

TraX mpox data report: Report period 10 October 2022 to 31 December 2023

This report summarises data collected as part of the TraX study from its launch on 10 October 2022 to 31 December 2023. Survey 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 ^{1,2}

- As of 25 January 2024, there have been 93,030 laboratory-confirmed mpox cases reported to the World Health Organisation (WHO) globally.
- The Democratic Republic of Congo (DRC) had over 12,000 suspected cases of clade I mpox by November 2023, with two distinct epidemiological patterns and a case fatality ratio of 4.6%. The main pattern was typical in endemic countries, with a high proportion of children affected and household transmission. A new pattern, affecting mainly adults, emerged in non-endemic areas of the DRC such as Kinshasa and South Kivu, with sexual transmission of clade I reported for the first time.
- In non-endemic countries, the outbreak continues to primarily affect men who have sex with men, with no significant transmission beyond these networks observed.
- The number of new cases reported monthly decreased by 47.7% in December 2023 when compared to the previous month.
- The majority of cases in December were reported in the America (43.2% of cases) and European (35.1% of cases) regions.
- There has been a substantial decline in monthly reported cases from the global peak observed in August 2022.
- Cambodia reported their first mpox case in December 2023.

¹ Mpox Outbreak 2022-23: Global Trends. Geneva: World Health Organization, 2023. Available online: https://worldhealthorg.shinyapps.io/mpx_global/ (last cited: 29 January 2024).

² World Health Organization (23 November 2023). Disease Outbreak News; Mpox (monkeypox) in the Democratic Republic of the Congo. Available at: <https://www.who.int/emergencies/disease-outbreak-news/item/2023-DON493>

TraX summary

- During this reporting period, 2,889 people across Australia participated in the TraX study and provided at least one follow-up response.
- Throughout the study, monthly rates of testing for mpox remained consistent at approximately 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 31 December 2023, the proportion of people who reported being unvaccinated against mpox had reduced by more than half to 9.2%, leaving 265 participants unvaccinated. The proportion who reported having received only one mpox vaccination also fell to 10.7% and the proportion who had received both mpox vaccinations increased to 80.1%.
- At study entry, 12 participants reported prior mpox infection. No new mpox infections were reported throughout the study period.

Recruitment source

The largest proportion of participants were recruited through the NSW Ministry of Health expression of interest (NSW MoH EOI) list (34.4%). This list was compiled by the NSW MoH while awaiting the readiness of mpox vaccines and subsequent vaccine rollout. 31.0% of participants were recruited through NSW mpox clinics. Crown Street Vaccination Clinic was 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 (23.3%) 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 (N=2889).

	N	%
NSW MoH EOI	995	34.4
Social media	29	1.0
Hook-up apps	56	1.9
NSW mpox clinics	897	31.0
Victoria mpox clinic	80	2.8
a[TEST]	12	0.4
Consent from other studies	673	23.3
Unpaid advertising	147	5.1

Sample characteristics at study entry

The median age of participants was 41 years, and ages ranged from 19 years to 81 years. Approximately two-thirds (63.6%) of participants were born in Australia. The majority of participants identified as cis male (94.4%) or trans male (0.6%), and most (85.7%) identified as gay.

Most participants (82.5%) reported an HIV negative status and 8.5% were living with HIV. A recent STI diagnosis in the last 6 months was reported by 23.3% of participants at study entry. Most participants (83.8%) 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=2889).

