

TraX mpox month eight report: Report period 10 October 2022 to 21 May 2023

This report summarises data collected during the first eight months of the TraX Study. Data are collected weekly on mpox vaccine uptake, infection, and sexual behaviours among people considered at high risk of mpox infection in Australia.

Global mpox update ¹

- Since January 2023, there has been a decrease in the weekly reported cases from the highest recorded global peak of 7,576 cases during the week of 8 August 2022.
- Between 28 May 2023 and 4 June 2023, the number of reported new cases globally has decreased by 3.1% (96 cases vs. 93 cases, respectively).
- The majority of cases in the past four weeks were reported in The Americas (35.4%) and the Western Pacific Region (32.8%).
- Between 15 May 2023 and 4 June 2023, new mpox cases were reported in 15 countries, with Thailand recording the highest number of cases (N=17).
- As of 4 June 2023, 84.1% of cases were among men who have sex with men (where data on sexual orientation was known).
- Among all types of transmission reported, sexual contact was the most frequently mentioned, accounting for 82.0% of all transmission instances.
- After declining to near-zero numbers, in the last two months, a small number of mpox cases, including in previously vaccinated people, have been reported in Northern Europe and North America. In addition, in May 2023, one case has been reported in New South Wales.

TraX summary

- During this reporting period (10 October 2022 to 21 May 2023), 2868 people across Australia participated in the TraX study. Most participants were from New South Wales (83.9%).
- The monthly testing for mpox remained consistently low at around 1.0%.
- At study entry, 22.2% of participants reported being unvaccinated against mpox, 50.1% had received one vaccination, and 27.7% had received two mpox vaccinations.
- As of 21 May 2023, the proportion of people who reported being unvaccinated against mpox had reduced by more than half to 9.5%, leaving 273 participants unvaccinated. The proportion who reported having received only one mpox vaccination also fell to 11.3% and the proportion who had received both mpox vaccinations increased to 79.1%.
- At study entry, 11 participants reported prior mpox infection.

¹ † Mpox Outbreak 2022-23: Global Trends. Geneva: World Health Organization, 2023. Available online: https://worldhealthorg.shinyapps.io/mpox_global/ (last cited: 9 June 2023).

Recruitment source

The largest proportion of participants were recruited through the NSW Ministry of Health expression of interest (NSW MoH EOI) list (34.7%). This list was compiled by the NSW MoH while awaiting the readiness of vaccines and subsequent vaccine rollout. One in three (33.5%) participants were recruited through NSW mpox clinics. Crown Street Vaccination Clinic were the first clinic to commence recruitment and recruited most of the clinic-based sample. Victorian clinics began clinic-based recruitment in mid-November 2022. Just under one-quarter (23.5%) of participants were recruited through consent given to participate in future research as part of previous Kirby Institute/Centre for Social Research in Health studies.

Table 1. Recruitment source by study month.

N (%)	Month 01 10-Oct-22 to 6-Nov-22	Month 02 7-Nov-22 to 4-Dec-22	Month 03 5-Dec-22 to 1-Jan-23	Month 04 2-Jan-23 to 29-Jan-23	Month 05 30-Jan-23 to 26-Feb-23	Month 06 27-Feb-23 to 26-Mar-23	Month 07 27-Mar-23 to 23-Apr-23	Month 08 24-Apr-23 to 21-May-23	Total
NSW MoH EOI	948 (59.9)	28 (4.5)	8 (3.4)	7 (3.5)	1 (0.7)	1 (2.2)	1 (3.8)	0 (0.0)	994 (34.7)
Social media	11 (0.7)	14 (2.3)	1 (0.4)	2 (1.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	28 (1.0)
Hook-up apps	4 (0.3)	42 (6.8)	10 (4.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	56 (2.0)
NSW mpox clinics	183 (11.6)	194 (31.3)	154 (65.8)	166 (83.0)	121 (80.1)	34 (75.6)	22 (84.6)	8 (72.7)	882 (30.8)
Victoria mpox clinic	0 (0.0)	34 (5.5)	20 (8.5)	9 (4.5)	12 (7.9)	4 (8.9)	1 (3.8)	0 (0.0)	80 (2.8)
a[TEST]	11 (0.7)	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	12 (0.4)
Consent from other studies	360 (22.8)	282 (45.6)	16 (6.8)	4 (2.0)	7 (4.6)	1 (2.2)	1 (3.8)	2 (18.2)	673 (23.5)
Unpaid advertising	65 (4.1)	24 (3.9)	25 (10.7)	12 (6.0)	10 (6.6)	5 (11.1)	1 (3.8)	1 (9.1)	143 (5.0)
Total	1582	619	234	200	151	45	26	11	2868

