

# HIV in Queensland

2020



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# Introduction

Infection with the human immunodeficiency virus (HIV) has been notifiable in Queensland, and Australia, since 1984. It is estimated that there were approximately 5,800 (within a range of 5,000 and 6,700) people living with HIV in Queensland in 2020, based on a national HIV prevalence rate of 0.14 per cent (range 0.12% to 0.16%) among people aged 15 years or over.<sup>1</sup> Notification data were extracted from the Notifiable Conditions System (NoCS) of the Communicable Diseases Branch, Department of Health on 22 November 2021.

Data for 2020 should be interpreted with caution due to the impact that the COVID-19 pandemic has had on disease transmission and testing. The effects of the pandemic and its control measures are not covered as they are beyond the scope of this report.

## HIV notifications in Queensland

Table 1. Number and rate (per 100,000 population per year) of HIV notifications in Queensland, by place of first diagnosis, 1 January 2015 to 31 December 2020

Place of first diagnosis		2015	2016	2017	2018	2019	2015-2019 average	2020
First diagnosed in Queensland (new diagnoses)		201	195	185	180	158	183.8	107
	Rate	4.2	4.0	3.8	3.6	3.1	3.7	2.1
First diagnosed in other Australian states/territories		79	71	85	69	94	79.6	91
	Rate	1.7	1.5	1.7	1.4	1.8	1.6	1.8
First diagnosed overseas		57	89	72	76	107	80.2	105
	Rate	1.2	1.8	1.5	1.5	2.1	1.6	2.0

- There were 107 new diagnoses of HIV notified in Queensland in 2020, a 42% decrease compared with the previous five-year average (183.8 cases). The notification rate of new diagnoses of HIV in 2020 (2.1/100,000/year) was lower than the previous five-year average (3.7/100,000/year).
- The number of notifications of HIV in Queensland initially diagnosed in other Australian states/territories was higher in 2020 (91 cases) than the previous five-year average (79.6 cases).
- The number of notifications of HIV in Queensland initially diagnosed overseas was higher in 2020 (105 cases) than the previous five-year average (80.2 cases).

<sup>1</sup> Kirby Institute. <https://data.kirby.unsw.edu.au/hiv>

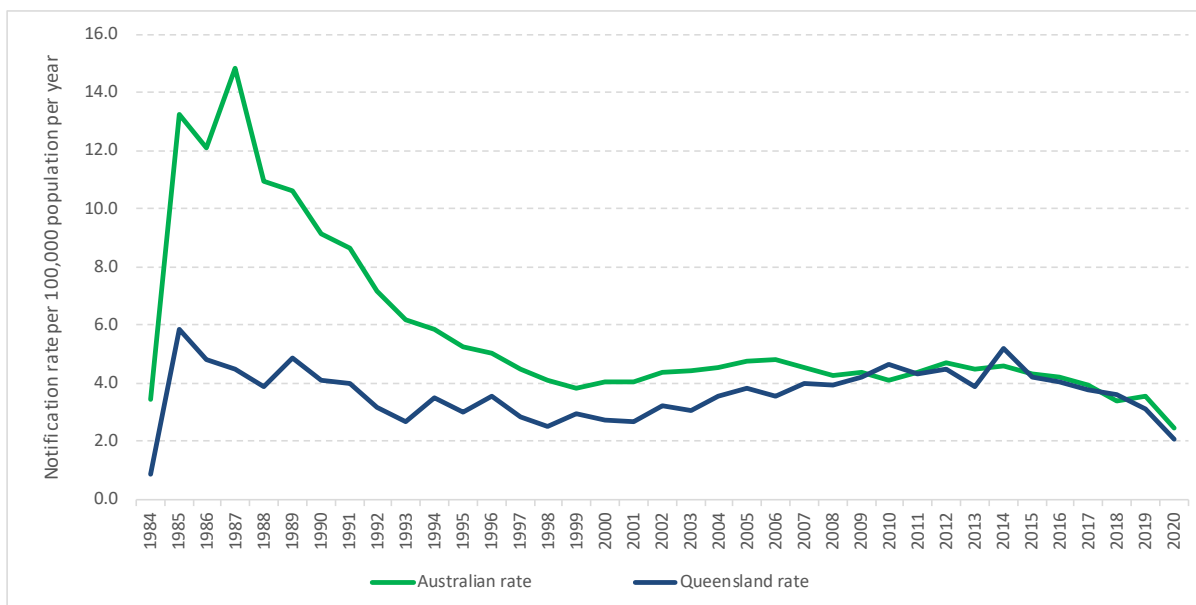


Figure 1. Annual notification rates (per 100,000 population per year) for new diagnoses of HIV in Queensland and Australia<sup>2</sup>, 1 January 1984 to 31 December 2020