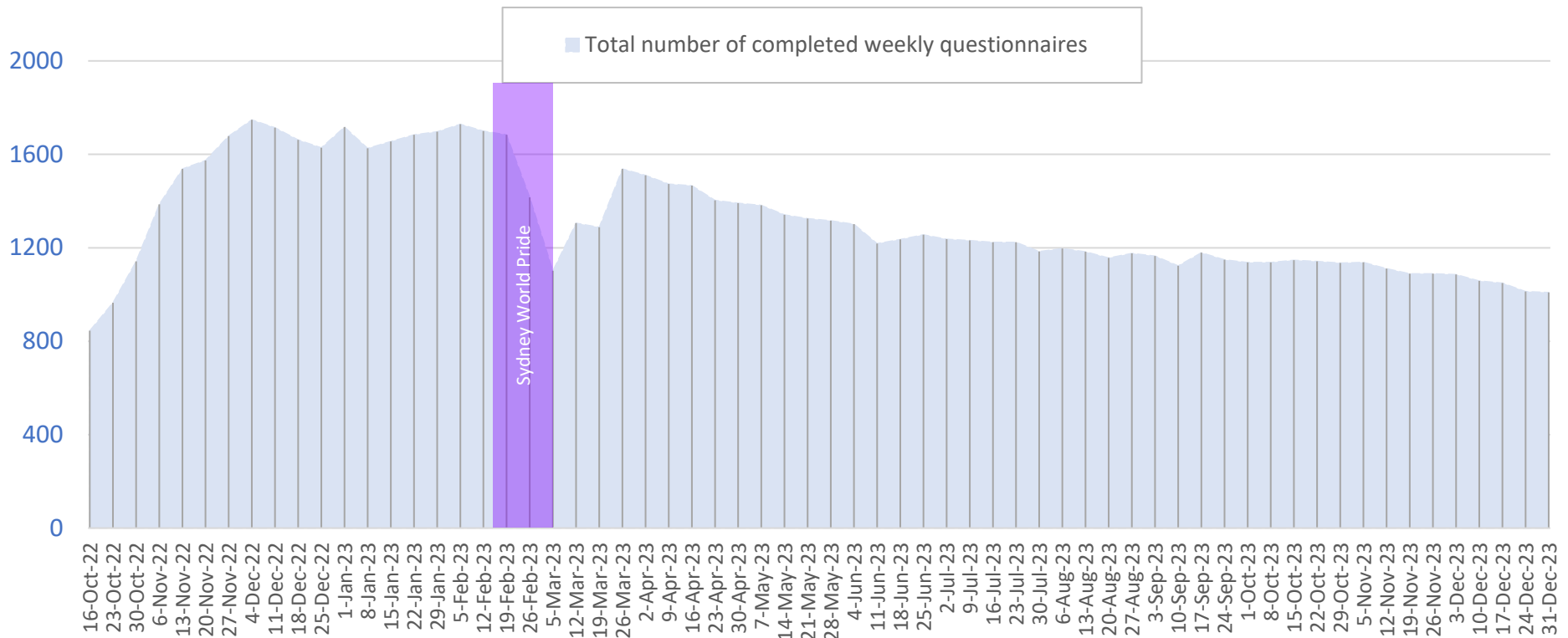
	N	%		N	%
Age			Gender		
19-29	357	12.4	Cis men	2726	94.4
30-39	962	33.3	Trans men	16	0.6
40-49	708	24.5	Cis women	41	1.4
50-59	519	18.0	Trans women	19	0.7
60+	335	11.6	Non-binary people	67	2.3
Did not answer	8	0.3	Other	20	0.7
Country of birth			Sexuality		
Australia	1838	63.6	Gay	2476	85.7
Elsewhere	1051	36.4	Lesbian	9	0.3
State of residence			Bisexual/pansexual	227	7.9
New South Wales	2422	83.8	Heterosexual	38	1.3
Victoria	252	8.7	Queer/other term	139	4.8
Queensland	93	3.2	HIV status		
Northern Territory	12	0.4	Positive	245	8.5
Western Australia	23	0.8	Negative	2384	82.5
South Australia	26	0.9	Untested/unknown	260	9.0
Australian Capital Territory	49	1.7	STI diagnosis in past six months *		
Tasmania	12	0.4	Gonorrhoea	370	12.8
Aboriginal or Torres Strait Islander			Chlamydia	442	15.3
Yes	73	2.5	Syphilis	147	5.1
No	2816	97.5	Unsure	13	0.4
			Other	43	1.5

* Items are mutually exclusive

Follow-up and participation over time

Study participation fluctuated, with the most engagement occurring prior to Sydney World Pride. The reduction in completed surveys observed in February 2023 corresponded with Sydney World Pride events. An average of 1253 participants have completed the questionnaires each week since the closing of Sydney World Pride. A consistent number of participants have continued to respond to the weekly questionnaire in the past three months.

