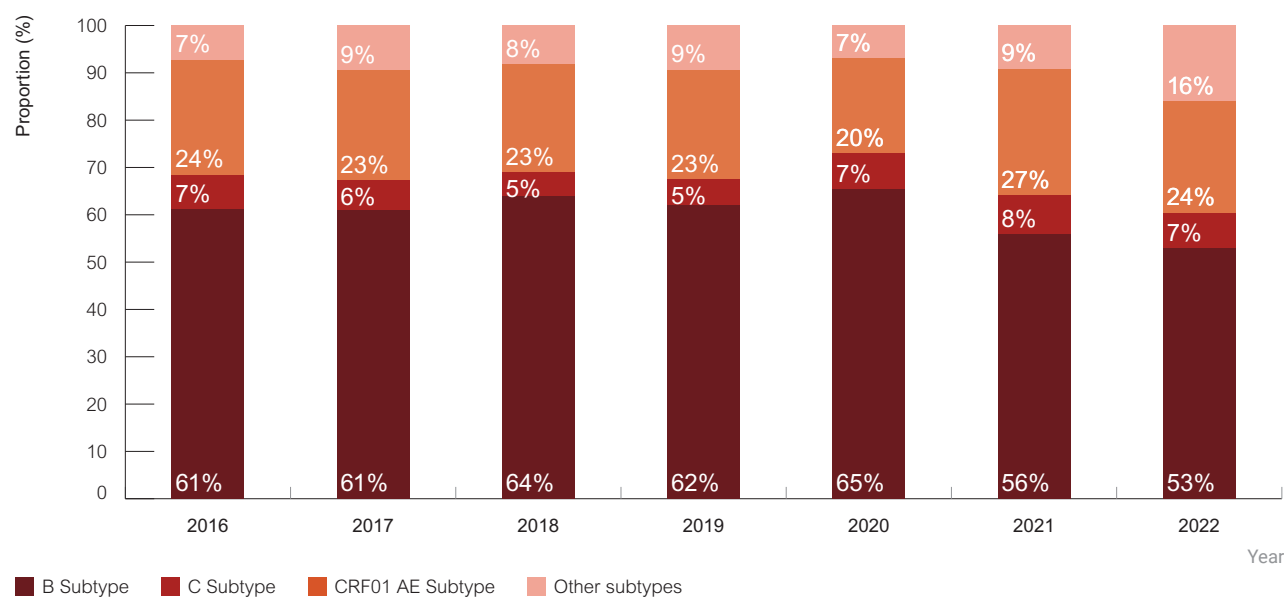
HIV subtype is included in this report as changes in the distribution of subtypes at a population level can inform prevention programs. There are at least nine subtypes of HIV-1 virus globally, A, B, C, D, F, G, H, J and K. Additionally, different subtypes can combine, creating what is known as a 'circulating recombinant form'. The dominant HIV subtype in the Americas, Western Europe and Australasia is subtype B^(4,5). Subtype C is more common in India and high-prevalence countries of Sub-Saharan Africa⁽⁶⁾.

In this report we have included HIV subtype based on HIV notifications with a reported subtype in New South Wales, South Australia, and Victoria from 2016 to 2022. These data may not be representative of all new infections Australia-wide, therefore these figures should be interpreted with caution. Future reports will aim to include data from all jurisdictions (see [Methodology](#) for further details).

Between 2016 and 2021, for HIV notifications attributed to male-to-male sex, most HIV notifications (between 53% and 61%) were subtype B (compared with non-B subtypes), with higher proportions among Australian-born men than among overseas-born men. In 2022, among HIV notifications attributed to male-to-male sex, subtype B made up the majority (52%) of notifications, compared with the next most prevalent subtype, CRF01 AE (24%) Overall, proportions of subtypes fluctuated in the reporting period (Figure 12).

Between 2016 and 2022, for HIV notifications attributed to heterosexual sex, the proportions of subtype B notifications declined from 39% to 22%. In 2022 subtype B accounted for 22% of notifications compared with 39% for subtype CRF01 AE. Small numbers of HIV subtypes for notifications attributed to heterosexual sex with a reported subtype mean that these numbers should be interpreted with caution (Figure 13).

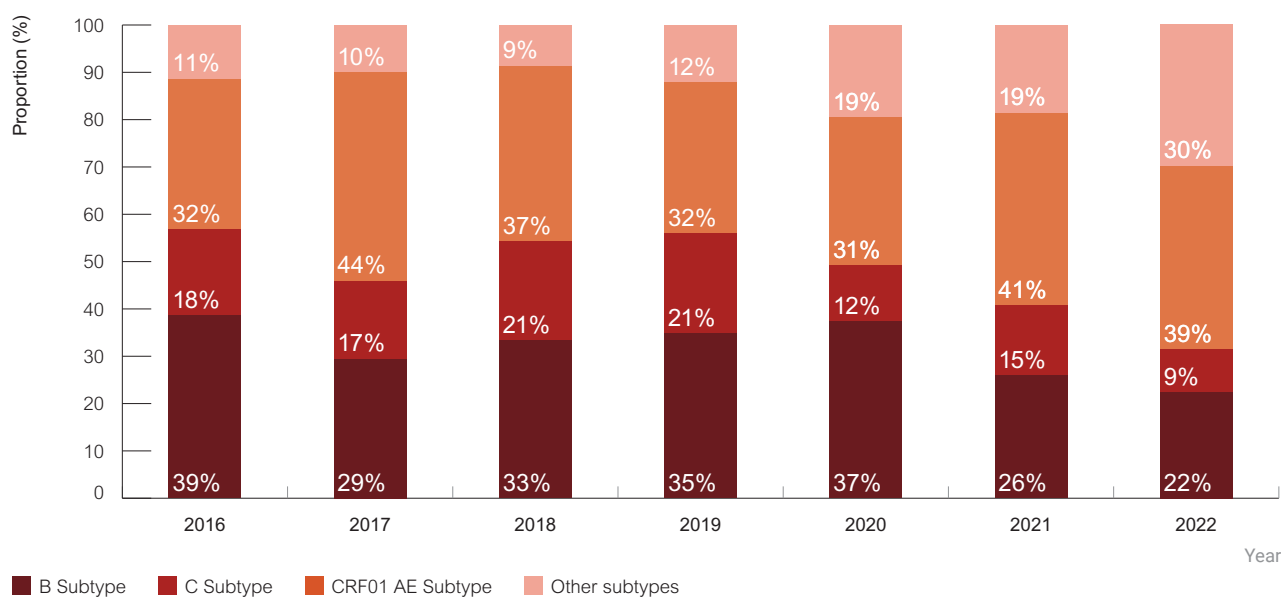
Figure 12 HIV subtype distribution in HIV notifications attributed to male-to-male sex by place of birth, 2016-2022



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

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

Figure 13 HIV subtype distribution in HIV notifications attributed to heterosexual sex by place of birth, 2016-2022



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

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

Late and advanced HIV diagnoses

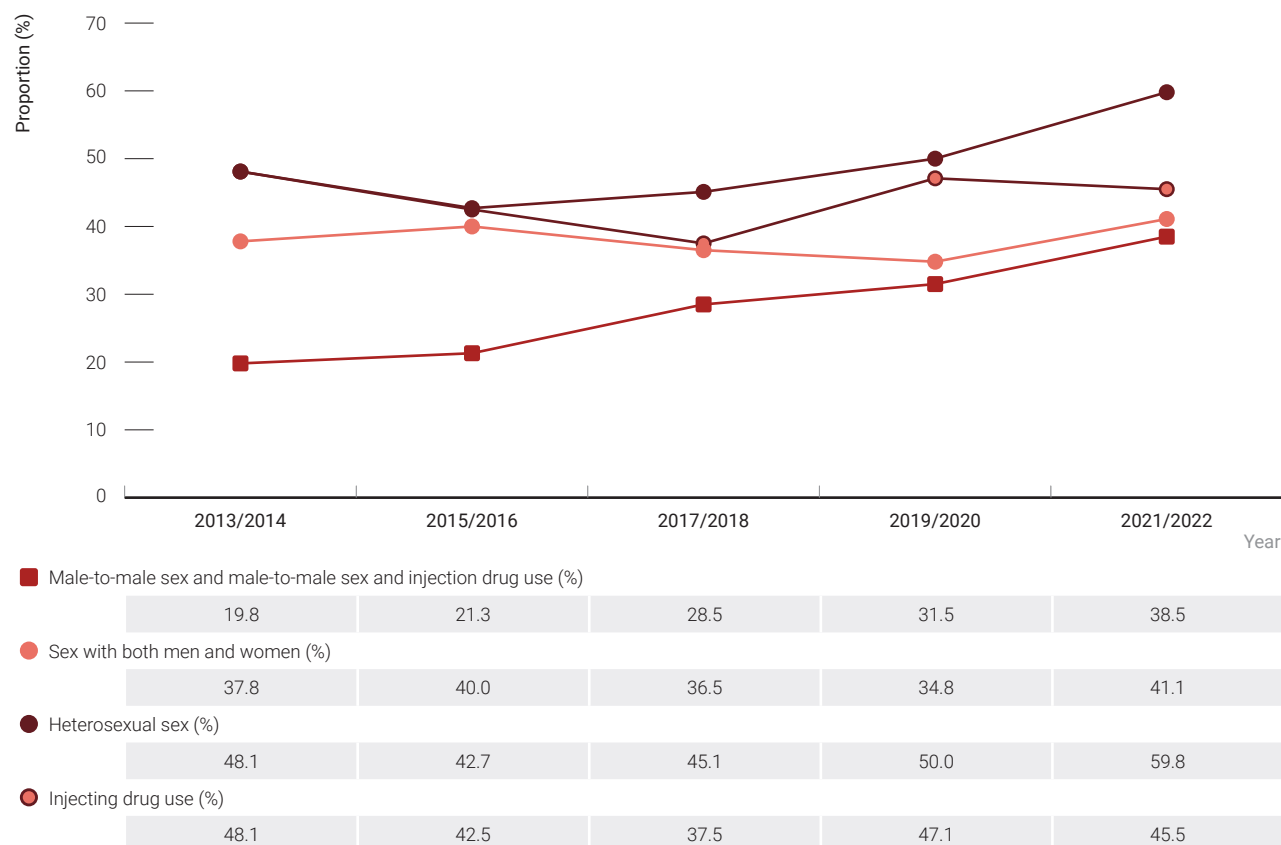
CD4+ cell count at the time of HIV diagnosis can indicate how long a person has had HIV before being diagnosed. CD4+ cell count is above 500 cells/ μ L in most people without HIV and declines on average by 50 to 100 cells/ μ L per year in people with HIV⁽⁷⁾. Late HIV diagnosis is defined as CD4+ cell 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 30.4% in 2013 to 44.1% in 2022 (see Table 3). For the years 2020 to 2022, the proportion of HIV notifications with late diagnosis was highest in people born in Sub-Saharan Africa (58%), Southeast Asia (56%), and Latin America and the Caribbean (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 2021/2022 and for diagnoses attributed to heterosexual sex and injection drug use, the proportions diagnosed late remain high at 59.8% and 45.5%, respectively (Figure 14).