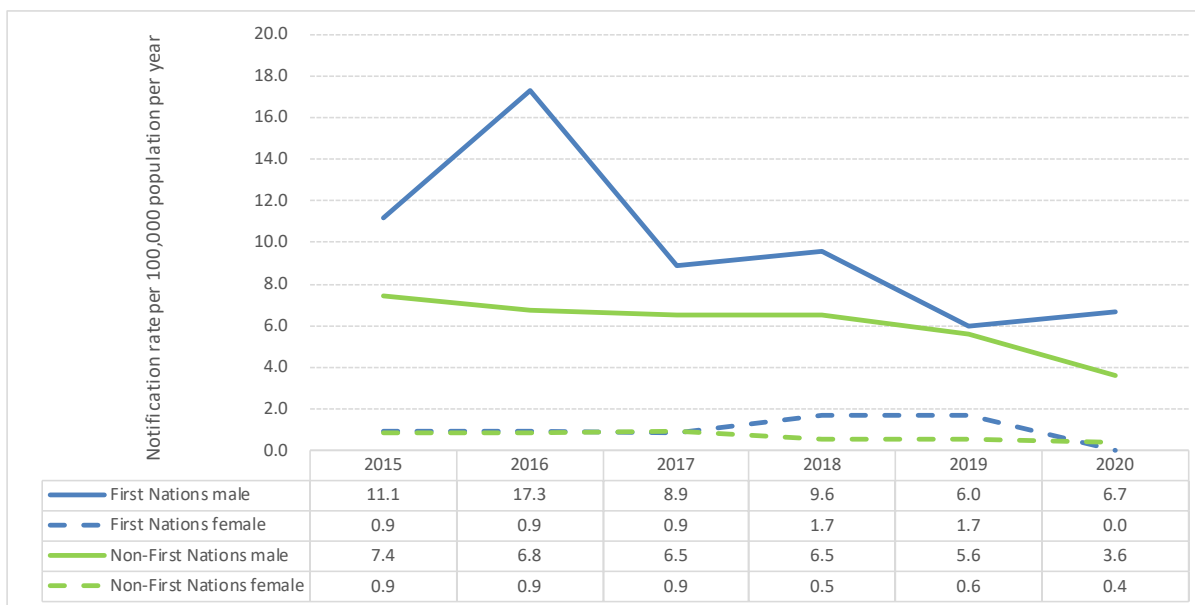
<sup>2</sup> Kirby Institute. National HIV Quarterly Report. <https://kirby.unsw.edu.au/report/national-hiv-quarterly-report>

# New diagnoses of HIV in Queensland by sex, age group and First Nations status

Table 2. Number and percentage of new HIV diagnoses in Queensland by sex, age group and First Nations status, 1 January 2015 to 31 December 2020

Characteristic		2015	2016	2017	2018	2019	2015–2019 average	2020
<b>Sex</b>								
Male		180	174	162	165	141	164.4	96
	%	89.6	89.2	87.6	91.7	89.2	89.4	89.7
Female		21	21	23	15	16	19.2	10
	%	10.4	10.8	12.4	8.3	10.1	10.4	9.3
Other		0	0	0	0	1	0.2	1
	%	0	0	0	0	0.6	0.1	0.9
<b>Age group (years)</b>								
0–9		1	3	0	1	0	1.0	1
	%	0.5	1.5	0	0.6	0	0.5	0.9
10–19		4	0	3	3	2	2.4	1
	%	2.0	0	1.6	1.7	1.3	1.3	0.9
20–29		55	57	57	64	51	56.8	34
	%	27.4	29.2	30.8	35.6	32.3	30.9	31.8
30–39		49	48	47	45	47	47.2	33
	%	24.4	24.6	25.4	25.0	29.7	25.7	30.8
40–49		46	36	35	31	31	35.8	19
	%	22.9	18.5	18.9	17.2	19.6	19.5	17.8
50–59		30	34	33	23	15	27.0	11
	%	14.9	17.4	17.8	12.8	9.5	14.7	10.3
60+		16	17	10	13	12	13.6	8
	%	8.0	8.7	5.4	7.2	7.6	7.4	7.5
<b>First Nations status</b>								
First Nations		13	20	11	13	9	13.2	8
	%	6.5	10.3	5.9	7.2	5.7	7.2	7.5
Non-First Nations		188	175	174	167	149	170.6	99
	%	93.5	89.7	94.1	92.8	94.3	92.8	92.5
<b>Total</b>		<b>201</b>	<b>195</b>	<b>185</b>	<b>180</b>	<b>158</b>	<b>183.8</b>	<b>107</b>
	%	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

