

# HIV in Queensland

2016

## **HIV in Queensland 2016**

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An electronic version of this document is available at <http://www.health.qld.gov.au/clinical-practice/guidelines-procedures/sex-health/resources/default.asp>

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# Notification data

Infection with the human immunodeficiency virus (HIV) has been notifiable in Queensland, and Australia, since 1984. The notification data were extracted from the Notifiable Conditions System (NoCS) of the Communicable Disease Branch, Department of Health on 11 October 2017.

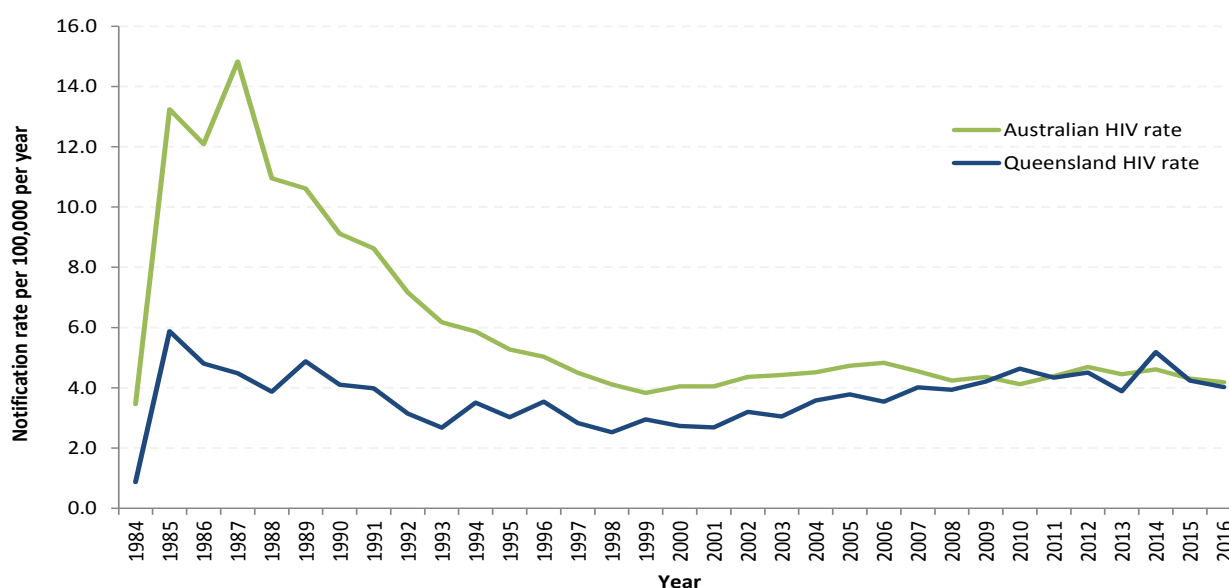
## HIV notifications in Queensland

**Table 1: Number and rate (per 100,000 population per year) of HIV notifications in Queensland, by place of first diagnosis, 1 January 2012 to 31 December 2016**

Place of first diagnosis		2012	2013	2014	2015	2012-2015 average	2016
New diagnoses in Queensland		206	181	245	203	208.8	195
	Rate	4.5	3.9	5.2	4.2	4.5	4.0
First diagnosed in other Australian states/territories		81	59	53	78	67.8	71
	Rate	1.8	1.3	1.1	1.6	1.4	1.5
First diagnosed overseas		63	69	68	59	64.8	91
	Rate	1.4	1.5	1.4	1.2	1.4	1.9

- There were 195 new diagnoses of HIV notified in Queensland in 2016, 6% decrease compared with the previous four-year average (208 cases). The notification rate of new diagnoses of HIV in 2016 (4.0/100,000/year) was lower than the previous four-year average (4.5/100,000/ year).
- The numbers of notifications of HIV in Queensland initially diagnosed in other Australian states/territories were comparable between 2016 (71 cases) and the previous four-year average (68 cases), as were the corresponding notification rates.
- In 2016, there was a marked increase in the number of notifications of HIV in Queensland initially diagnosed overseas (91 cases), when compared with the previous four-year average (65 cases). The corresponding notification rate in 2016 (1.9/100,000/year) was higher when compared with the previous four-year average (1.4/100,000/year).

