

Annex 2. Supplementary materials

Supplementary Table 1. SEMVAC participating healthcare clinics and date of Ethics committee approval

Name	City/Region	Type setting	Date Ethics Committee approval	Ethics Committee
Charité – Universitätsmedizin Berlin Medizinische Klinik mit Schwerpunkt Infektiologie und Pneumologie	Berlin	University hospital	8/7/2022	EK Charité
Charité – Universitätsmedizin Berlin Infektiologisches MVZ	Berlin	University hospital		
Zentrum für Infektiologie Berlin Prenzlauer Berg (ZIBP)	Berlin	Specialist practice		
Praxis Kreuzberg Dres. Schulbin und Speer Dr. med. Hubert Schulbin	Berlin	Specialist practice		
Praxis Turmstr. Berlin Dr. med. Christoph Schuler	Berlin	Specialist practice		
Vivantes Auguste-Viktoria-Klinikum Dr. med. Caroline Isner	Berlin	Specialist practice		
Praxis Dr. Roswitha Vallée und Dr. Mathias Vallée	Berlin	Specialist practice		
ZIMIH Wünsche	Berlin	Specialist practice		
Praxis Dr. Cordes	Berlin	Specialist practice		
Praxiszentrum Kaiserdamm	Berlin	Specialist practice		

Name	City/Region	Type setting	Date Ethics Committee approval	Ethics Committee
EPIMED GmbH	Berlin	Research centre		
Checkpoint BLN	Berlin	Specialist practice		
Praxis an der Kulturbrauerei	Berlin	Specialist practice		
Praxis Goldstein	Berlin	Specialist practice		
Klinikum rechts der Isar	Munich	University Hospital	7/7/2022	EK TUM
MVZ München am Goetheplatz	Munich	Primary care centre - specialist	8/7/2022	EK der BLÄK
MVZ am Isartor Allgemeinmedizin, Innere Medizin und Infektiologie	Munich	Primary care centre - specialist		
ZIMI Infektiologie Schwabing	Munich	Specialist practice		
Ludwig-Maximilians-Universität München Medizinische Klinik und Poliklinik IV Zentrum für Klinische Infektiologie am LMU Klinikum - KIIK	Munich	University Hospital	25/5/2023	EK bei der LMU
Ambulanzzentrum des UKE GmbH Fachbereich Infektiologie	Hamburg	Primary care centre - specialist	12/9/2022	EK der ÄK Hamburg
ICH Hamburg-Stendal GbR ICH MVZ Stadtmitte	Hamburg	Primary care centre - specialist	12/9/2022	EK der ÄK Hamburg
Universitätsklinikum Köln Klinik I für Innere Medizin/Infektionsambulanz	Köln	University Hospital	10/01/2023	EK der Uni Köln
Praxis Hohenstaufenring	Köln	Specialist practice	20/9/2022	EK Nordrhein
Praxis am Ebertplatz	Köln	Specialist practice	21/9/2022	EK Nordrhein

Name	City/Region	Type setting	Date Ethics Committee approval	Ethics Committee
Dres. Kümmerle, Reiner				
Universitätsklinikum Bonn Medizinische Klinik I	Bonn	University Hospital	27/9/2022	EK UK Bonn
Praxis/Labor Dr. med. Heribert Knechten	Aachen	Specialist practice	22/9/2022	EK Nordrhein
WIR Zentrum für Sexuelle Gesundheit und Medizin Universitätsklinikum der Ruhr-Universität Bochum	Bochum	University Hospital	5/10/2022	EK der RUB
Haifa.med Düsseldorf	Düsseldorf	Specialist practice	23/9/2022	EK Nordrhein
Praxis Dr. Göbels	Düsseldorf	Specialist practice	24/9/2022	EK Nordrhein
Praxis Dr. med. Ines Ruck	Leipzig	Specialist practice	12/10/2022	EK der ÄK Sachsen
Universitätsklinikum Leipzig	Leipzig	University Hospital	17/3/2023	EK der Uni Leipzig
Infektiologisches Zentrum Klinikum Osnabrück	Osnabrück	Primary care centre - specialist	13/10/2022	EK der ÄK Niedersachsen
Infektiologikum Frankfurt	Frankfurt	Specialist practice	25/8/2022	EK der LÄK Hessen
Praxis Dr. Cseke, Dr. Frieze und Dr. Richter	Gießen	Specialist practice	25/8/2022	EK der LÄK Hessen
Universitätsklinikum Schleswig-Holstein, Campus Lübeck Klinik für Infektiologie und Mikrobiologie Hochschulambulanz Infektiologie	Lübeck	University Hospital	8/11/2022	EK der Uni Lübeck
Universitätsklinikum Augsburg	Augsburg	University Hospital	11/10/2022	EK bei der LMU

Name	City/Region	Type setting	Date Ethics Committee approval	Ethics Committee
Universitätsklinikum Essen Klinik für Dermatologie, Venerologie und Allergologie	Essen	University Hospital	12/12/2022	EK der Uni Duisburg-Essen
Praxis Dr. Seidel	Weimar	Specialist practice	180/10/2022	EK der LÄK Thüringen
Mannheimer Onkologie Praxis (Dr. Vogelmann)	Mannheim	Specialist practice	3/3/2023	EK der LÄK BaWü

Supplementary Table 2: Distribution of participants (n=) per study location at each month of the study.