- Of the 107 new HIV diagnoses in 2020, 90% (96) were men, and 80% were aged 20 to 49 years.
- In 2020 there were 8 new HIV cases in First Nations people (all in males), lower than the previous five-year average (13.2 cases).



*Figure 2. Annual notification rates (per 100,000 population per year) for new diagnoses of HIV in Queensland, by First Nations status and sex, 1 January 2015 to 31 December 2020*

- In 2020, First Nations males had the highest notification rate of new HIV diagnoses (6.7/100,000/year), followed by non-First Nations males (3.6/100,000/year), and non-First Nations females (0.4/100,000/year). There were no new HIV cases notified in First Nations females in 2020.
- There was an increase in notification rates of new HIV diagnoses among First Nations males from 2015 to 2016, followed by a downward trend into 2020.
- An ongoing decrease in new HIV notification rates was observed in non-First Nations males during the reporting period.
- New HIV notification rates remained relatively stable and low in both First Nations and non-First Nations females during the period 2015–2020.

# CD4+ cell count at diagnosis

Late HIV diagnosis is defined as newly diagnosed HIV with a CD4+ cell count less than 350 cells/ $\mu$ L, and advanced HIV is defined as newly diagnosed HIV with a CD4+ cell count less than 200 cells/ $\mu$ L.

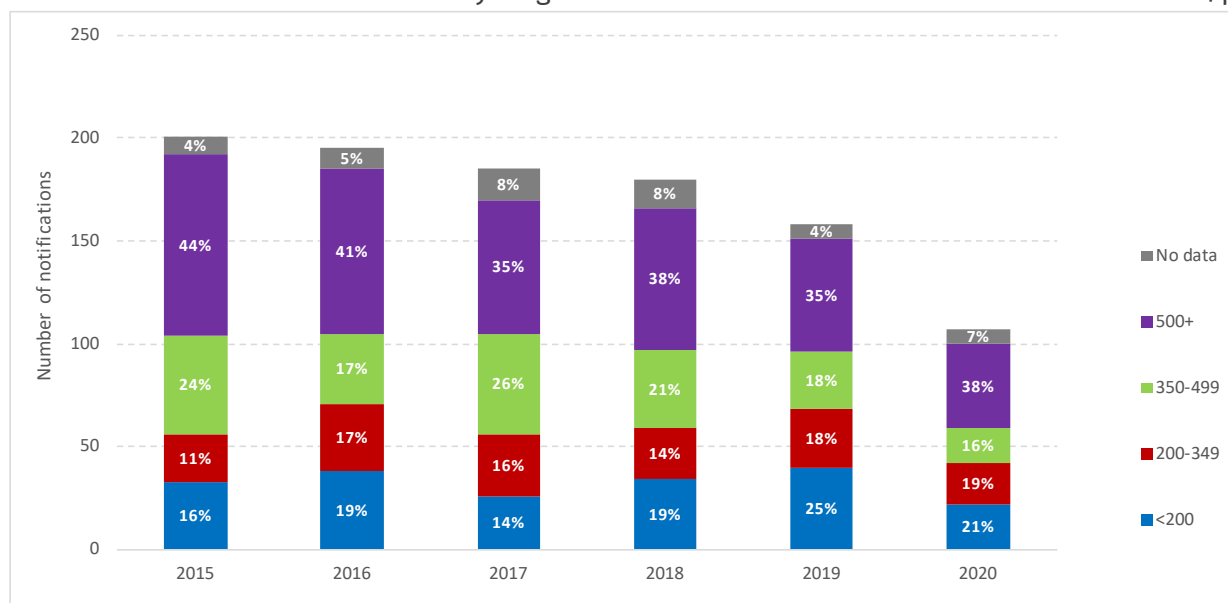


Figure 3. Number and percentage of new HIV notifications in Queensland by CD4+ cell count category at diagnosis, 1 January 2015 to 31 December 2020

- In 2020 late/advanced HIV diagnoses accounted for 40% of new diagnoses, higher than the previous five-year average (34%).