**Figure 1: Annual notification rates (per 100,000 population per year) for new diagnoses of HIV in Queensland and Australia\*, 1 January 1984 to 31 December 2016**



\* Source: HIV, Viral Hepatitis and Sexually Transmissible Infections in Australia: Annual Surveillance Report 2017. Kirby Institute, University of NSW. 2017

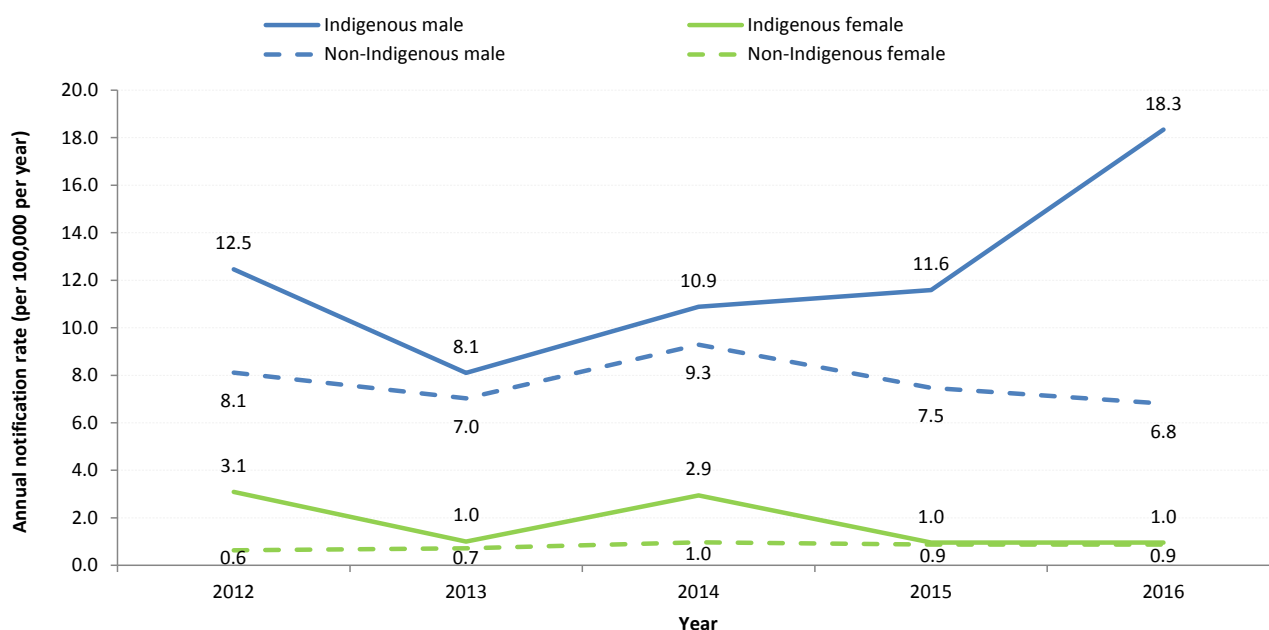
# New diagnoses of HIV by sex, age-group and Indigenous status

**Table 2: Number and percentage of new HIV diagnoses in Queensland by sex, age-group and Indigenous status, 1 January 2012 to 31 December 2016**

