TraX mpox data report:
Report period 10 October 2022 to 2 July 2023

This report summarises data collected as part of the TraX study from study launch on 10 October 2022 to 2 July 2023. Data were collected weekly on rates of mpox vaccine uptake, mpox infection, and sexual behaviours among people considered at high risk of mpox infection in Australia. Unless otherwise stated, data included in this report are from participants who provided at least one follow-up survey.

Global mpox update [1]

- The number of cases reported each week continued to decline from the highest recorded global peak of 7,576 cases during the week of 8 August 2022.
- Between 26 June 2023 and 2 July 2023, the number of reported new cases globally decreased by 7.3% (82 cases vs. 76 cases, respectively).
- The majority of cases in the past four weeks (5 June 2023 to 2 July 2023) were reported in The Americas (37.7%) and the Western Pacific Region (34.8%).
- In the Western Pacific Region, 94 cases were reported between 22 May 2023 and 11 June 2023. 71 new mpox cases were reported between 12 June 2023 and 2 July 2023, representing a 24.5% reduction in new confirmed cases between these reporting periods.

TraX summary

- During this reporting period (10 October 2022 to 2 July 2023), 2876 people across Australia participated in the TraX study. Most participants were from New South Wales (83.9%).
- Throughout the study, monthly rates of testing for mpox remained consistent at approximately 1.0%. However, these rates have further reduced to 0.5% in the more recent reporting period.
- At study entry, 22.2% of participants reported being unvaccinated against mpox, 50.2% had received one vaccination, and 27.6% had received two mpox vaccinations.
- As of 2 July 2023, the proportion of people who reported being unvaccinated against mpox had reduced by more than half to 9.4%, leaving 271 participants unvaccinated. The proportion who reported having received only one mpox vaccination also fell to 11.1% and the proportion who had received both mpox vaccinations increased to 79.5%.
- At study entry, 12 participants reported prior mpox infection. No new mpox infections were reported throughout the study period.

[1] † Mpox Outbreak 2022-23: Global Trends. Geneva: World Health Organization, 2023. Available online: https://worldhealthorg.shinyapps.io/mpx_global/ (last cited: 11 July 2023).

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Recruitment source

The largest proportion of participants were recruited through the NSW Ministry of Health expression of interest (NSW MoH EOI) list (34.6%). This list was compiled by the NSW MoH while awaiting the readiness of vaccines and subsequent vaccine rollout. 30.9% of 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 (23.4%) of participants were recruited though 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	%
NSW MoH EOI	994	34.6
Social media	28	1.0
Hook-up apps	56	1.9
NSW mpox clinics	888	30.9
Victoria mpox clinic	80	2.8
a[TEST]	12	0.4
Consent from other studies	673	23.4
Unpaid advertising	145	5.0

Sample characteristics at study entry

The median age was 41 years, and ages ranged from ranged from 19 years to 81 years. Approximately two-thirds (63.7%) of participants were born in Australia. The majority of participants identified as cis male (94.3%) or trans men (0.6%), and most (85.7%) identified as gay.

Most participants (82.6%) reported an HIV negative status and 8.5% were living with HIV. A recent STI diagnosis in the last 6 months was reported by 23.4% of participants at study entry. Most participants (83.9%) resided in New South Wales, which was expected given most participants were recruited through the NSW MoH EOI list, NSW mpox clinics, or through consent from studies conducted by the Sydney-based Kirby Institute and Centre for Social Research in Health.

Table 2. Sample characteristics at study entry (N=2876).