Figure 14 Proportion of late HIV diagnoses by selected exposure category, 2013–2022

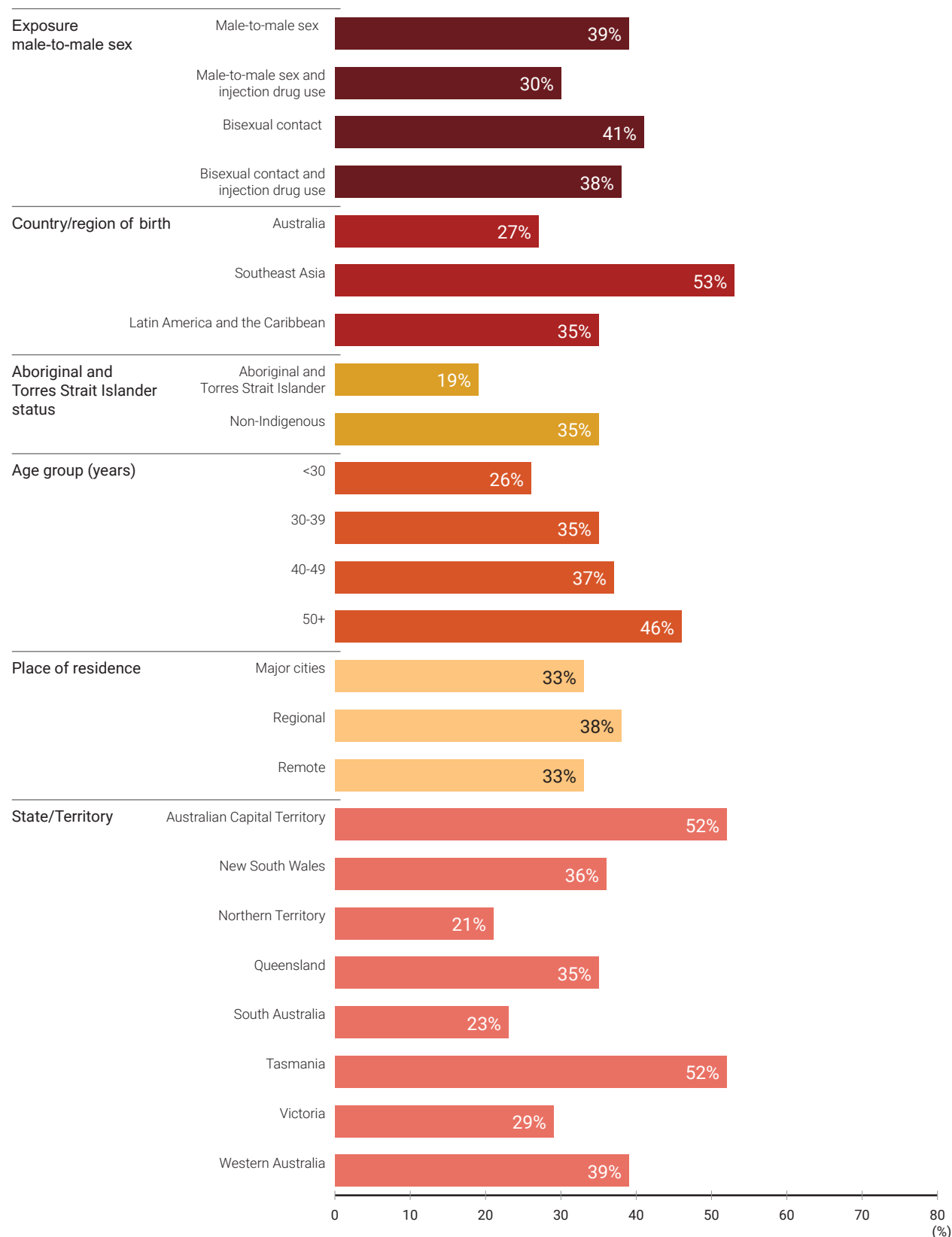


Note: Late HIV diagnosis was defined as new HIV diagnoses with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was not categorised as late or advanced diagnoses irrespective of CD4+ cell count. Notifications without a CD4+ cell count available were excluded.

Source: State and territory health authorities.

Among HIV notifications attributed to male-to-male sex for the years 2018 to 2022, late diagnosis was more common among men who reported sex with both men and women (41%), men aged 50 years and older (46%), men born in Southeast Asia (53%), and men living in regional areas (38%) (Figure 15).

Figure 15 Proportion of late HIV diagnoses among men reporting an exposure category that included male-to-male sex by subcategory, 2018–2022 (n = 2023)

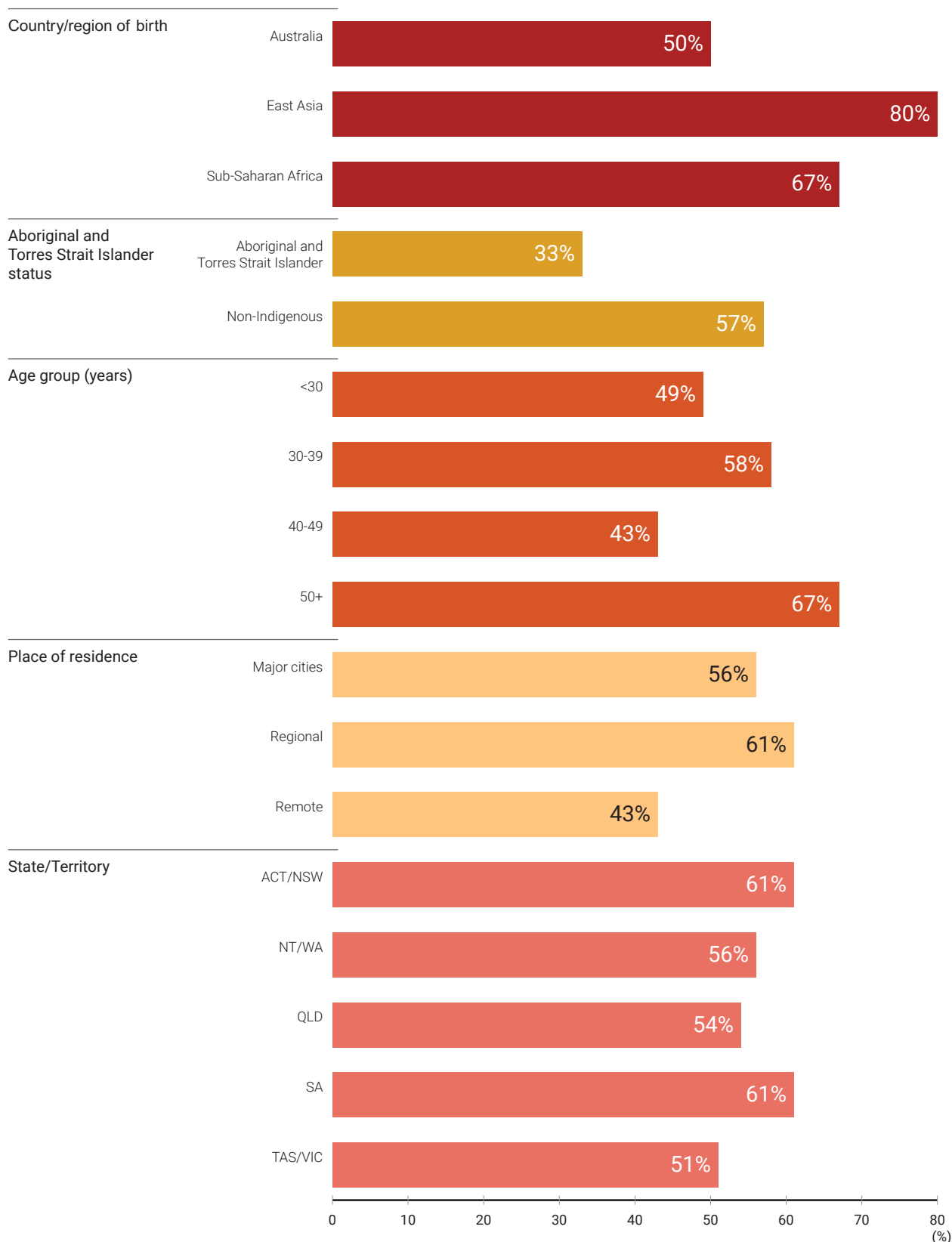


Note: Late HIV diagnosis was defined as an HIV notification with a CD4+ cell count of less than 350 cells/ μ L. Newly acquired HIV was categorised as neither late or advanced diagnoses, irrespective of CD4+ cell count. Notifications without a CD4+ cell count recorded within three months of diagnosis 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 (43% overall, 56% among men and 43% among women), with variation by key demographic characteristics and HIV risk exposure (Figure 16, Figure 17).