Figure 4. Median CD4+ cell count at diagnosis for new HIV diagnoses in Queensland by sex, 1 January 2015 to 31 December 2020

- The median CD4+ cell counts in males decreased over time, from 460 cells/ $\mu$ L in 2015 to 400 cells/ $\mu$ L in 2020.
- The median CD4+ cell counts in females fluctuated in the reporting period, ranging from 285 to 610 cells/ $\mu$ L.



# New diagnoses of HIV by sex and risk exposure

Table 3. Number and percentage of new HIV diagnoses in Queensland by sex and risk exposure, 1 January 2015 to 31 December 2020

Risk exposure		2015	2016	2017	2018	2019	2015–2019 average	2020
<b>Males</b>		180	174	162	165	141	164.4	96
	%	89.6	89.2	87.6	91.7	89.8	89.5	90.6
Male-to-male sex		136	129	122	109	103	119.8	61
	%	67.7	66.2	65.9	60.6	65.6	65.3	57.5
Male-to-male sex and injecting drug use		11	8	11	19	12	12.2	12
	%	5.5	4.1	5.9	10.6	7.6	6.6	11.3
Heterosexual (subtotal)		20	23	18	21	16	19.6	12
	%	10	11.8	9.8	11.7	10.2	10.7	11.2
<i>Partner who is an injecting drug user</i>		3	0	0	1	0	0.8	1
	%	1.5	0	0	0.6	0	0.4	0.9
<i>Partner from a high prevalence country<sup>#</sup></i>		12	17	14	11	7	12.2	3
	%	6.0	8.7	7.6	6.1	4.5	6.6	2.8
<i>Partner's risk not further specified</i>		5	6	4	9	9	6.6	8
	%	2.5	3.1	2.2	5.0	5.7	3.6	7.5
Injecting drug use <sup>‡</sup>		2	2	1	2	5	2.4	2
	%	1.0	1.0	0.5	1.1	3.2	1.3	1.9
Maternal transmission		0	2	0	0	0	0.4	0
	%	0	1.0	0	0	0	0.2	0
Other/undetermined exposure		11	10	10	14	5	10.0	9
	%	5.5	5.1	5.4	7.8	3.2	5.4	8.5
<b>Females</b>		21	21	23	15	16	19.2	10
	%	10.4	10.8	12.4	8.3	10.2	10.5	9.4
Heterosexual (subtotal)		14	16	15	13	8	13.2	7
	%	7	8.2	8.1	7.3	5.1	7.2	6.5
<i>Partner who is bisexual</i>		2	2	2	1	0	1.4	0
	%	1.0	1.0	1.1	0.6	0	0.8	0
<i>Partner who is an injecting drug user</i>		1	0	2	1	0	0.8	1
	%	0.5	0	1.1	0.6	0	0.4	0.9
<i>Partner from a high prevalence country<sup>#</sup></i>		5	2	0	2	1	2.0	1
	%	2.5	1.0	0	1.1	0.6	1.1	0.9
<i>Partner's risk not further specified</i>		6	12	11	9	7	9.0	5
	%	3.0	6.2	5.9	5.0	4.5	4.9	4.7

Risk exposure		2015	2016	2017	2018	2019	2015–2019 average	2020
Injecting drug use		1	0	0	0	1	0.4	0
	%	0.5	0	0	0	0.6	0.2	0
Maternal transmission		1	1	0	1	0	0.6	0
	%	0.5	0.5	0	0.6	0	0.3	0
Other/undetermined exposure		5	4	8	1	7	5.0	3
	%	2.5	2.1	4.3	0.6	4.5	2.7	2.8
Total*		201	195	185	180	157	183.6	106
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0