Sample characteristics at study entry

The median age was 41 years, and ages ranged from 19 years to 81 years. About two-thirds (63.7%) of participants were born in Australia. The great majority of participants identified as cis male (94.4%) or trans men (0.6%), and most (85.7%) identified as gay. As of 4 June 2023, 84.1% of known global cases were reported to be among men who have sex with men (where data on sexual orientation was known).

Most (82.7%) reported an HIV negative status and 8.5% were living with HIV. Most (83.9%) participants resided in New South Wales, which was expected given most participants were recruited through the NSW MoH EOI list, NSW mpox clinics, and through consent from studies conducted by the Sydney-based Kirby Institute and Centre for Social Research in Health. A recent STI diagnosis in the last 6 months was reported by 23.4% of participants at study entry.

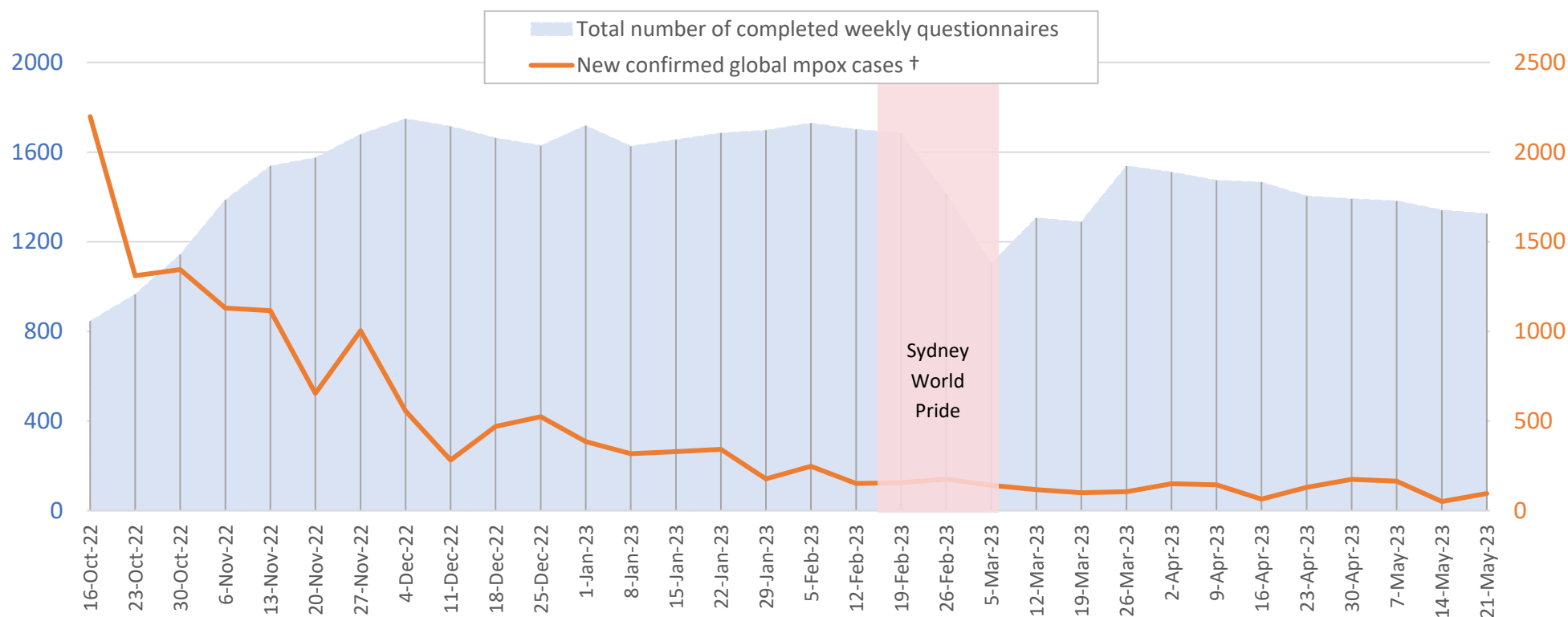
Table 2. Sample characteristics at study entry (N=2868).