Figure 1. Follow-up and participation over time (N=2889).

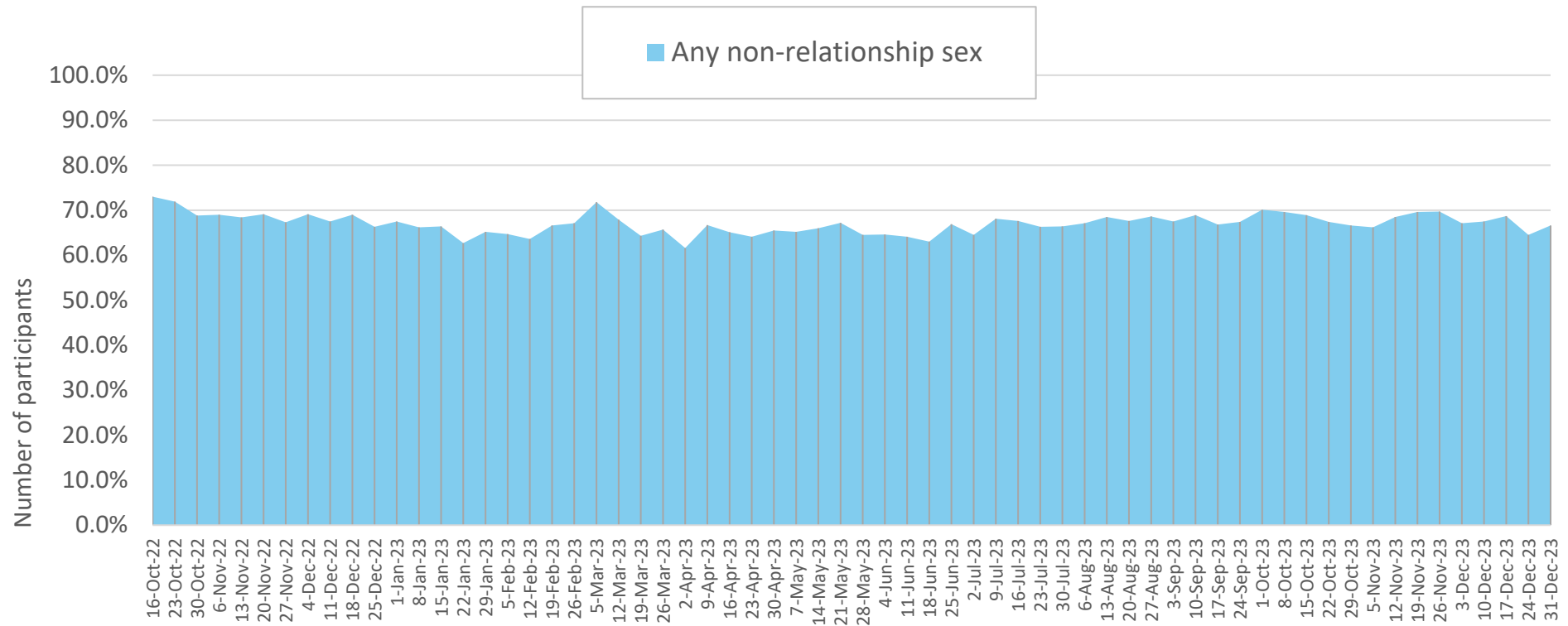


Note: Study launched on 10 October 2022. Sydney World Pride commenced on 16 February 2023 and ended 5 March 2023.

Mpox sexual risk behaviours

Globally, sexual contact was the most frequently mentioned and accounted for 82.0% of all mpox transmission instances. The reporting of sexual encounters with cis or trans male partners by individuals remained consistent throughout the TraX study period.