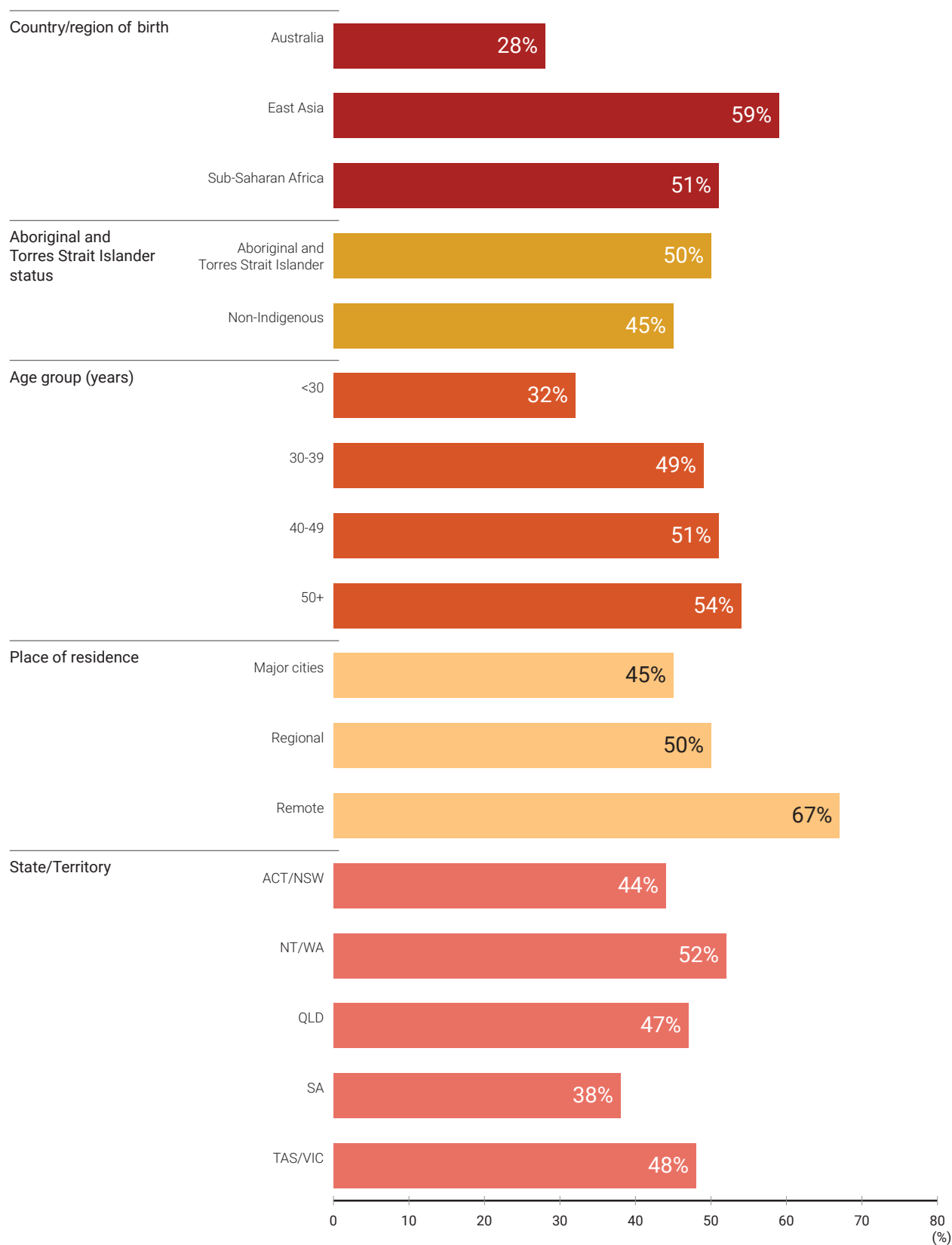
Figure 16 The proportion of late HIV diagnoses among men who reported heterosexual sex as an exposure risk by subcategory, 2018–2022 (*n* = 460)



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 17 The proportion of late HIV diagnoses among women who reported heterosexual sex as an exposure risk by subcategory, 2018–2022 (n = 293)



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. Caution should be applied when interpreting these data due to low numbers.

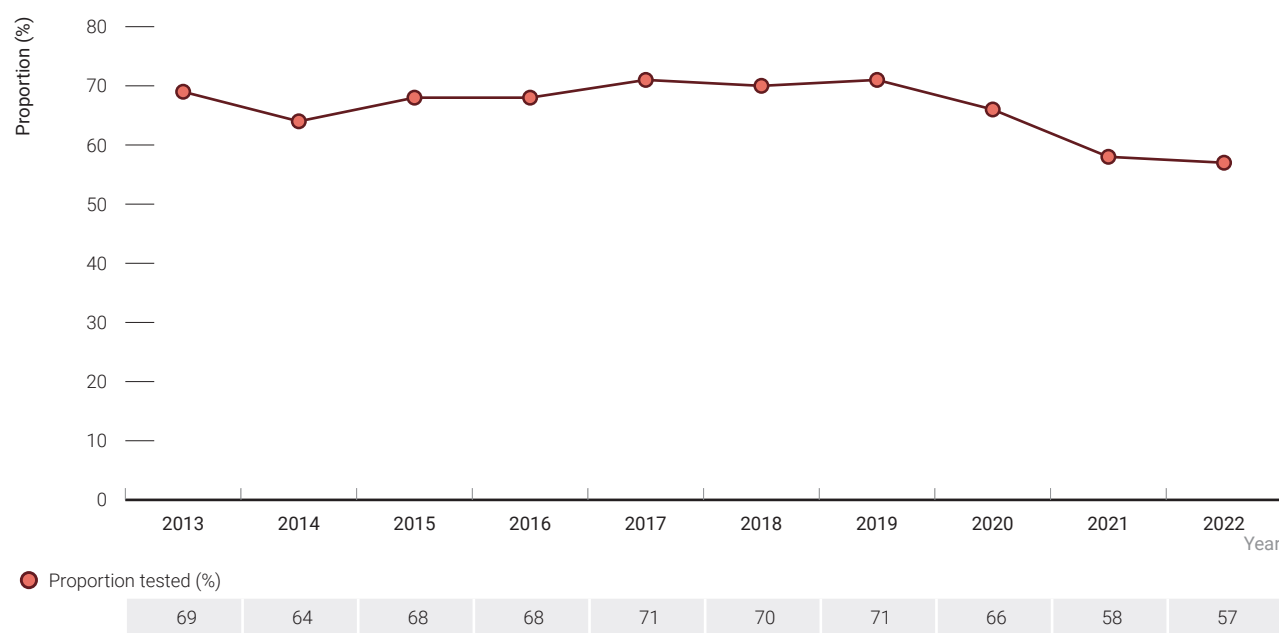
Source: State and territory health authorities.

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⁽⁸⁾. Guidelines recommend three-monthly testing for all sexually active men who have had sex with another man in the previous three months⁽⁹⁾.

Behavioural surveys measure the proportion of people tested in a year and provide further information about HIV testing patterns in Australia among selected priority populations. In the Gay Community Periodic Surveys⁽¹⁰⁾, 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 69% in 2013 to 71% in 2019. Between 2019 and 2022 this proportion dropped to 51% likely due to the impacts of the ongoing COVID-19 pandemic (Figure 18).

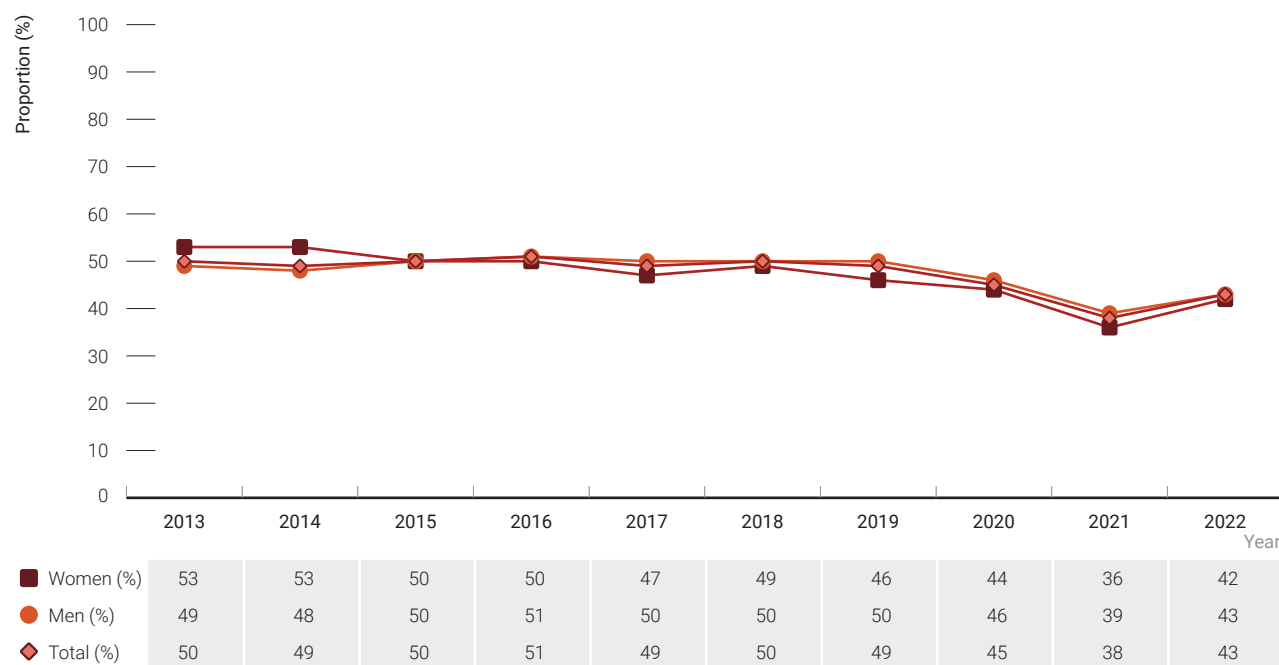
Figure 18 Proportion of non-HIV-positive gay and bisexual men tested for HIV in the 12 months prior to completing the surveys, 2013–2022



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

Based on data from the Australian Needle Syringe Program Survey (ANSPS), in 2022, 43% 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 19). The number of participants of the ANSPS between 2020 and 2022 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 19 Proportion of people who inject drugs attending needle and syringe programs who reported an HIV test in the past 12 months by gender, 2013–2022



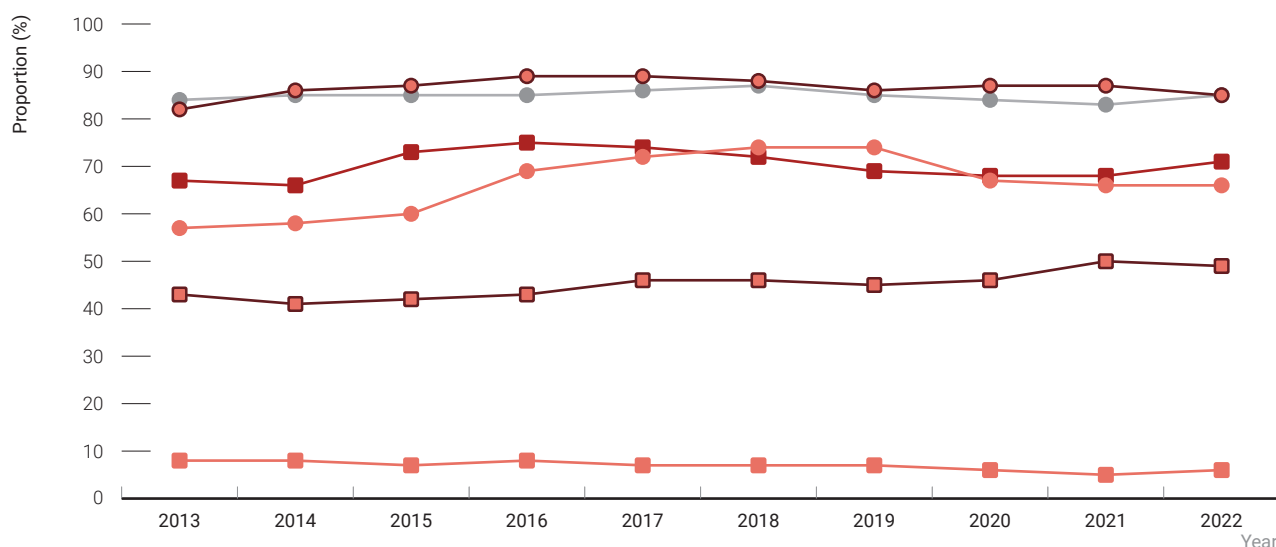
Source: ANSPS; see [Methodology](#) for detail.