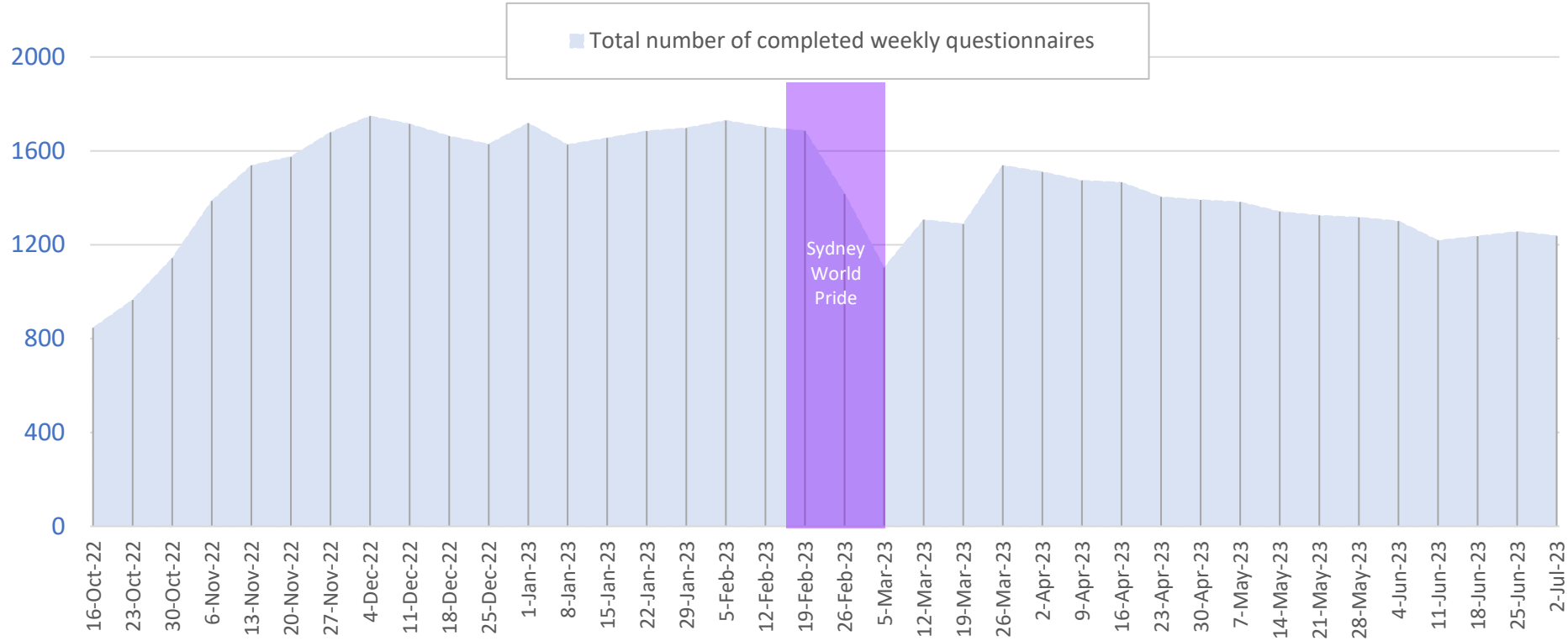
	N	%
Age		
19-29	355	12.3
30-39	955	33.2
40-49	706	24.5
50-59	518	18.0
60+	334	11.6
Did not answer	8	0.3
Country of birth		
Australia	1831	63.7
Elsewhere	1045	36.3
State of residence		
New South Wales	2412	83.9
Victoria	249	8.7
Queensland	93	3.2
Northern Territory	12	0.4
Western Australia	23	0.8
South Australia	26	0.9
Australian Capital Territory	49	1.7
Tasmania	12	0.4
Aboriginal or Torres Strait Islander		
Yes	72	2.5
No	2804	97.5

	N	%
Gender		
Cis men	2713	94.3
Trans men	16	0.6
Cis women	41	1.4
Trans women	19	0.7
Non-binary people	67	2.3
Other	20	0.7
Sexuality		
Gay	2465	85.7
Lesbian	9	0.3
Bisexual/pansexual	226	7.9
Heterosexual	37	1.3
Queer/other term	139	4.8
HIV status		
Positive	245	8.5
Negative	2376	82.6
Untested/unknown	255	8.9
STI diagnosis in past six months		
Gonorrhoea	369	12.8
Chlamydia	441	15.3
Syphilis	147	5.1
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 2 April 2023 to 1333 on 2 July 2023.