		2012	2013	2014	2015	2012-2015 average	2016
<b>Sex</b>							
Male		189	164	220	182	188.8	174
	%	91.7	90.6	89.8	89.7	90.4	89.2
Female		17	17	25	21	20.0	21
	%	8.3	9.4	10.2	10.3	9.6	10.8
<b>Age group (years)</b>							
00-09		0	2	1	1	1.0	4
	%	0.0	1.1	0.4	0.5	0.5	2.1
10-19		1	5	5	6	4.3	0
	%	0.5	2.8	2.0	3.0	2.0	0.0
20-29		66	43	65	55	57.3	58
	%	32.0	23.8	26.5	27.1	27.4	29.7
30-39		55	45	72	49	55.3	46
	%	26.7	24.9	29.4	24.1	26.5	23.6
40-49		37	44	51	47	44.8	36
	%	18.0	24.3	20.8	23.2	21.4	18.5
50-59		28	23	29	29	27.3	34
	%	13.6	12.7	11.8	14.3	13.1	17.4
60+		19	19	22	16	19.0	17
	%	9.2	10.5	9.0	7.9	9.1	8.7
<b>Indigenous Status</b>							
Indigenous		15	9	14	13	12.8	20
	%	7.3	5.0	5.7	6.4	6.1	10.3
Non-Indigenous		191	172	231	190	196.0	175
	%	92.7	95.0	94.3	93.6	93.9	89.7
<b>Total</b>		<b>206</b>	<b>181</b>	<b>245</b>	<b>203</b>	<b>208.8</b>	<b>195</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 195 new HIV diagnoses in 2016, 89 per cent (172) were men, and 72% were aged 20 to 49 years.
- In 2016 there was an increase in the number of Aboriginal and Torres Strait Islander new diagnoses (20) compared with the previous year (13) and the four-year average (12.8).

**Figure 2: Annual notification rates (per 100,000 population per year) for new diagnoses of HIV in Queensland, by Indigenous status and sex, 1 January 2012 to 31 December 2016**