According to respondents of 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 2022 were a general practice (46%) and a sexual health clinic (30%).

At sentinel sexual health clinics across Australia participating in ACCESS (see [Methodology](#) for further detail), between 2013 and 2022 the proportion of gay and bisexual men who were tested for HIV at least once in the previous 12 months fluctuated between 82% and 89% and was 85% in 2022 (Figure 20). 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 57% in 2013 to 74% in 2019 but declined to 66% in 2022. Declines in the numbers of gay and bisexual men attending sexual health clinics and general practice clinics after 2019 mean that trends to 2022 should be interpreted with caution.

Among other priority populations attending sexual health clinics participating in ACCESS, 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 2013 to 2022 and was 85% in 2022. In 2022, among people attending sexual health clinics who were recorded as having recently injected drugs, 71% received an HIV test in the previous 12 months, similar to the preceding nine years. Among young heterosexuals (aged 16-29 years) attending sexual health clinics, 49% received an HIV test in the previous 12 months in 2022. By contrast, among young heterosexuals attending general practice clinics in 2022, only 6% received an HIV test in the previous 12 months (Figure 20).

Figure 20 Proportion of sexual health and high-caseload general practice clinic attendees tested for HIV in a year by priority population, 2013–2022



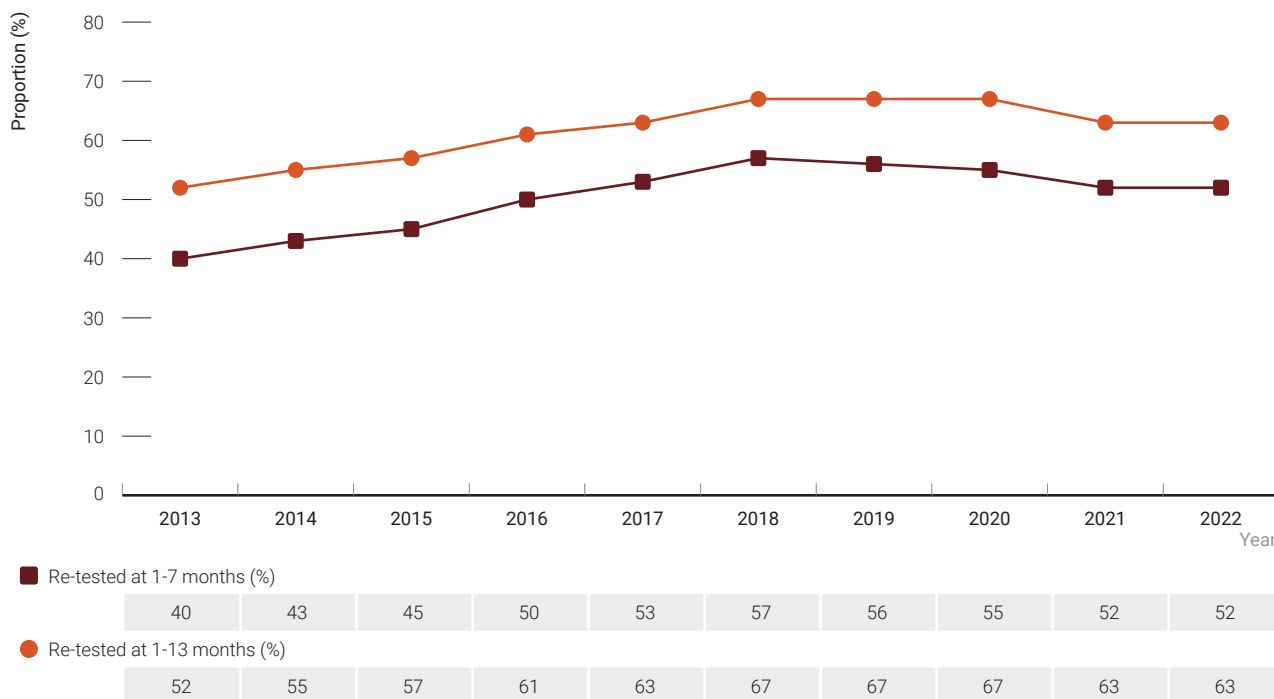
● Gay and bisexual men, sexual health clinic (%)	82	86	87	89	89	88	86	87	87	85
● Gay and bisexual men, general practice (%)	57	58	60	69	72	74	74	67	66	66
■ Heterosexuals aged 16–29y, sexual health clinic (%)	43	41	42	43	46	46	45	46	50	49
■ Heterosexuals aged 16-29y, general practice (%)	8	8	7	8	7	7	7	6	5	6
■ People who inject drugs, sexual health clinic (%)	67	66	73	75	74	72	69	68	68	71
● Female sex workers, sexual health clinic (%)	84	85	85	85	86	87	85	84	83	85

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.

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 2013 to 67% in 2019 and then declined to 63% in 2022. In this period, the proportion retested within seven months of a previous HIV test increased from 40% in 2013 to 57% in 2018 and then declined to 52% in 2022 (Figure 21).

Figure 21 HIV retesting among gay and bisexual men attending sexual health clinics, 2013–2022



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

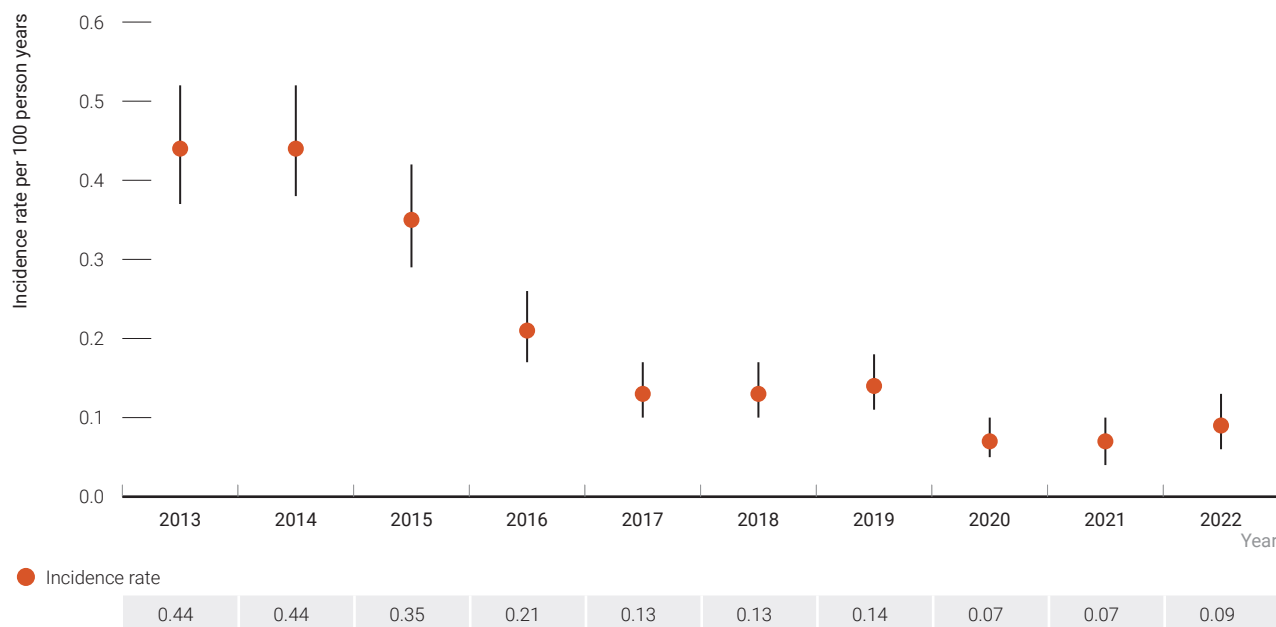
5 HIV incidence

HIV incidence is the best indicator of changes in transmission in a population. HIV incidence is calculated 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 2013–2022, among gay and bisexual men attending sexual health services and general practice clinics participating in ACCESS who had at least one repeat HIV test (n = 132 454), there were 924 seroconversions during 441 182 person-years at risk. The HIV incidence rate in 2019 was 0.14 new infections per 100 person-years down from 0.44 per 100 person-years in 2013. In 2022, the HIV incidence rate was 0.09 per 100 person-years (Figure 22).

In the same period, among female sex workers attending sexual health services and general practice clinics who had at least one repeat HIV test (n=20 902), there were eight seroconversions during 47 066 person-years at risk (Figure 23). Between 2013 and 2022, the HIV incidence rate among female sex workers remained low, between 0 and 0.4 per 100 person-years and was 0.00 per 100 person-years in 2022. Smaller numbers of female sex workers tested for HIV after 2019 mean that trends in incidence rates to 2022 should be interpreted with caution.

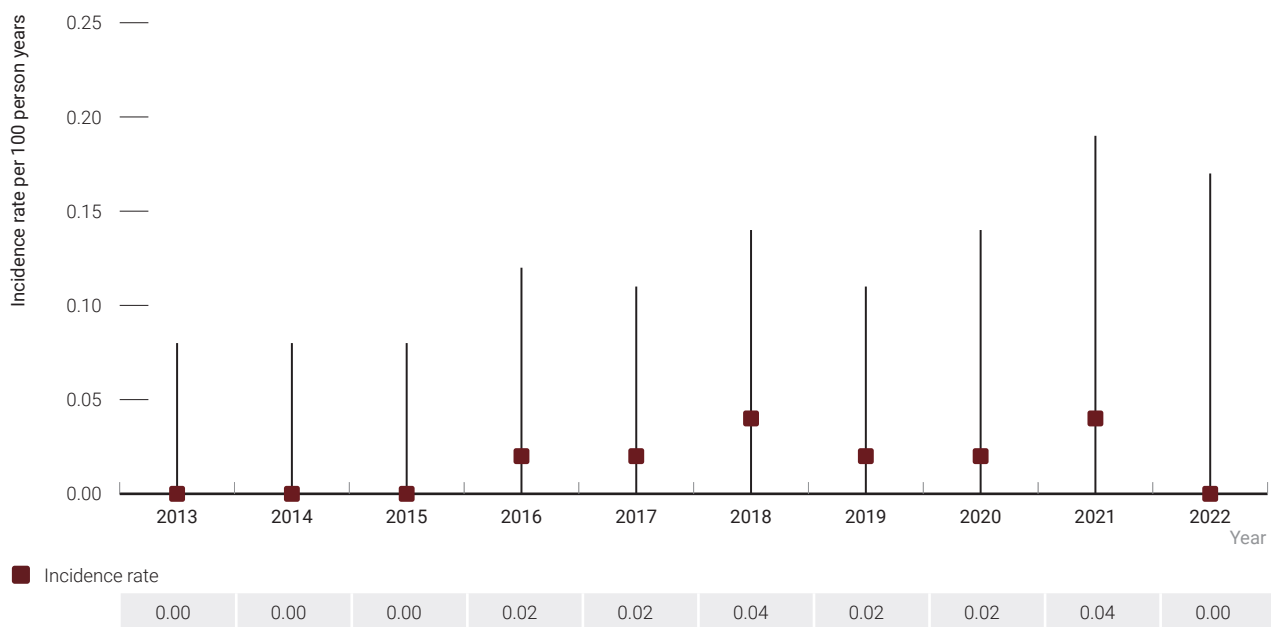
Figure 22 HIV incidence rate per 100 person-years among gay and bisexual men attending sexual health clinics, 2013–2022



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 23 HIV incidence rate per 100 person-years among female sex workers attending sexual health clinics, 2013–2022



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 2022, among the 28 870 people estimated to be living with HIV in Australia, 21 320 people were estimated to have acquired HIV through male-to-male sex, 7300 through heterosexual sex, and 620 through injection drug use (Table 6).