Figure 1. Follow-up and participation over time.

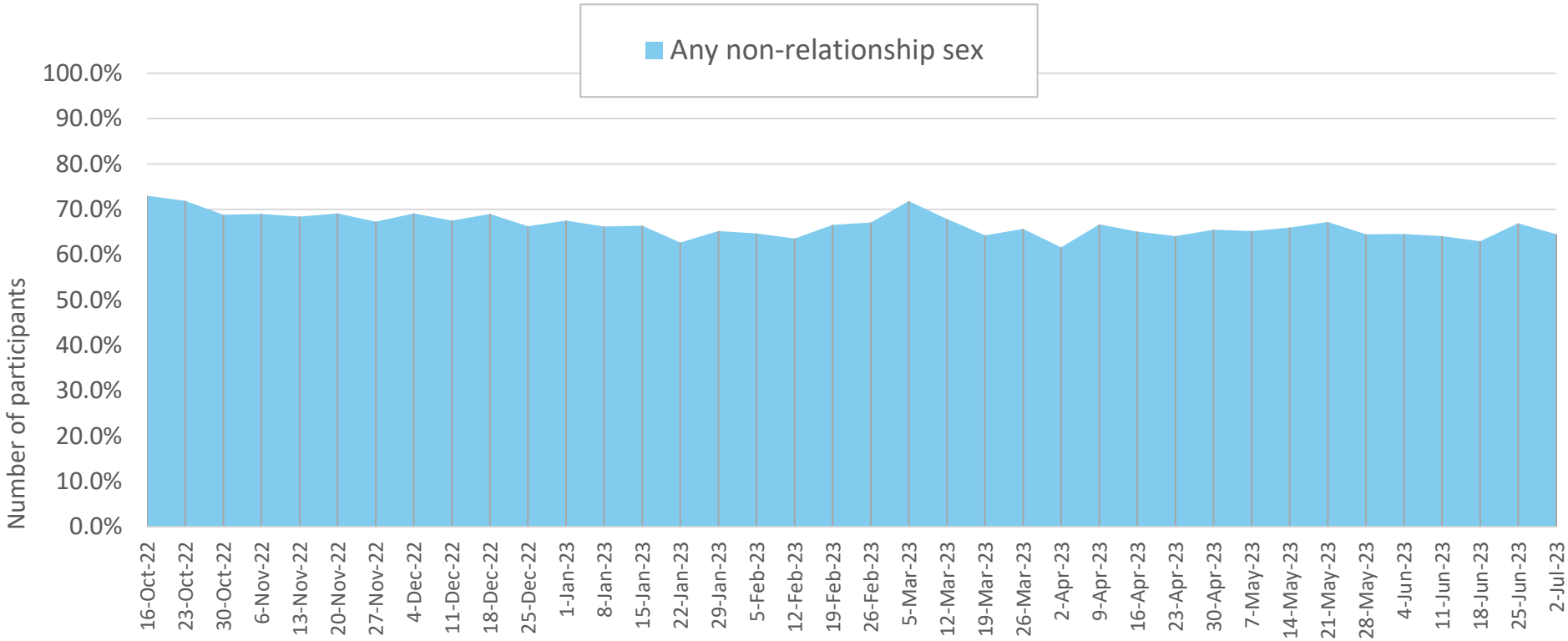


Note: Study launched on 10 October 2022. Sydney World Pride commenced on 16 February 2023 and ended 5 March 2023.