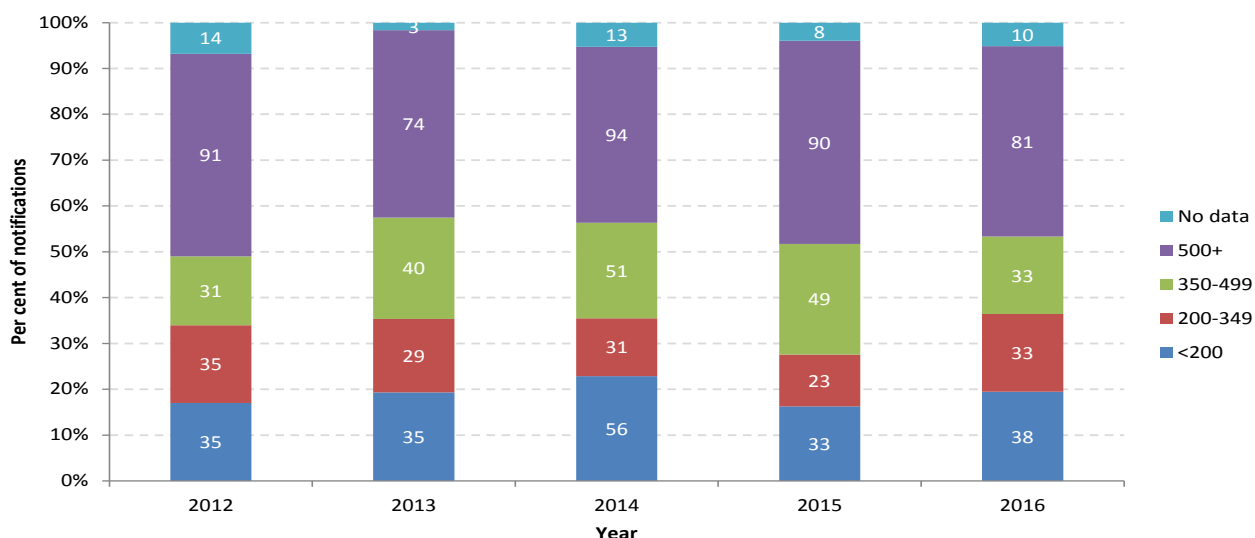


- In 2016, Aboriginal and Torres Strait Islander males had the highest notification rate of new HIV diagnoses (18.3/100,000/year), followed by non-Indigenous males (6.8/100,000/year), Aboriginal and Torres Strait Islander females (1.0/100,000/year), and non-Indigenous females (0.9/100,000/year).
- The increase in notification rates of new HIV diagnoses was observed among Aboriginal and Torres Strait Islander males from 2015 (11.6/100,000/year) to 2016 (18.3/100,000/year). For other groups, notification rates fluctuated or remained stable over the reporting period 2012-2016.

## CD4+ cell count at diagnosis

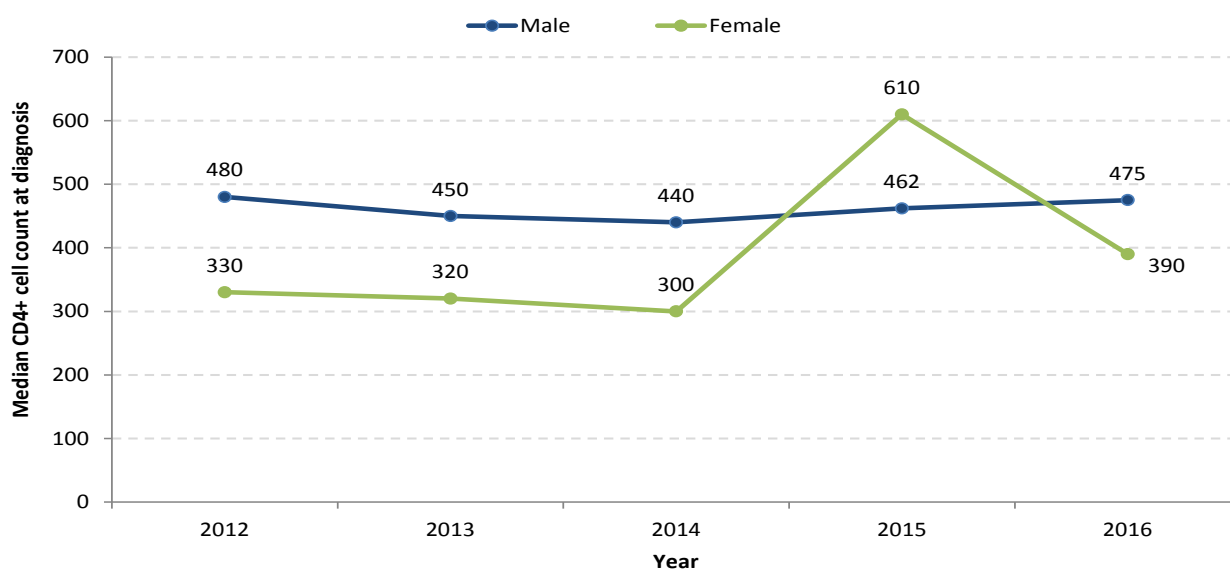
Late HIV diagnosis is defined as newly diagnosed HIV with a CD4+ cell count less than 350 cells/ $\mu$ L, and advanced HIV as newly diagnosed HIV with a CD4+ cell count less than 200 cells/ $\mu$ L.

**Figure 3: Number and percentage of new HIV notifications in Queensland by CD4+ cell count category at diagnosis, 1 January 2012 to 31 December 2016**



- In 2016 late HIV diagnoses accounted for 36% of new diagnoses, higher than the previous year (28%), but similar to 2012-2014.

**Figure 4: Median CD4+ cell count at diagnosis for new HIV diagnoses in Queensland by sex, 1 January 2012 to 31 December 2016**



- The median CD4+ cell counts in males have remained relatively stable over the period 2012-2016, ranging from 440 to 480/ $\mu$ L.
- The median CD4+ cell counts were lower in females than in males for most of the years, except for 2015 in which females had a higher median CD4+ cell count than males.