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

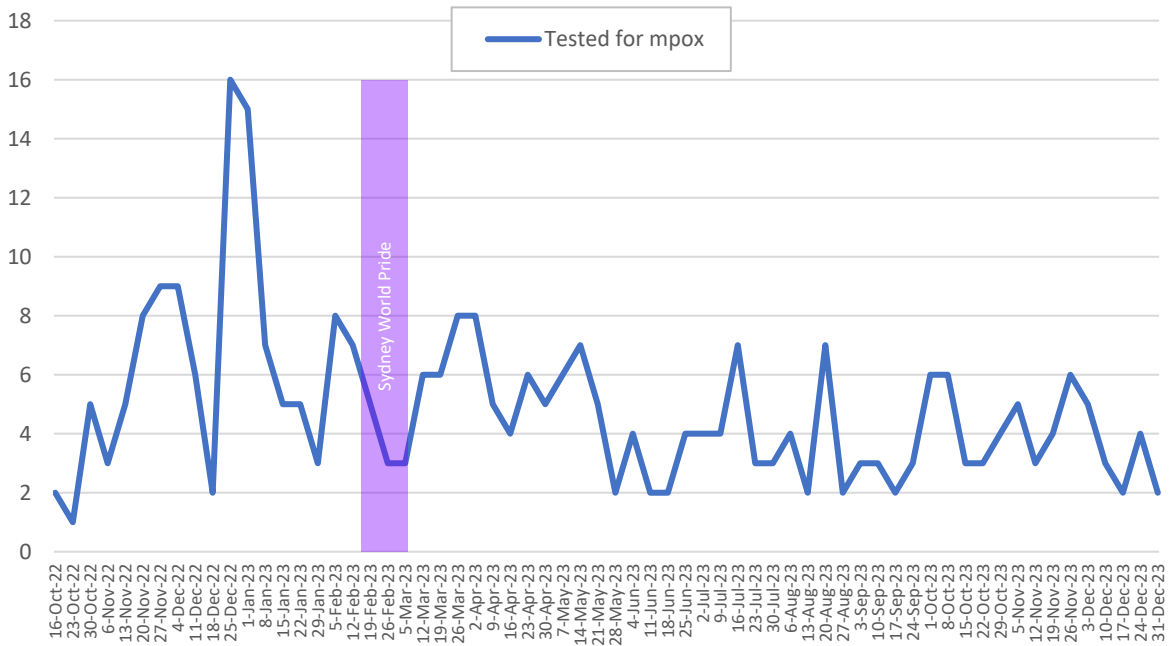


Note. The proportions above combine sexual behaviours reported with both cis and trans men.

Mpx testing

The monthly rates of testing for mpx have remained consistent at around 1.0%. Throughout the study period, 148 (5.1%) participants reported having ever had an mpx test in the previous week.

Figure 3. Number of participants reporting an mpx test in the previous week (N=2889).



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

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 3. Mpox vaccination at study entry (N = 2889).

Recruitment source	None	First dose	Second dose
NSW MoH EOI	216 (21.7)	576 (57.9)	203 (20.4)
Mpox clinics	30 (3.1)	551 (56.4)	396 (40.5)
Other	394 (43.0)	321 (35.0)	202 (22.0)
Total	640 (22.2)	1448 (50.1)	801 (27.7)