Mpox sexual risk behaviours

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

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

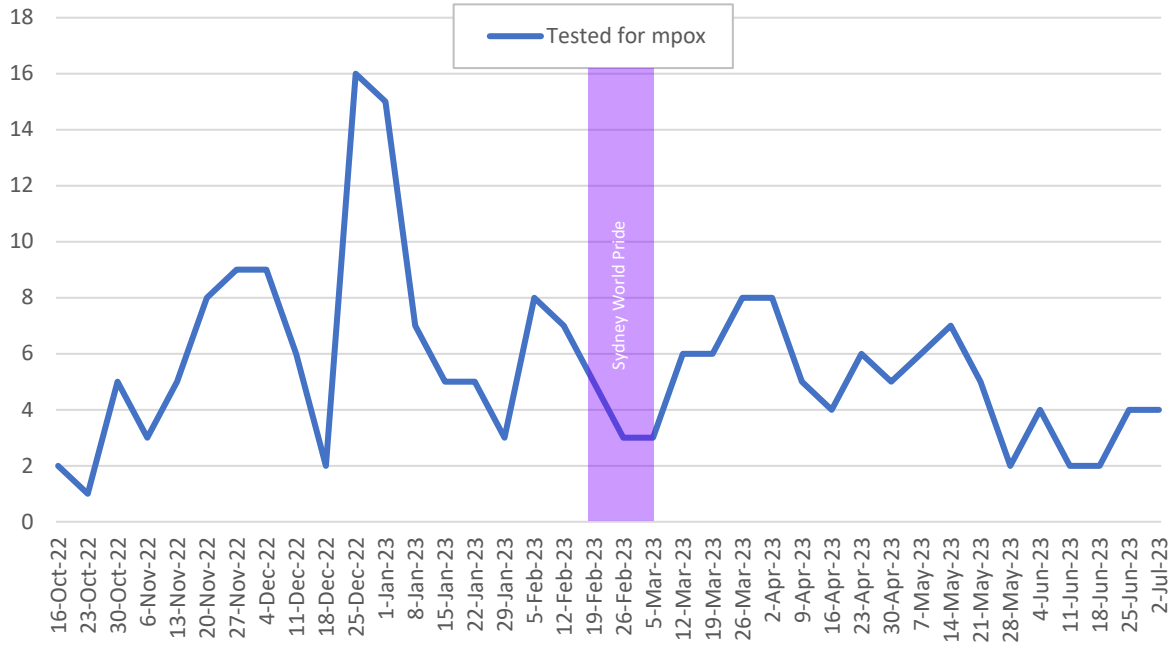


Note. The proportions above combine sexual behaviours reported with both cis and trans men.

Mpox testing

The monthly rates of testing for mpox have remained consistent at around 1.0%. However, these rates have reduced to 0.5% in the more recent reporting period. Throughout the study period, 116 (4.0%) participants reported having ever had an mpox test in the previous week.

Figure 3. Number of participants reporting an mpox test in the previous week (N=2876).



Mpox vaccination

At study entry, 22.2% of participants reported being unvaccinated against mpox. Half (50.2%) reported having received one mpox vaccination and 27.6% had received both mpox vaccinations.

Table 3. Mpox vaccination at study entry (N = 2876).