# 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 2012 to 31 December 2016**

Risk exposure		2012	2013	2014	2015	2012-2015 average	2016
<b>Males</b>		<b>189</b>	<b>164</b>	<b>220</b>	<b>182</b>	<b>188.8</b>	<b>174</b>
	%	<b>91.7</b>	<b>90.6</b>	<b>89.8</b>	<b>89.7</b>	<b>90.4</b>	<b>89.2</b>
Men who have sex with men/bisexual	%	138	112	165	136	137.8	129
		67.0	61.9	67.3	67.0	66.0	66.2
Men who have sex with men/bisexual and injecting drug use	%	13	13	11	9	11.5	8
		6.3	7.2	4.5	4.4	5.5	4.1
Heterosexual							
<i>Person/partner with origin from a high prevalence country<sup>#</sup></i>	%	16	18	17	14	16.3	18
		7.8	9.9	6.9	6.9	7.8	9.2
<i>Partner with/at risk of infection<sup>‡</sup></i>	%	5	6	5	8	6.0	6
		2.4	3.3	2.0	3.9	2.9	3.1
Injecting drug use*	%	4	2	7	4	4.3	2
		1.9	1.1	2.9	2.0	2.0	1.0
Maternal transmission	%	0	1	0	1	0.5	1
		0.0	0.6	0.0	0.5	0.2	0.5
Not reported/unknown	%	13	12	15	10	12.5	10
		6.3	6.6	6.1	4.9	6.0	5.1
<b>Females</b>		<b>17</b>	<b>17</b>	<b>25</b>	<b>21</b>	<b>20.0</b>	<b>21</b>
	%	<b>8.3</b>	<b>9.4</b>	<b>10.2</b>	<b>10.3</b>	<b>9.6</b>	<b>10.8</b>
Heterosexual							
<i>Person/partner with origin from a high prevalence country<sup>#</sup></i>	%	5	8	9	10	8.0	6
		2.4	4.4	3.7	4.9	3.8	3.1
<i>Partner with/at risk of infection<sup>‡</sup></i>	%	10	6	11	9	9.0	14
		4.9	3.3	4.5	4.4	4.3	7.2
Injecting drug use	%	0	0	3	1	1.0	0
		0.0	0.0	1.2	0.5	0.5	0.0
Maternal transmission	%	0	1	0	1	0.5	1
		0.0	0.6	0.0	0.5	0.2	0.5
Not reported/unknown	%	2	2	2	0	1.5	0
		1.0	1.1	0.8	0.0	0.7	0.0
<b>Total</b>		<b>206</b>	<b>181</b>	<b>245</b>	<b>203</b>	<b>208.8</b>	<b>195</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>