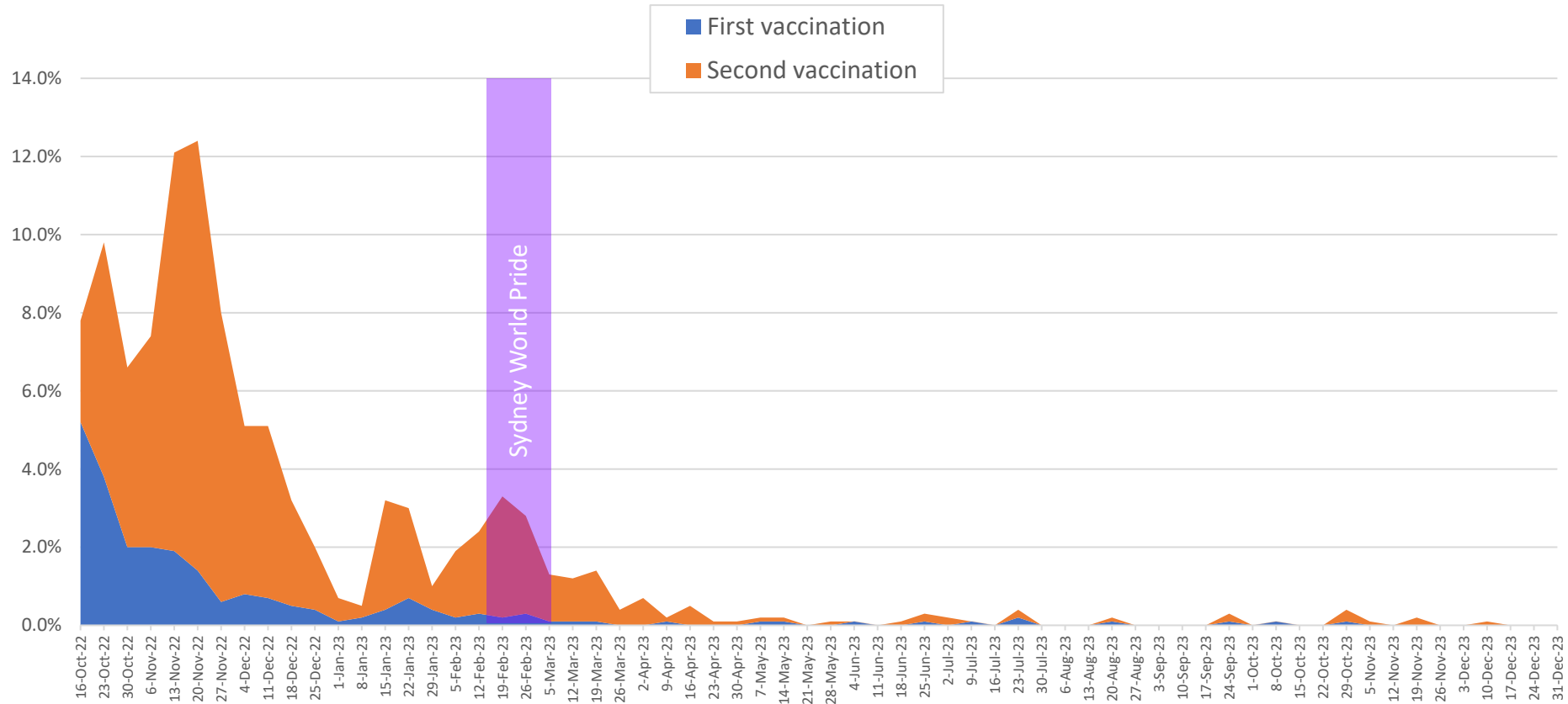
By 31 December 2023, the proportion of study participants who reported being unvaccinated against mpox had reduced by more than half to 9.2%, leaving 265 participants unvaccinated. The proportion who reported having received only one mpox vaccination also fell to 10.7% and the proportion of participants who had received both mpox vaccinations increased to 80.1%.

Table 4. Mpox vaccination at 31 December 2023 (N = 2889).

Recruitment source	None	First dose	Second dose
NSW MoH EOI	40 (4.0)	98 (9.8)	857 (86.1)
Mpox clinics	3 (0.3)	128 (13.1)	846 (86.6)
Other	222 (24.2)	84 (9.2)	611 (66.6)
Total	265 (9.2)	310 (10.7)	2314 (80.1)

Most participants had received two vaccine doses before the launch of Sydney World Pride. High vaccination rates prior to Sydney World Pride may have contributed to zero mpox cases being reported in the study.

Figure 4. Trends in first and second vaccination in the previous week among all participants (N=3597[†])



[†] These trends include participants who responded at study entry only.

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