There were an estimated 590 Aboriginal and/or Torres Strait people living with HIV in Australia at the end of 2022. After adjusting for missing country of birth data, there were an estimated 3290 people living with HIV born in Southeast Asia, 1670 born in Sub-Saharan Africa, and 930 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 2022 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 2021). In the wider Asia-Pacific region including Australia, HIV prevalence was an estimated 0.2% in 2020⁽¹⁾. HIV prevalence among Aboriginal and Torres Strait Islander peoples was estimated to be 0.10% in 2022 (Table 6).

Undiagnosed HIV infection

At the end of 2022, an estimated 2020 people (7% of all people living with HIV) were living with HIV who were unaware of their HIV status (undiagnosed). The proportion undiagnosed was 8% among both men and women, 5% among Australian-born people, and 3% among Aboriginal and Torres Strait Islander peoples. People living with HIV born in Southeast Asia had the highest proportion of people who were undiagnosed (26%), followed by people living with HIV born in Latin America and the Caribbean (16%) and Sub-Saharan Africa (7% each) (Figure 24, Table 6).

The proportion with undiagnosed HIV was lower among Australian-born men with male-to-male sex as an exposure risk (3%) than in overseas-born men with male-to-male sex as an exposure risk (12%), in people with heterosexual risk exposure (16%), and people who inject drugs (10%). Detailed 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, 2022

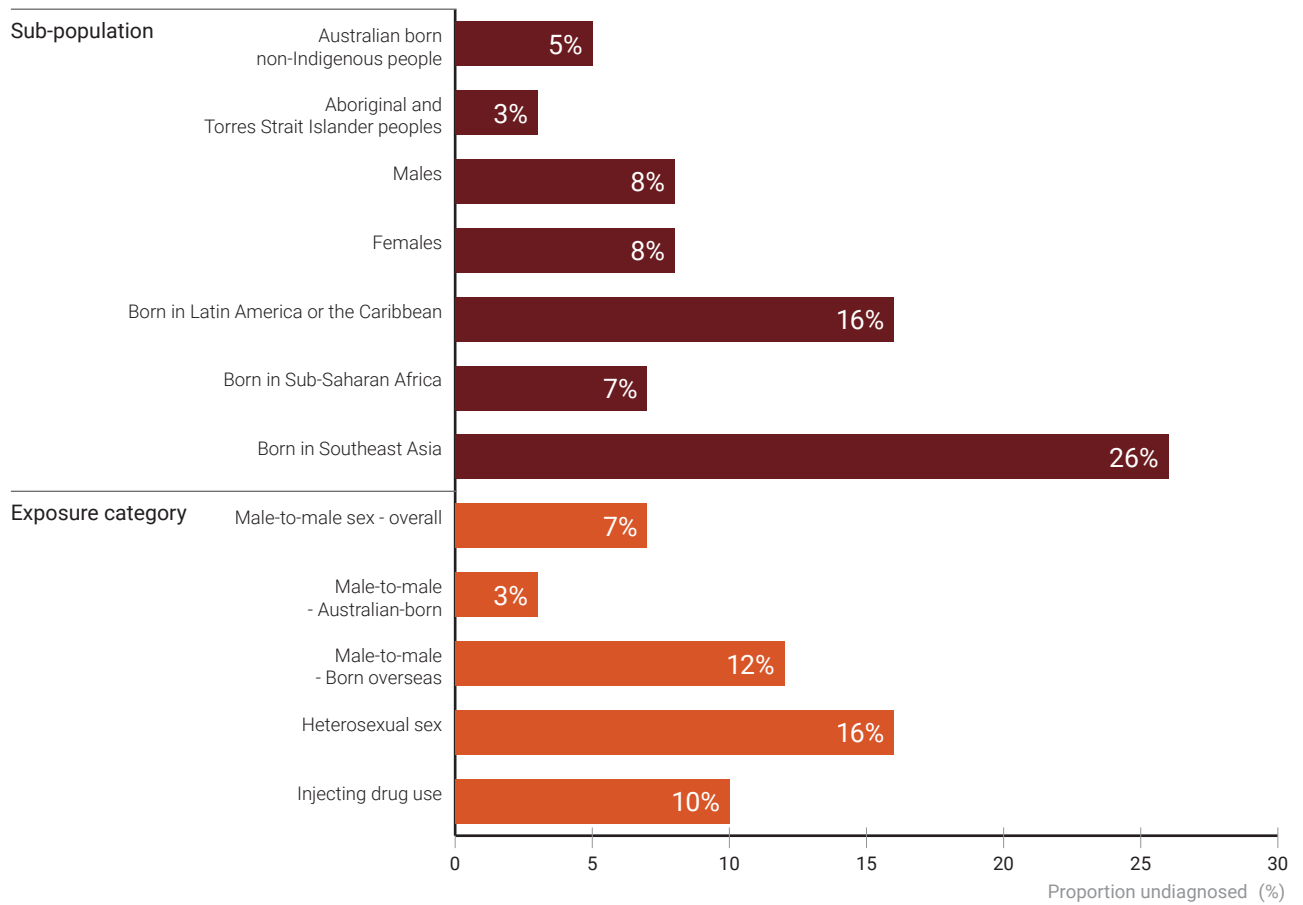
	People living with HIV (range)	Number diagnosed (range)	Number undiagnosed (range)	Proportion undiagnosed	HIV prevalence (range)	Population size ² (>15 years of age)
Demographics						
Total¹	28 870 (25 380 to 33 710)	26 850 (25 230 to 31 310)	2 020 (150 to 2 400)	7%	0.14% (0.12% to 0.16%)	21 244 283
Exposure risk category						
Men who have sex with men	21 320 (18 530 to 25 750)	19 900 (17 320 to 23 640)	1 420 (1 210 to 2 110)	7%		
Heterosexuals	7 300 (6 270 to 8 610)	6 150 (5 420 to 7 220)	1 150 (850 to 1 390)	16%		
People who inject drugs	620 (470 to 900)	560 (450 to 770)	60 (20 to 130)	10%		
Sub-population						
Men	25 410 (22 410 to 30 270)	23 280 (21 970 to 27 360)	2 130 (440 to 2 910)	8%	0.24% (0.21% to 0.29%)	10 459 254
Women	3 680 (3 260 to 4 250)	3 400 (3 260 to 3 830)	280 (0 to 420)	8%	0.03% (0.03% to 0.04%)	10 785 029
Aboriginal and Torres Strait Islander peoples	590 (520 to 650)	570 (500 to 630)	20 (20 to 20)	3%	0.10% (0.09% to 0.11%)	608 555
Australian born non-Indigenous	16 870 (14 440 to 19 400)	15 970 (13 850 to 18 220)	900 (590 to 1 180)	5%	0.13% (0.11% to 0.15%)	13 339 285
Born in Latin America or the Caribbean	930 (800 to 1 120)	780 (710 to 910)	150 (90 to 210)	16%	0.45% (0.38% to 0.54%)	208 450
Born in Sub-Saharan Africa	1 670 (1 480 to 2 120)	1 550 (1 370 to 1 880)	120 (110 to 240)	7%	0.43% (0.38% to 0.54%)	391 640
Born in Southeast Asia	3 290 (2 860 to 4 050)	2 430 (2 190 to 2 900)	860 (670 to 1 150)	26%	0.30% (0.26% to 0.37%)	1 092 360
Other country region of birth	7 130 (5 790 to 9 750)	6 280 (5 180 to 8 670)	850 (610 to 1 080)	12%	0.13% (0.10% to 0.17%)	5 603 993

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.

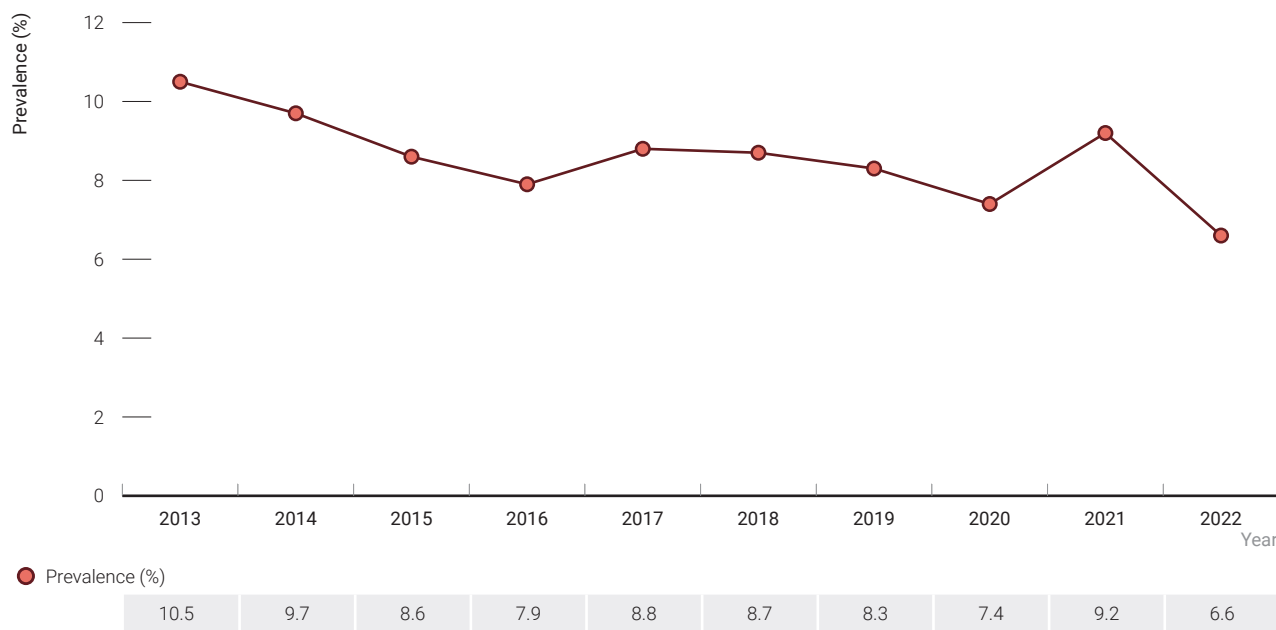
Figure 24 Estimated proportion of people living with HIV who are undiagnosed by demographic group and exposure, 2022



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

According to the Gay Community Periodic Surveys, between 2013 and 2022, the unadjusted prevalence of self-reported HIV among men in the surveys fluctuated between 6.6% (in 2022) and 10.5% (in 2013) (Figure 25). 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.