\*Excludes men who have sex with men

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

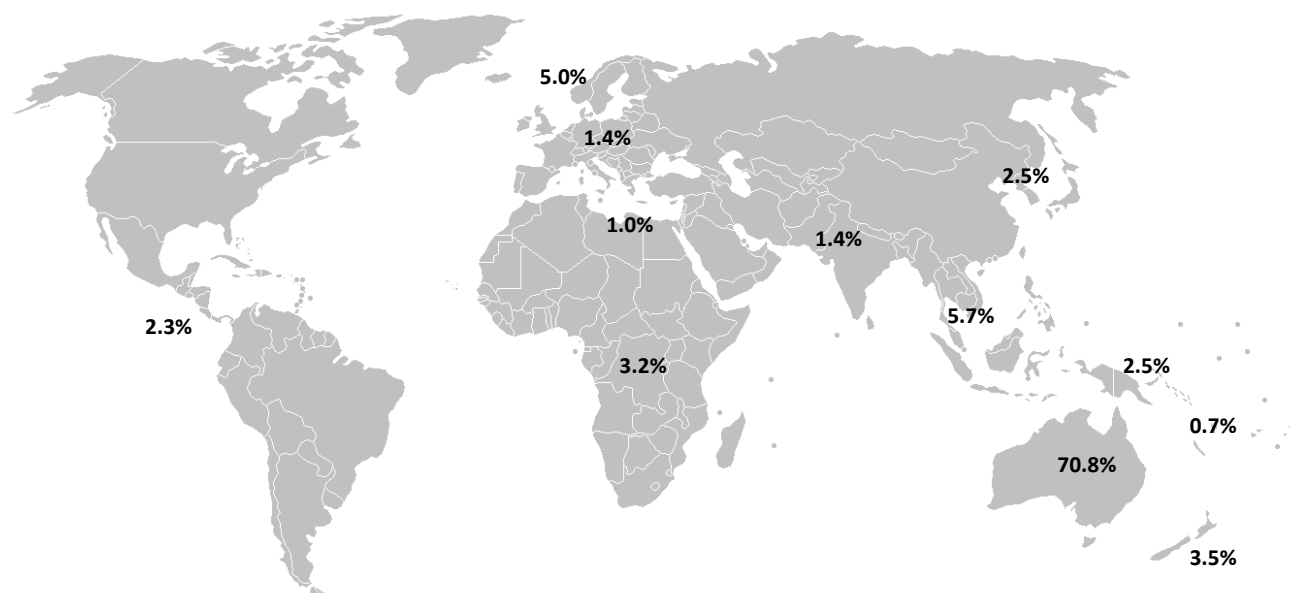
<sup>‡</sup>Partner with/at risk of infection includes sex with a person who injects drug, bisexual male, someone who received blood/tissue, or a person with haemophilia/coagulation disorder.

- The profile of risk exposure among newly diagnosed HIV cases is similar over the period 2012-2016, with transmission primarily occurring among men who have sex with men/bisexual men.
- In 2016, 66% of new HIV diagnoses were reported among men who have sex with men/bisexual men, 4% were attributed to men who have sex with men/bisexual men and injecting drug use, 23% to heterosexual sex, 1% to injecting drug use, and 1% to maternal transmission.



## Region of Birth

**Figure 5: Percentage of new Queensland HIV diagnoses by region of birth, 1 January 2012 to 31 December 2016**



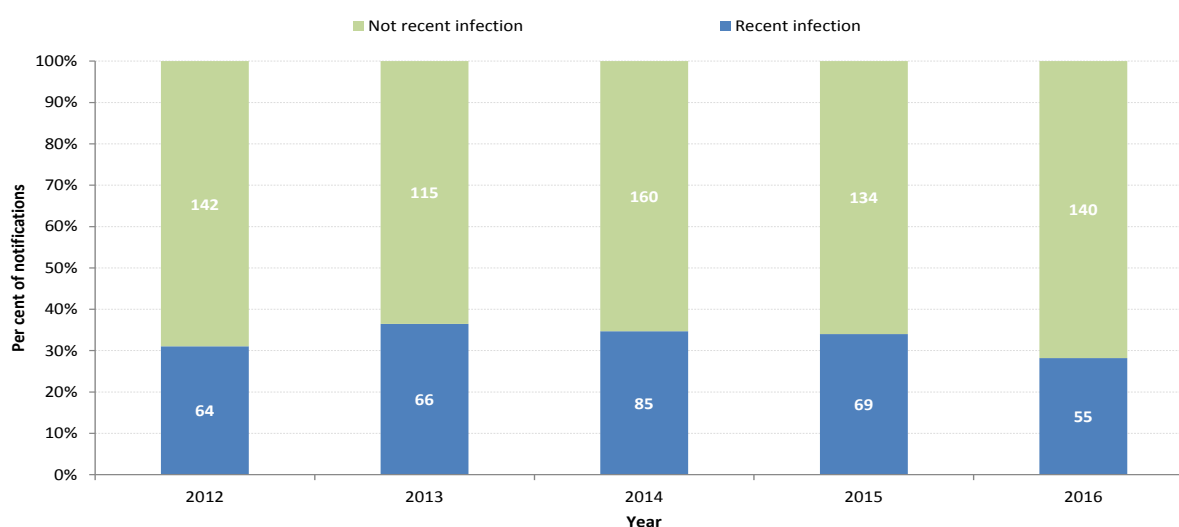
(Map template from [https://commons.wikimedia.org/wiki/Maps\\_of\\_the\\_world#/media/File:BlankMap-World-v2.png](https://commons.wikimedia.org/wiki/Maps_of_the_world#/media/File:BlankMap-World-v2.png))