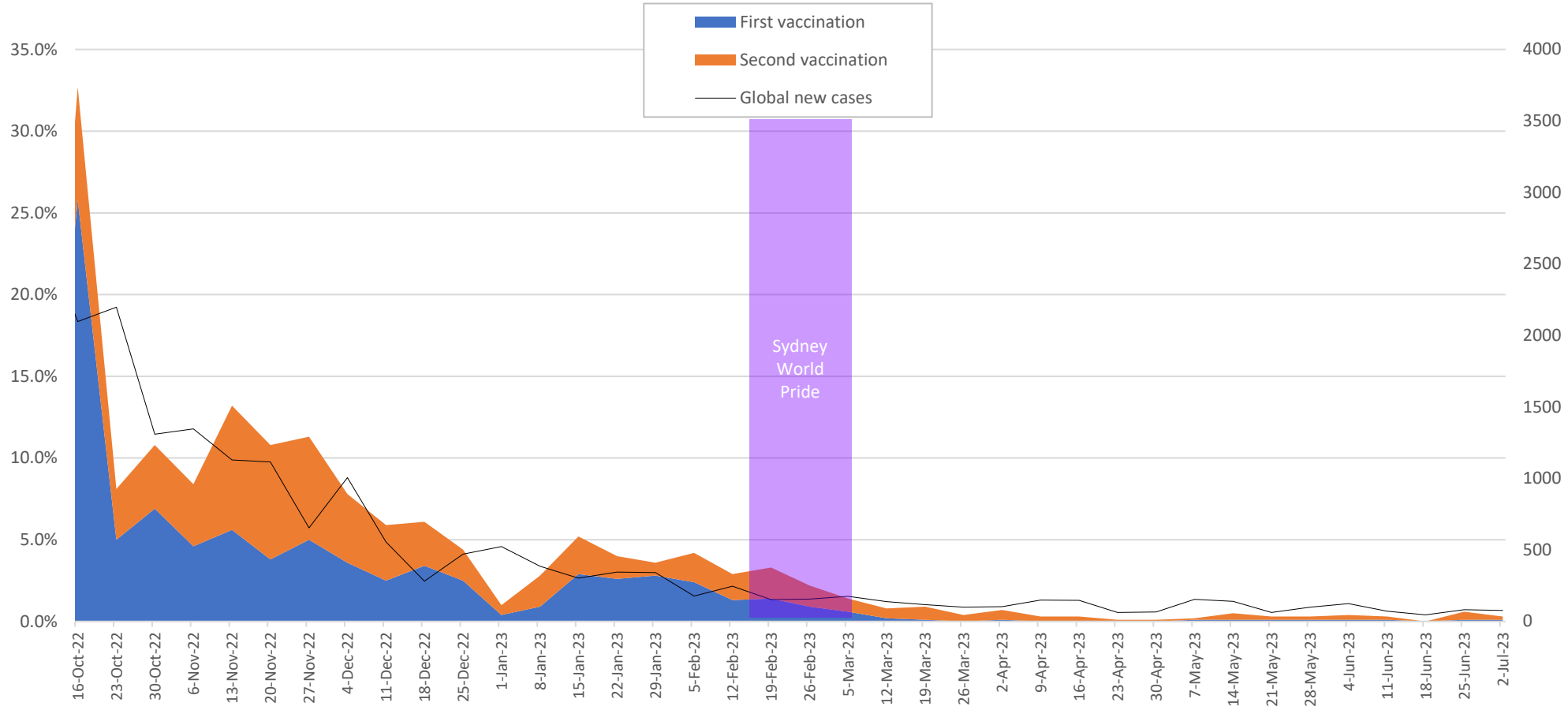
Recruitment source	None	First dose	Second dose
NSW MoH EOI	216 (21.7)	575 (57.8)	203 (20.4)
Mpox clinics	30 (3.1)	548 (56.6)	390 (40.3)
Other	392 (42.9)	320 (35.0)	202 (22.1)
Total	638 (22.2)	1443 (50.2)	795 (27.6)

By 2 July 2023, the proportion of study participants who reported being unvaccinated against mpox had reduced by more than half to 9.4%, leaving 271 participants unvaccinated. The proportion who reported having received only one mpox vaccination also fell to 11.1% with the proportion of participants who had received both mpox vaccinations increasing to 79.5%.

Table 4. Mpox vaccination at 2 July 2023 (N = 2876).

Recruitment source	None	First dose	Second dose
NSW MoH EOI	42 (4.2)	99 (10.0)	853 (85.8)
Mpox clinics	3 (0.3)	134 (13.8)	831 (85.8)
Other	226 (24.7)	86 (9.4)	602 (65.9)
Total	271 (9.4)	319 (11.1)	2286 (79.5)

Figure 4. Trends in first and second vaccination (N=3595), and number of new confirmed global mpox cases.



Note: These trends also include participants who responded at study entry only.

† Mpox Outbreak 2022-23: Global Trends. Geneva: World Health Organization, 2023. Available online: https://worldhealthorg.shinyapps.io/mpx_global/ (last cited: 11 July 2023).

Vaccine effectiveness

All 12 cases of mpox reported among this cohort were diagnosed prior to study entry. No mpox cases were reported among participants during follow-up. As such, we cannot calculate vaccine effectiveness.