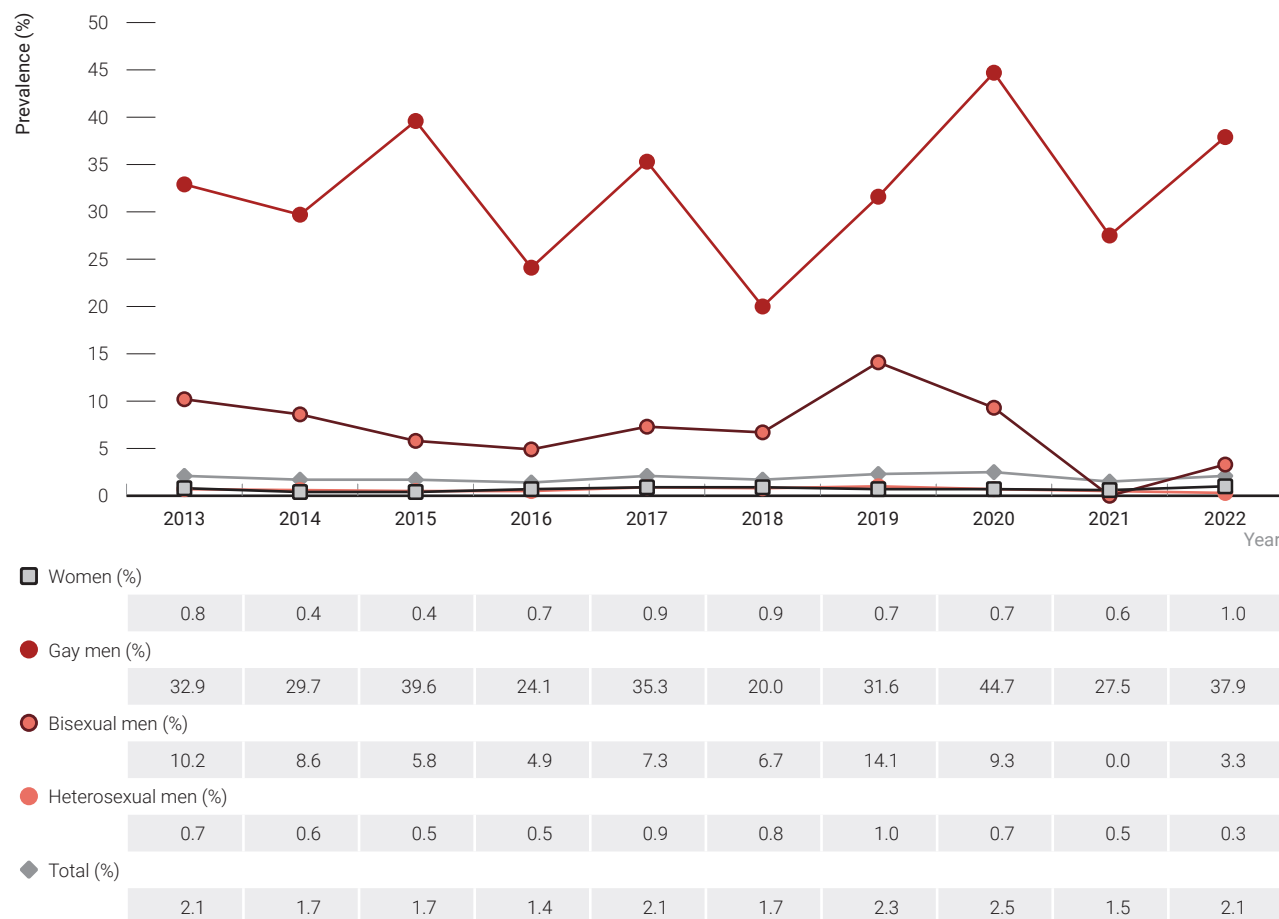
Figure 25 Self-reported HIV prevalence among men participating in the Gay Community Periodic Surveys, 2013-2022



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

HIV prevalence is low among people who inject drugs, ranging between 1.4% and 2.5% among people attending needle and syringe programs in the past 10 years and was 2.1% in 2022 (0.6% if gay and bisexual men are excluded from the sample) (Figure 26). The number of participating needle and syringe programs and the number of ANSPS respondents between 2020 and 2022 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 26 HIV prevalence among people who attend needle and syringe programs by gender and sexual identity, 2013–2022



Source: ANSPS, 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 who 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 (Figure 27, Table 7). 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 a suppressed viral load. This corresponds to 86% of all people living with HIV having a suppressed viral load.

At the end of 2022, there were an estimated 28 870 people living with HIV in Australia. Of these an estimated 93% (26 850) had been diagnosed, increasing from 90% in 2018 (24 410), meaning that Australia has yet to meet the UNAIDS 2025 target. Of those diagnosed at the end of 2022, an estimated 96% (25 960) were retained in care, unchanged from 96% (23 440) in 2018. Also, of those diagnosed 95% (25 430) were receiving antiretroviral therapy, a slight increase from 91% (22 320) in 2018 and 98% (25 030) of those on antiretroviral therapy had a suppressed viral load, a slight increase from 97% (21 720) since 2018. (Table 7, Figure 27). This corresponds to 87% of all people living with HIV (diagnosed and undiagnosed) having a suppressed viral load in 2022, meeting the 2025 UNAIDS target of 86%.

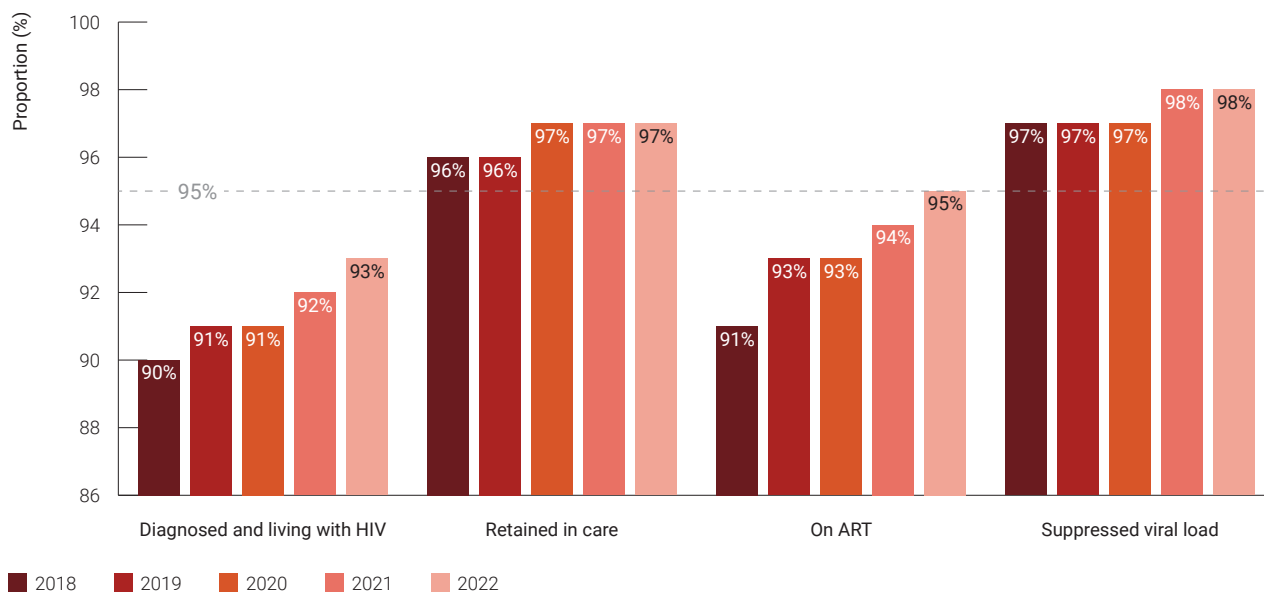
The cascade also shows the gaps at the end of 2022, with an estimated 20% (7%) of all people living with HIV not having a suppressed viral load. Of these, an estimated 49% were undiagnosed, 18% were diagnosed but not in care, 21% were in care but not on antiretroviral therapy, and 11% were on antiretroviral therapy but had not achieved viral suppression (Figure 28). 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, 2018–2022

Year	Living with HIV (range)	Living with HIV and diagnosed (range)	Retained in care (range)	Receiving antiretroviral therapy (range)	Suppressed viral load (range)
2018	27 040 (24 380 to 30 860)	24 410 (22 160 to 28 100)	23 440 (22 160 to 27 810)	22 320 (22 160 to 22 430)	21 720 (21 390 to 22 000)
2019	27 810 (24 980 to 31 880)	25 300 (23 230 to 29 210)	24 340 (23 230 to 28 910)	23 410 (23 230 to 23 550)	22 680 (22 310 to 23 010)
2020	28 450 (25 460 to 32 700)	26 000 (24 140 to 30 050)	25 150 (24 140 to 29 060)	24 280 (24 140 to 24 330)	23 440 (23 060 to 23 730)
2021	28 680 (25 470 to 33 190)	26 360 (24 450 to 30 580)	25 490 (24 450 to 29 570)	24 740 (24 450 to 24 620)	24 170 (23 670 to 24 270)
2022	28 870 (25 380 to 33 710)	26 850 (25 230 to 31 310)	25 960 (25 230 to 30 280)	25 430 (25 230 to 25 480)	25 030 (24 650 to 25 260)