- The majority of people newly diagnosed with HIV in Queensland over the period 2012-2016 were born in Australia (71%), with 6% born in South-East Asia (e.g. Philippines, Malaysia, Indonesia), 5% born in North-West Europe (e.g. United Kingdom, Germany), 4% born in New Zealand, 3% born in Sub-Saharan Africa (e.g., South Africa, Zimbabwe).

## Recently acquired infection

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

**Figure 6: Number and percentage of new HIV notifications in Queensland by recently acquired infection status, 1 January 2012 to 31 December 2016**



- In 2016, 55 (28%) of all new HIV diagnoses were recently acquired infections, compared to 69 (34%) in 2015.

**Table 4: Number and percentage of recently acquired HIV infection diagnoses in Queensland, by sex and risk exposure, 1 January 2012 to 31 December 2016**

Risk exposure		2012	2013	2014	2015	2012-2015 average	2016
<b>Males</b>		<b>60</b>	<b>59</b>	<b>81</b>	<b>63</b>	<b>65.8</b>	<b>49</b>
	%	<b>93.8</b>	<b>89.4</b>	<b>95.3</b>	<b>91.3</b>	<b>92.6</b>	<b>89.1</b>
Men who have sex with men/bisexual		50	50	67	54	55.3	41
	%	78.1	75.8	78.8	78.3	77.8	74.5
Men who have sex with men/bisexual and injecting drug use		4	5	3	2	3.5	1
	%	6.3	7.6	3.5	2.9	4.9	1.8
Heterosexual							
<i>Person/partner with origin from a high prevalence country<sup>#</sup></i>		3	3	4	3	3.3	5
	%	4.7	4.5	4.7	4.3	4.6	9.1
<i>Partner with/at risk of infection<sup>‡</sup></i>		0	0	4	1	1.3	1
	%	0.0	0.0	4.7	1.4	1.8	1.8
Injecting drug use*		1	0	0	2	0.8	0
	%	1.6	0.0	0.0	2.9	1.1	0.0
Not reported/unknown		2	1	3	1	1.8	1
	%	3.1	1.5	3.5	1.4	2.5	1.8
<b>Females</b>		<b>4</b>	<b>7</b>	<b>4</b>	<b>6</b>	<b>5.3</b>	<b>6</b>
	%	<b>6.3</b>	<b>10.6</b>	<b>4.7</b>	<b>8.7</b>	<b>7.4</b>	<b>10.9</b>
Heterosexual							
<i>Partner with origin from a high prevalence country<sup>#</sup></i>		1	2	2	2	1.8	1
	%	1.6	3.0	2.4	2.9	2.5	1.8
<i>Partner with/at risk of infection<sup>‡</sup></i>		3	4	1	4	3.0	5
	%	4.7	6.1	1.2	5.8	4.2	9.1
Maternal transmission		0	1	0	0	0.3	0
	%	0.0	1.5	0.0	0.0	0.4	0.0
Not reported/unknown		0	0	1	0	0.3	0
	%	0.0	0.0	1.2	0.0	0.4	0.0
<b>Total</b>		<b>64</b>	<b>66</b>	<b>85</b>	<b>69</b>	<b>71.0</b>	<b>55</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>

\*Excludes men who have sex with men

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

<sup>‡</sup>Partner with/at risk of infection includes sex with a person who injects drug, bisexual male, someone who received blood/tissue, or a person with haemophilia/coagulation disorder.