	N (%)		N (%)
Age		Gender	
19-29	354 (12.3)	Cis men	2706 (94.4)
30-39	951 (33.2)	Trans men	16 (0.6)
40-49	703 (24.5)	Cis women	41 (1.4)
50-59	518 (18.1)	Trans women	18 (0.6)
60+	334 (11.6)	Non-binary people	67 (2.3)
Did not answer	8 (0.3)	Other	20 (0.7)
Country of birth		Sexuality	
Australia	1827 (63.7)	Gay	2458 (85.7)
Elsewhere	1041 (36.3)	Lesbian	10 (0.3)
State of residence		Bisexual/pansexual	224 (7.8)
New South Wales	2405 (83.9)	Heterosexual	37 (1.3)
Victoria	248 (8.6)	Queer/other term	139 (4.8)
Queensland	93 (3.2)	HIV status	
Northern Territory	14 (0.5)	Positive	244 (8.5)
Western Australia	23 (0.8)	Negative	2371 (82.7)
South Australia	26 (0.9)	Untested/unknown	253 (8.9)
Australian Capital Territory	48 (1.7)	STI diagnosis in past six months	
Tasmania	11 (0.4)	Gonorrhoea	368 (12.8)
Aboriginal or Torres Strait Islander		Chlamydia	439 (15.3)
Yes	73 (2.5)	Syphilis	147 (5.1)
No	2795 (97.5)	Unsure	13 (0.5)
		Other	43 (1.5)

Follow-up and participation over time

Study participation fluctuated, with the most engagement occurring prior to Sydney World Pride. The reduction in completed surveys in February 2023 corresponded with Sydney World Pride events. An average of 1300 participants have completed the questionnaires each week since the closing of Sydney World Pride. Although a consistent number of participants have continued to respond to the weekly questionnaire since the closing of Sydney World Pride, there has been a slight decline over the past two months, from 1510 participants on the 2nd April 2023 to 1325 on the 21st May 2023.

Figure 1. Follow-up and participation over time.



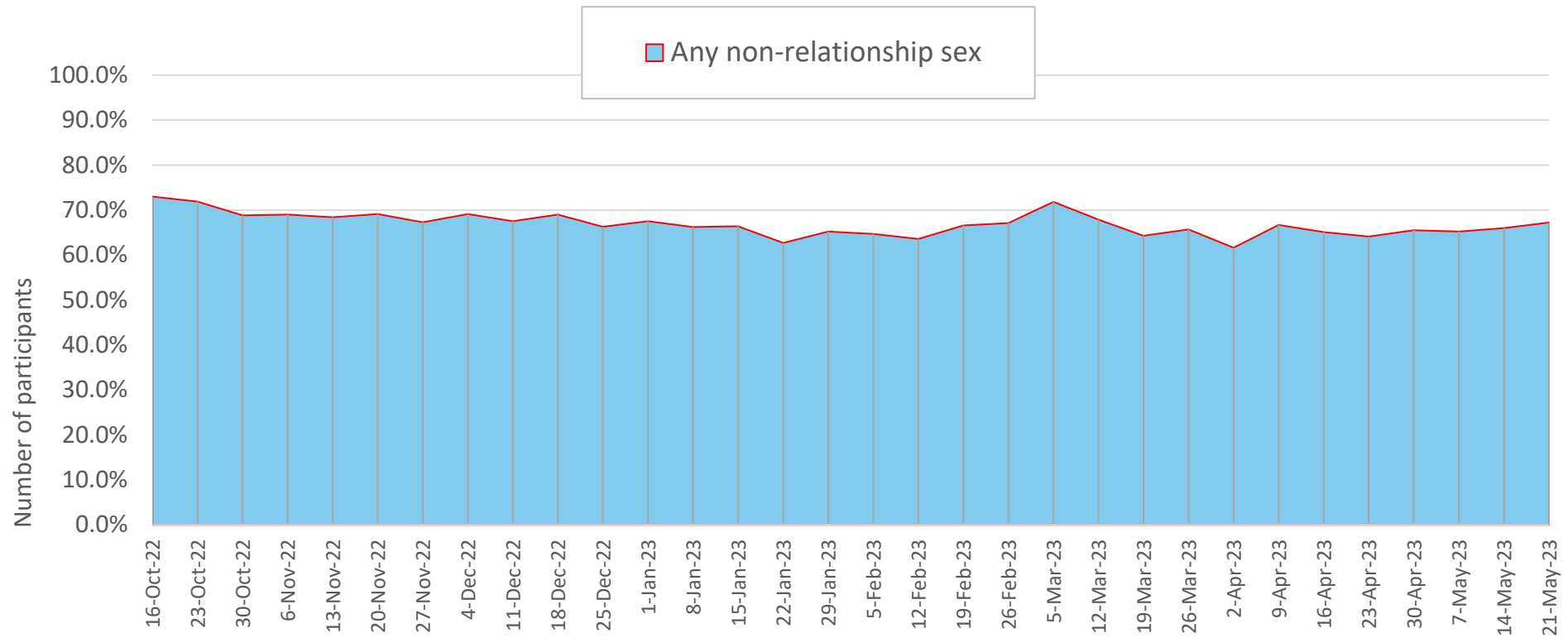
Note: Study launched on 16 October 2022. Sydney World Pride commenced on 16 February 2023 and ended 5 March 2023.