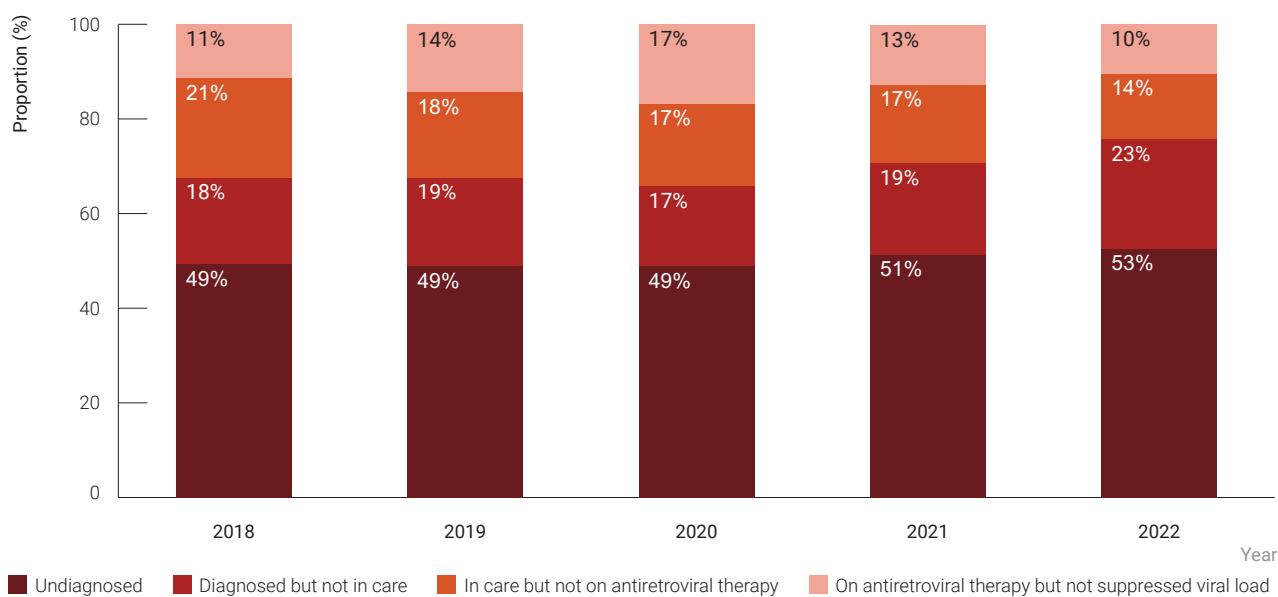
Source: See [Methodology](#) for details of mathematical modelling used to generate estimates.

Figure 27 HIV diagnosis and care cascade, 2018–2022



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

Figure 28 People living with HIV who have not achieved suppressed viral load by cascade stage, 2018–2022



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)⁽¹²⁾.

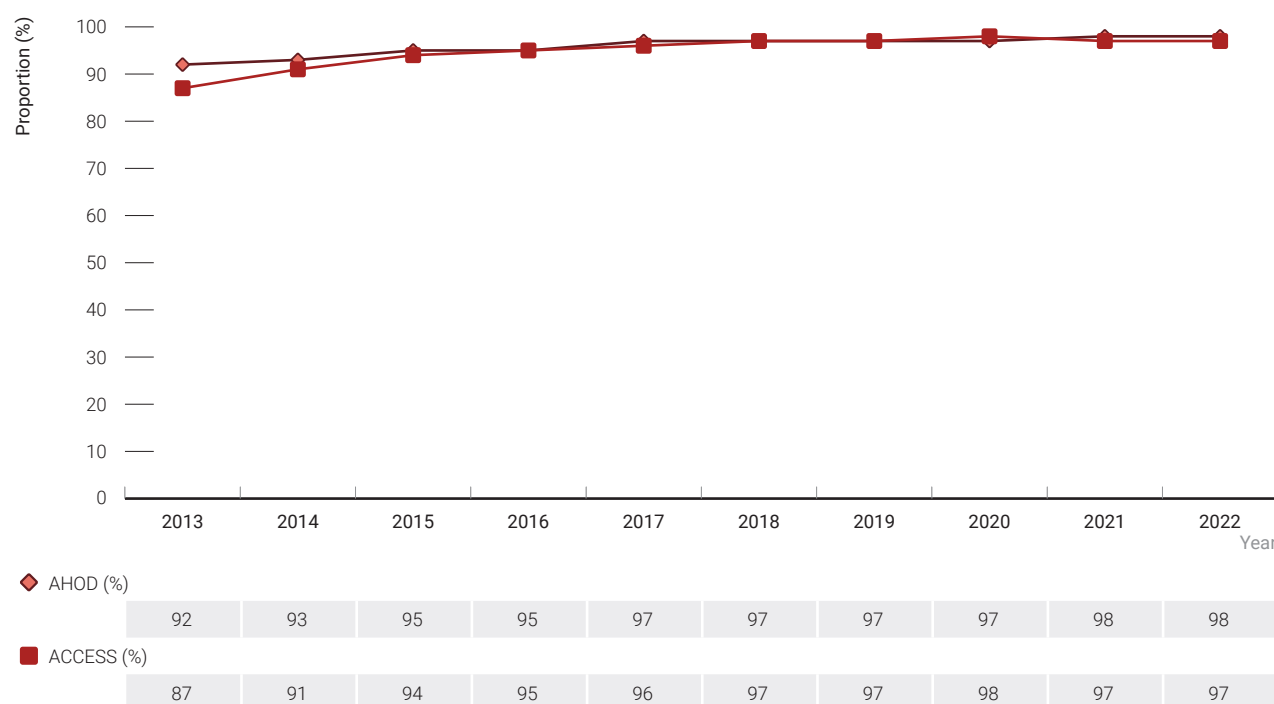
The estimated treatment coverage among people diagnosed with HIV in Australia is presented in the diagnosis and care cascades: 95% of people with diagnosed HIV were receiving antiretroviral therapy in 2022, (95% of males and 97% of females; refer to [Kirby Institute data site](#)).

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⁽⁸⁾. 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 92% in 2013 to 98% in 2022 in the Australian HIV Observational Database, and from 87% in 2013 to 97% in 2022 at sexual health clinics participating in ACCESS (Figure 29). All priority populations accessing sexual health clinics had high proportions with a suppressed viral load (>97%) in 2022; however, the number accessing care through ACCESS clinics declined in 2021, likely related to the impacts of the ongoing COVID-19 pandemic (data not shown). See [Methodology](#) for further detail.

Figure 29 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, 2013–2022

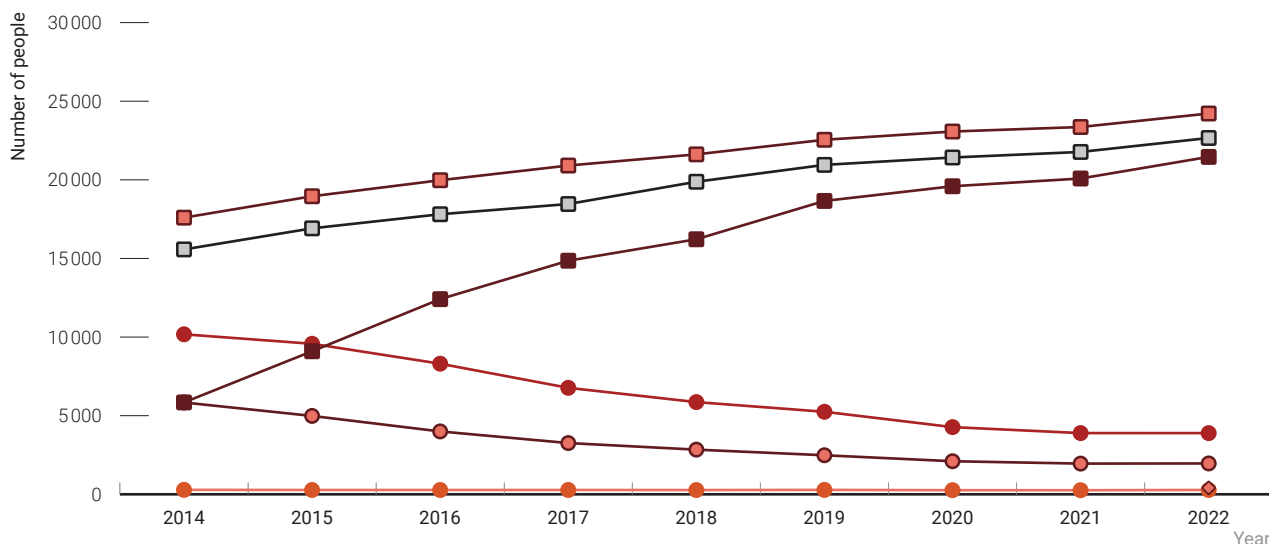


Note: Suppressed viral load equals 200 copies/mL or less.

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 2022, the number of people receiving integrase inhibitors increased almost four-fold from 5844 to 21 459. Conversely the number of people receiving non-nucleoside reverse transcriptase inhibitors decreased by nearly two-thirds from 10 175 in 2014 to 3892 in 2022. In the same period, the number of people receiving any PBS-subsidised antiretroviral therapy increased from 17 595 to 24 219 (Figure 30).

Figure 30 Number of people dispensed ART by drug class, 2014–2022



Any NRTI	15 575	16 915	17 812	18 461	19 878	20 951	21 421	21 774	22 662
Any NNRTI	10 175	9 573	8 306	6 772	5 864	5 249	4 273	3 893	3 892
Any Protease Inhibitor	5 838	4 985	3 999	3 259	2 841	2 483	2 103	1 952	1 963
Any Integrase Inhibitor	5 844	9 098	12 413	14 856	16 221	18 658	19 592	20 085	21 459
Any other ART (enfuvirtide or maraviroc)	283	274	274	275	270	280	261	259	276
Any long acting injectable ART									408
Any ART	17 595	18 956	19 975	20 910	21 620	22 548	23 073	23 360	24 219

Note: Excludes temporary residents who are ineligible for Medicare; due to PrEP dispensed as part of PrEP implementation programs, the NRTI dispensing numbers for the years 2014 to 2016 may be slightly over, or underestimated.