- The majority (75%) of the recently acquired infections in 2016 were in men who have sex with men or bisexual men, comparable with the four year average (78%).
- Twenty two per cent of the recently acquired infections in 2016 were attributed to heterosexual sex, compared with the four year average of 13%.

# 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 2012 to 31 December 2016**

HHS		2012	2013	2014	2015	2012-2015 average	2016
Cairns and Hinterland		20	15	17	18	17.5	27
	Rate	8.3	6.1	6.8	7.2	7.1	10.7*
Central Queensland		2	6	7	4	4.8	5
	Rate	0.9	2.7	3.2	1.8	2.2	2.3
Central West		0	0	1	0	0.3	1
	Rate	0.0	0.0	8.5	0.0	2.1	9.3
Darling Downs		7	3	8	11	7.3	6
	Rate	2.6	1.1	2.9	4.0	2.6	2.1
Gold Coast		24	19	25	31	24.8	31
	Rate	4.4	3.4	4.4	5.4	4.4	5.2
Mackay		4	3	3	3	3.3	6
	Rate	2.3	1.7	1.7	1.7	1.8	3.5
Metro North		68	61	75	60	66.0	57
	Rate	7.5	6.6	7.9	6.2	7.0	5.8
Metro South		51	47	77	45	55.0	37
	Rate	4.8	4.4	7.1	4.1	5.1	3.3
North West		2	1	1	4	2.0	0
	Rate	6.3	3.2	3.3	13.5	6.5	0.0
South West		0	0	0	0	0.0	0
	Rate	0.0	0.0	0.0	0.0	0.0	0.0
Sunshine Coast		8	3	9	7	6.8	7
	Rate	2.1	0.8	2.3	1.8	1.7	1.7
Torres and Cape		0	0	2	0	0.5	0
	Rate	0.0	0.0	7.8	0.0	2.0	0.0
Townsville		5	7	7	8	6.8	4
	Rate	2.1	3.0	2.9	3.3	2.9	1.7
West Moreton		5	12	5	8	7.5	8
	Rate	2.0	4.6	1.9	2.9	2.9	2.9
Wide Bay		10	4	8	4	6.5	6
	Rate	4.8	1.9	3.8	1.9	3.1	2.8
<b>Queensland</b>		<b>206</b>	<b>181</b>	<b>245</b>	<b>203</b>	<b>208.8</b>	<b>195</b>
	<b>Rate</b>	<b>4.5</b>	<b>3.9</b>	<b>5.2</b>	<b>4.2</b>	<b>4.5</b>	<b>4.0</b>

\* denotes the notification rate statistically significantly higher than the overall Queensland rate in 2016.

- In 2016, the largest number of newly diagnosed HIV notifications were from Metro North HHS (57 cases, 29% of the Queensland total), followed by Metro South HHS (37 cases, 19%), Gold Coast HHS area (31 cases, 16%), and Cairns and Hinterland HHS (27 cases, 14%).
- The number of newly diagnosed HIV notifications increased in Cairns and Hinterland HHS, from 18 cases in 2015 to 27 cases in 2016.
- The number of newly diagnosed HIV notifications decreased in Metro South HHS, from 45 cases in 2015 to 37 cases in 2016.
- Newly diagnosed HIV notifications were sporadic in Central West HHS (2 cases in the five year period), South West HHS (zero cases in the five year period), and Torres and Cape HHS (2 cases in the five year period).
- In 2016, Cairns and Hinterland HHS had a newly diagnosed HIV notification rate (10.7/100,000/year) higher than the overall Queensland rate (4.0/100,000/year), while the rates in other HHSs had no statistically significant difference from the overall Queensland rate.