† Mpox Outbreak 2022-23: Global Trends. Geneva: World Health Organization, 2023. Available online: https://worldhealthorg.shinyapps.io/mpx_global/ (last cited: 9 June 2023).

Mpox sexual risk behaviours

Among all types of mpox transmission reported globally, sexual contact was the most frequently mentioned, accounting for 82.0% of all transmission instances. In the TraX study, individuals reporting sex with non-relationship cis or trans partners remained consistent during the reporting period.

Figure 2. Non-relationship sexual behaviours with cis or trans men over time.



Sexual behaviours with cis and trans men are reported separately. The proportions above combine sexual behaviours reported with both cis and trans men.

Mpox testing

The monthly testing for mpox has remained consistent at around 1.0%. Throughout the study period, 114 (4.0%) participants reported ever having had an mpox test in the previous week.

Table 3. Mpox testing in the previous week by study month (N = 2868).

N (%)	Study entry	Month 01 10-Oct-22 to 6-Nov-22	Month 02 7-Nov-22 to 4-Dec-22	Month 03 5-Dec-22 to 1-Jan-23	Month 04 2-Jan-23 to 29-Jan-23	Month 05 30-Jan-23 to 26-Feb-23	Month 06 27-Feb-23 to 26-Mar-23	Month 07 27-Mar-23 to 23-Apr-23	Month 08 24-Apr-23 to 21-May-23
	N=2868	N=1583	N=2031	N=1996	N=1971	N=1971	N=1752	N=1709	N=1569
Untested	2822 (99.6)	1575 (99.5)	2008 (98.9)	1969 (98.6)	1953 (99.1)	1950 (98.9)	1733 (98.9)	1690 (98.9)	1554 (99.0)
Tested	12 (0.4)	8 (0.5)	23 (1.1)	27 (1.4)	18 (0.9)	21 (1.1)	19 (1.1)	19 (1.1)	15 (1.0)

Mpox vaccination

At study entry, 22.2% of participants reported being unvaccinated against mpox. Half (50.1%) reported having received one mpox vaccination and 27.7% had received both mpox vaccinations.

Table 4. Mpox vaccination at study entry (N = 2868).

Recruitment source	None	First dose	Second dose
NSW MoH EOI	216 (21.7)	575 (57.8)	203 (20.4)
Mpox clinics	29 (3.0)	544 (56.5)	389 (40.4)
Other	391 (42.9)	319 (35.0)	202 (22.1)
Total	636 (22.2)	1438 (50.1)	794 (27.7)

By 21 May 2023, the proportion of study participants who reported being unvaccinated against mpox had reduced by more than half to 9.5%, leaving 273 participants unvaccinated. The proportion who reported having received one mpox vaccination also fell to 11.3% with the proportion of participants who had received both mpox vaccinations increased to 79.1%.

Table 5. Mpox vaccination at 21 May 2023 (N = 2868).

Recruitment source	None	First dose	Second dose
NSW MoH EOI	42 (4.2)	100 (10.1)	852 (85.7)
Mpox clinics	3 (0.3)	134 (13.9)	825 (85.8)
Other	228 (25.0)	91 (10.0)	593 (65.0)
Total	273 (9.5)	325 (11.3)	2270 (79.1)

Vaccine effectiveness

All 11 cases of mpox reporting in this cohort were reported at study entry; therefore, we cannot calculate vaccine effectiveness.