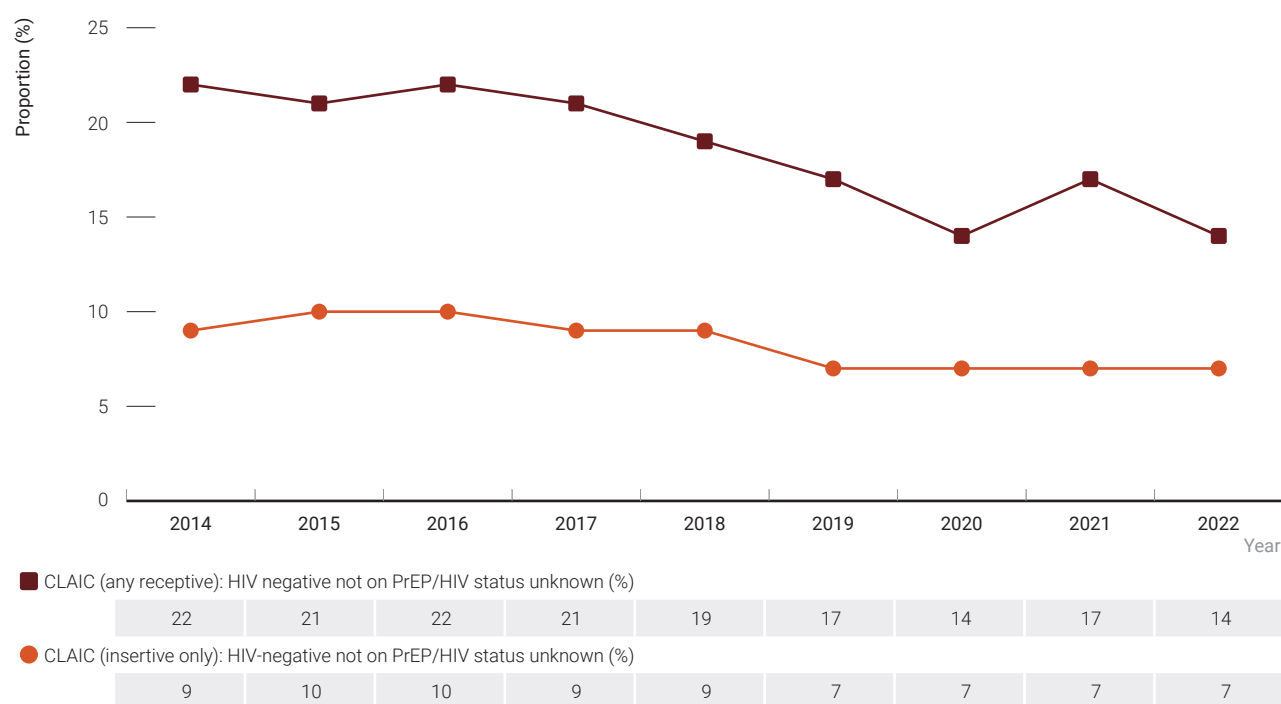
Source: Pharmaceutical Benefits Scheme.

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^(13–15); 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 (79%) of HIV-negative/unknown-HIV-status gay and bisexual men who had casual partners were regularly using strategies in 2022 to protect themselves against acquiring HIV, including avoiding anal sex, using condoms, or biomedical prevention. Inversely, 21% 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 these prevention strategies with casual partners of unknown HIV or PrEP status, down from 31% in 2014 (Figure 31).

Figure 31 HIV risk behaviour in men with casual partners, 2014–2022



Note: CLAIC = condomless anal intercourse.

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

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^(13–15). 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 19% in 2022 (See [Hepatitis C chapter](#), page 28).

Blood screening

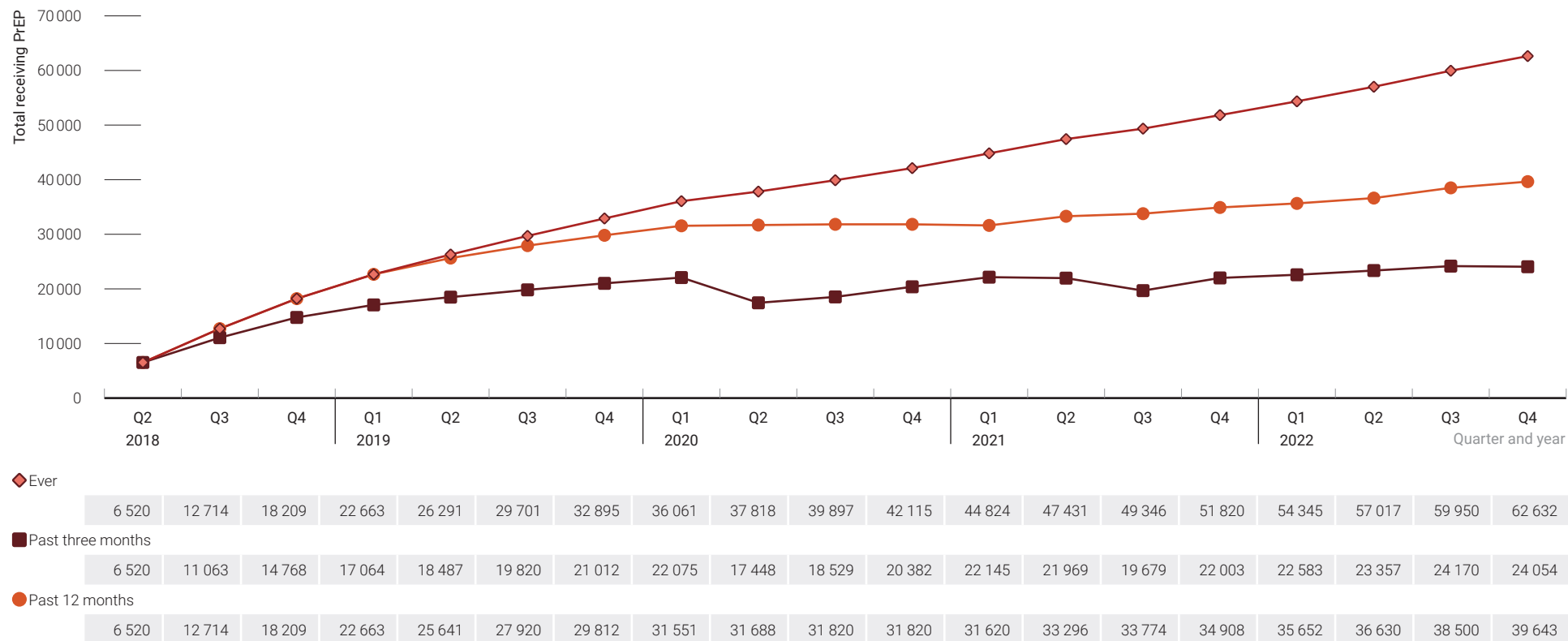
Since 1985, all blood donors have been screened for HIV to prevent onward transmission to recipients of blood products. There has been no known case of HIV acquisition through blood transfusion in Australia since the late 1990s. For further information, see [Transfusion-transmissible infections in Australia: 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 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 2022, 62 632 people have taken PrEP. In the same period, the number of people who had taken PrEP in the previous three months has increased from 6520 to 24 054. Also, the number of people who have taken PrEP in the previous 12 months increased from 6520 to 39 643 (Figure 32). Declines in PrEP use were reported in 2020 and 2021 coinciding with COVID-19 related restrictions across Australia.

Figure 32 Number of people taking PrEP by recency and quarter, 2018–2022



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

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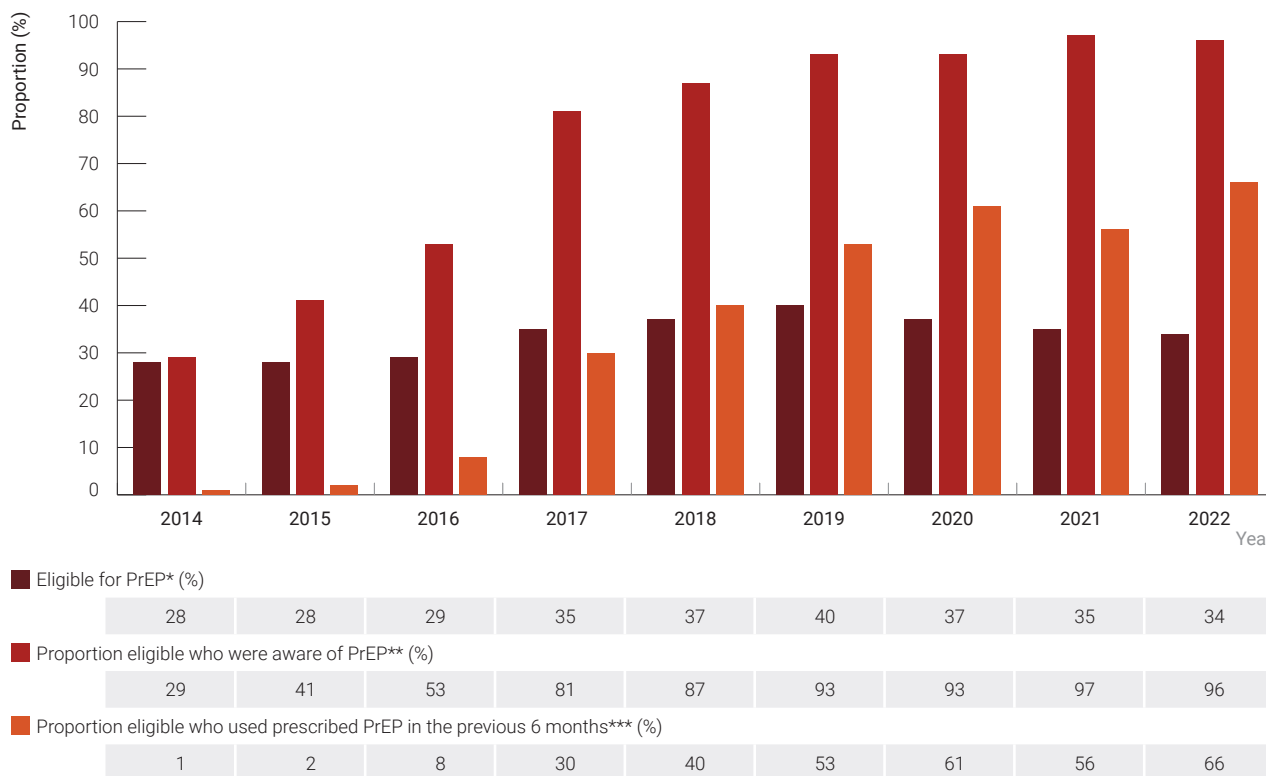
What does this mean?

Despite a decline over the peak of the COVID-19 pandemic, increasing numbers of people are recorded as taking PrEP recently (within the last three months).



Among participants of the Gay Community Periodic Surveys, over a third (34%) were eligible for PrEP in 2022, down from 37% in 2018 when subsidised PrEP became available through the PBS. Of those eligible for PrEP, 96% were aware of PrEP, up from 87% in 2018, and 66% reported using prescribed PrEP in the previous six months, up from 40% in 2018. (Figure 33).

Figure 33 PrEP cascade for non-HIV-positive men, 2014–2022



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: Annual Report on Trends in Behaviour, Centre for Social Research in Health, UNSW Sydney.

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