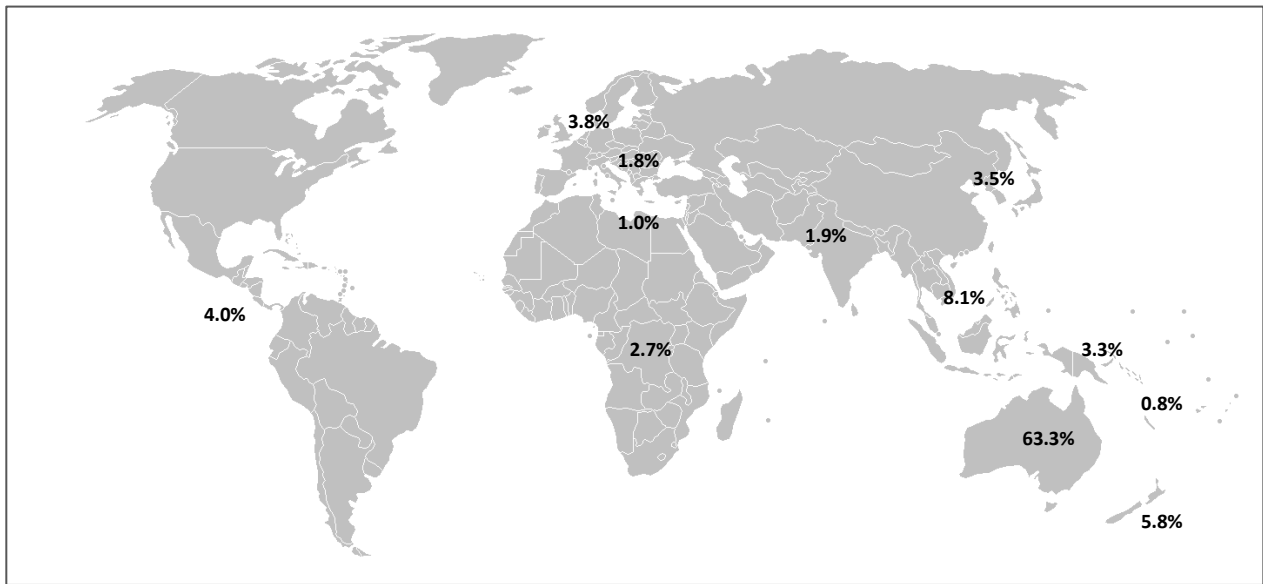
# High prevalence countries defined as those with an estimated HIV prevalence of more than 1% of the population. UNAIDS website: <https://aidsinfo.unaids.org/>

‡ Excludes male-to-male sex

\* Excludes the count of people with sex reported as other

- The profile of risk exposure among newly diagnosed HIV cases was similar during the period 2015–2020, with transmission primarily occurring through male-to-male sex.
- In 2020, 58% of new HIV diagnoses were reported among people who had male-to-male sex, 11% were attributed to male-to-male sex and injecting drug use, 18% to heterosexual sex, and 2% to injecting drug use alone.
- Of 74 new HIV cases notified in First Nations people during the period 2015–2020, 49 (66%) were among people who had male-to-male sex, 10 (14%) attributed to male-to-male sex and injecting drug use, 9 (12%) to heterosexual sex, and 3 (4%) to injecting drug use alone.

## Region of Birth



(Map template from [https://commons.wikimedia.org/wiki/Maps\\_of\\_the\\_world#/media/File:BlankMap-World-v2.png](https://commons.wikimedia.org/wiki/Maps_of_the_world#/media/File:BlankMap-World-v2.png))

Figure 5. Percentage of new Queensland HIV diagnoses by region of birth, 1 January 2015 to 31 December 2020

- The majority of people newly diagnosed with HIV in Queensland during the period 2015–2020 were born in Australia (63.3%), with 8.1% born in South-East Asia (e.g., Philippines, Thailand), 5.8% born in New Zealand, 4.0% born in the Americas, 3.8% born in North-West Europe (e.g. United Kingdom), and 2.7% born in Sub-Saharan Africa (e.g., South Africa, Zimbabwe).

# Recently acquired infection

A recently acquired HIV infection is a new notification defined as having either a negative or indeterminate HIV antibody test in the previous 12 months or a clinically diagnosed primary HIV infection (seroconversion illness).

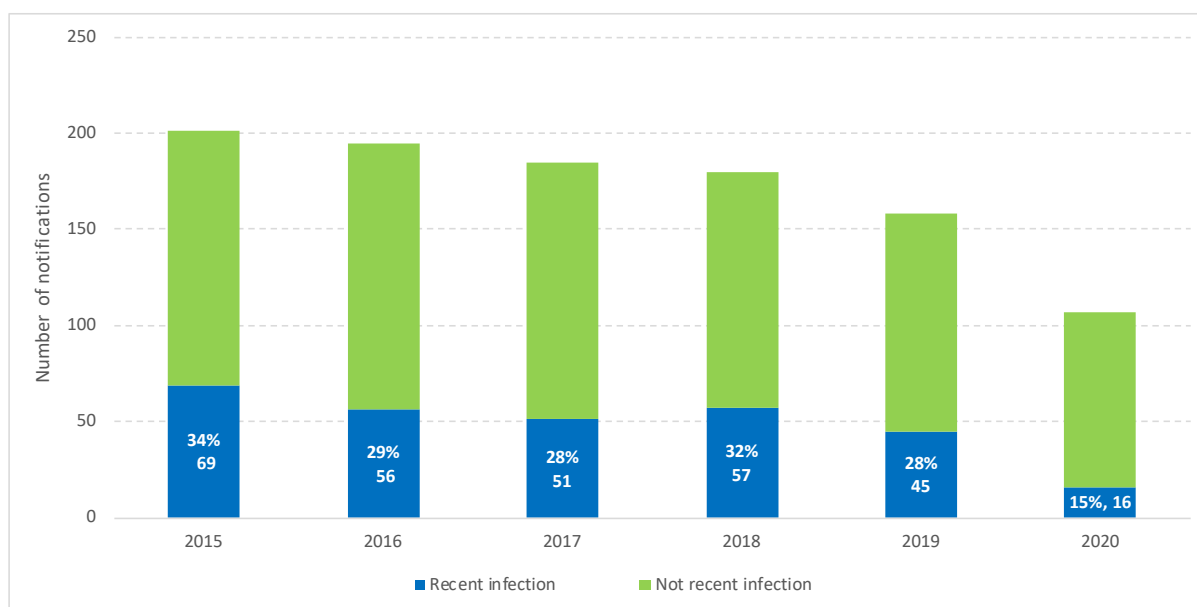


Figure 6. Number and percentage of new HIV notifications in Queensland by recently acquired infection status, 1 January 2015 to 31 December 2020

- In 2020, 16 (15%) of all new HIV diagnoses were recently acquired infections, lower than the five-year average (30%).
- Of these 16 recently acquired HIV cases, 4 (25%) were in First Nations people, and 15 (94%) were aged 20 to 49 years.

Table 4. Number and percentage of recently acquired HIV infections in Queensland, by sex and risk exposure, 1 January 2015 to 31 December 2020

Risk exposure		2015	2016	2017	2018	2019	2015–2019 average	2020
<b>Males</b>		63	50	48	51	42	50.8	14
	%	91.3	89.3	94.1	89.5	95.5	91.7	87.5
Male-to-male sex		54	41	42	39	28	40.8	8
	%	78.3	73.2	82.4	68.4	63.6	73.6	50.0
Male-to-male sex and injecting drug use		3	1	3	4	6	3.4	5
	%	4.3	1.8	5.9	7.0	13.6	6.1	31.3
Heterosexual (subtotal)		3	7	3	6	6	5.0	0
	%	4.3	12.5	5.9	10.5	13.6	9.0	0
<i>Partner who is an injecting drug user</i>		1	0	0	0	0	0.2	0
	%	1.4	0	0	0	0	0.4	0
<i>Partner from a high prevalence country<sup>#</sup></i>		2	6	3	4	4	3.8	0
	%	2.9	10.7	5.9	7.0	9.1	6.9	0
<i>Partner's risk not further specified</i>		0	1	0	2	2	1.0	0
	%	0	1.8	0	3.5	4.5	1.8	0
Injecting drug use <sup>‡</sup>		1	0	0	0	2	0.6	0
	%	1.4	0	0	0	4.5	1.1	0
Other/indetermined exposure		2	1	0	2	0	1.0	1
	%	2.9	1.8	0	3.5	0	1.8	6.3
<b>Females</b>		6	6	3	6	2	4.6	2
	%	8.7	10.7	5.9	10.5	4.5	8.3	12.5
Heterosexual (subtotal)		6	6	3	5	1	4.2	2
	%	8.6	10.7	5.9	8.9	2.3	7.6	12.5
<i>Partner who is bisexual</i>		1	1	0	1	0	0.6	0
	%	1.4	1.8	0	1.8	0	1.1	0
<i>Partner from a high prevalence country<sup>#</sup></i>		2	1	0	1	1	1.0	0
	%	2.9	1.8	0	1.8	2.3	1.8	0
<i>Partner's risk not further specified</i>		3	4	3	3	0	2.6	2
	%	4.3	7.1	5.9	5.3	0	4.7	12.5
Injecting drug use		0	0	0	0	1	0.2	0
	%	0	0	0	0	2.3	0.4	0
Maternal transmission		0	0	0	1	0	0.2	0
	%	0	0	0	1.8	0	0.4	0
<b>Total</b>		<b>69</b>	<b>56</b>	<b>51</b>	<b>57</b>	<b>44</b>	<b>55.4</b>	<b>16</b>
	%	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

<sup>#</sup> High prevalence countries defined as those with an estimated HIV prevalence of more than 1 per cent. UNAIDS website: <https://aidsinfo.unaids.org/>

<sup>‡</sup> Excludes male-to-male sex

- For recently acquired cases in 2020, 50% reported transmission route as male-to-male sex, 31% as male-to-male sex and injecting drug use, and 13% as heterosexual sex.

# Hospital and Health Service at time of diagnosis

Table 5. Number and rate (per 100,000 population per year) of new HIV diagnoses in Queensland by Hospital and Health Service (HHS) at diagnosis, 1 January 2015 to 31 December 2020

HHS		2015	2016	2017	2018	2019	2015–2019 average	2020
Torres and Cape		0	0	4	4	1	1.8	1
	Rate	0	0	14.9	14.6	3.6	6.7	3.5
North West		4	0	0	4	0	1.6	0
	Rate	13.4	0	0	14.4	0	5.6	0
Cairns and Hinterland		18	27	14	16	19	18.8	3
	Rate	7.2	10.7	5.5	6.2	7.3	7.4	1.1
Townsville		8	4	3	6	8	5.8	3
	Rate	3.4	1.7	1.2	2.5	3.3	2.4	1.2
Mackay		3	6	2	2	2	3.0	1
	Rate	1.7	3.5	1.2	1.2	1.2	1.7	0.6
Central West		0	1	0	1	0	0.4	0
	Rate	0	9.3	0	9.6	0	3.8	0
Central Queensland		4	5	2	3	5	3.8	4
	Rate	1.8	2.3	0.9	1.4	2.3	1.7	1.8
Wide Bay		4	6	2	4	3	3.8	0
	Rate	1.9	2.8	0.9	1.8	1.4	1.8	0*
South West		0	0	1	0	0	0.2	0
	Rate	0	0	4.1	0	0	0.8	0
Darling Downs		11	6	5	7	3	6.4	1
	Rate	4.0	2.1	1.8	2.5	1.1	2.3	0.3
Sunshine Coast		7	7	7	6	3	6.0	10
	Rate	1.8	1.7	1.7	1.4	0.7	1.4	2.2
Metro North		60	57	54	41	36	49.6	31
	Rate	6.2	5.8	5.4	4.0	3.4	4.9	2.9
Metro South		43	37	48	50	39	43.4	30
	Rate	3.9	3.3	4.2	4.3	3.3	3.8	2.5
West Moreton		8	8	10	12	15	10.6	5
	Rate	2.9	2.9	3.5	4.1	4.9	3.7	1.6
Gold Coast		31	31	33	24	24	28.6	18
	Rate	5.4	5.3	5.4	3.9	3.8	4.7	2.8
Queensland		201	195	185	180	158	183.8	107
	Rate	4.2	4.0	3.8	3.6	3.1	3.7	2.1

\* Indicating that the HHS specific notification rate in 2020 is statistically significantly lower than the overall Queensland rate in 2020.

- In 2020, the largest number of new diagnoses of HIV were from Metro North HHS (31 cases, 29% of the Queensland total), followed by Metro South HHS (30 cases, 28%), Gold Coast HHS (18 cases, 17%), and Sunshine Coast HHS (10 cases, 9%).
- The number of new diagnoses of HIV continued to decrease in Metro North HHS, from 60 cases in 2015 to 31 cases in 2020.
- The number of new diagnoses of HIV fluctuated in Metro South HHS, ranging from 30 to 50 cases in the reporting period.
- New diagnoses of HIV were sporadic in Central West HHS (2 cases in the six-year period) and South West HHS (1 case in the six-year period).
- In 2020, HHS specific notification rates of new HIV diagnoses had no statistically significant difference from the overall Queensland rate (2.1/100,000/year), except for Wide Bay HHS where a lower notification rate was reported.