	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	Total
	2022						2023									
Aachen	0	0	0	0	0	0	0	0	3	4	4	11	2	7	3	34
Augsburg	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	3
Berlin	635	679	681	653	308	219	243	140	48	84	45	26	21	10	11	3803
Bochum	0	0	0	0	0	0	0	0	15	25	34	22	16	5	7	124
Bonn	0	0	0	0	10	5	5	2	0	1	0	0	0	0	1	24
Essen	0	0	0	0	0	0	20	4	10	5	3	1	4	2	2	51
Frankfurt/M.	0	0	0	0	88	74	0	8	4	10	21	21	17	3	0	246
Hamburg	0	0	5	145	213	182	60	71	43	29	24	29	35	38	17	891
Köln	0	0	0	19	75	85	39	79	44	45	58	46	24	34	39	587
Leipzig	0	0	0	0	1	0	0	0	5	12	1	0	0	0	0	19
Lübeck	0	0	0	0	0	0	0	0	0	0	0	0	4	2	2	8
München	196	75	138	49	68	19	1	0	4	4	0	2	2	0	11	569
Total	831	754	824	866	763	584	370	304	176	219	190	158	125	102	93	6359

Supplementary Table 3: Baseline characteristics of PLWHIV participants by vaccination status

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA-BN at or after CED (N=256)	Unvaccinat ed (N=386)	Crossover (N=148)	1st dose MVA-BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
	<i>Mean (SD) or n(%)</i>						
Age	47.95 (10.85)	47.97 (10.71)	46.50 (11.40)	48.42 (11.11)	49.28 (9.93)	48.96 (10.75)	48.44 (10.10)
Height	180.11 (7.04)	180.29 (6.84)	179.81 (6.78)	179.47 (6.85)	180.03 (7.08)	180.82 (7.56)	180.47 (8.64)
Weight	81.20 (14.14)	80.45 (13.52)	81.71 (13.99)	82.24 (15.02)	82.63 (15.68)	81.06 (14.54)	83.07 (15.78)
BMI	25.05 (4.73)	24.73 (3.77)	25.23 (3.78)	25.52 (4.14)	25.47 (4.47)	24.72 (4.17)	25.93 (10.30)
Antiretroviral therapy (ART)	1901 (99.0)	1026 (99.2)	253 (98.8)	379 (98.2)	148 (100.0)	93 (98.9)	150 (100.0)
CD4 count cells per microliter	781.91 (307.05)	760.86 (288.73)	777.46 (301.42)	819.60 (350.74)	812.52 (347.44)	799.27 (321.34)	821.41 (294.51)
HIV viral copies per mL	1979.31 (18275.20)	1228.14 (8531.12)	423.73 (2493.69)	5549.18 (35926.11)	14105.85 (62820.39)	891.41 (5332.06)	24.70 (9.44)
HIV viral copies under detection limit	1433 (74.6)	794 (76.8)	198 (77.3)	286 (74.1)	121 (81.8)	51 (54.3)	104 (69.3)
PrEP users	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Systemic immunosuppressive	3 (0.2)	2 (0.2)	0 (0.0)	1 (0.3)	1 (0.7)	0 (0.0)	0 (0.0)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA-BN at or after CED (N=256)	Unvaccinat ed (N=386)	Crossover (N=148)	1st dose MVA-BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
therapy (e.g. systemic glucocorticoids)							
No immunosuppressive therapy	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Immunosuppression (non-HIV)	3 (0.2)	3 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HIV infection	1920 (100.0)	1034 (100.0)	256 (100.0)	386 (100.0)	148 (100.0)	94 (100.0)	150 (100.0)
STI infection	215 (11.2)	100 (9.7)	21 (8.2)	38 (9.8)	10 (6.8)	28 (29.8)	28 (18.7)
Rheumatological disease	15 (0.8)	12 (1.2)	1 (0.4)	2 (0.5)	1 (0.7)	0 (0.0)	0 (0.0)
Tumor/malignancy	45 (2.3)	23 (2.2)	9 (3.5)	9 (2.3)	3 (2.0)	1 (1.1)	3 (2.0)
Hematological disease	13 (0.7)	6 (0.6)	2 (0.8)	2 (0.5)	1 (0.7)	1 (1.1)	2 (1.3)
Chronic Cardiovascular disease	213 (11.1)	71 (6.9)	49 (19.1)	62 (16.1)	25 (16.9)	8 (8.5)	23 (15.3)
Chronic lung disease	71 (3.7)	25 (2.4)	19 (7.4)	13 (3.4)	6 (4.1)	10 (10.6)	4 (2.7)
Chronic kidney disease	31 (1.6)	13 (1.3)	6 (2.3)	9 (2.3)	4 (2.7)	0 (0.0)	3 (2.0)
Chronic liver disease	105 (5.5)	47 (4.5)	18 (7.0)	24 (6.2)	9 (6.1)	8 (8.5)	8 (5.3)
Diabetes mellitus	43 (2.2)	18 (1.7)	11 (4.3)	10 (2.6)	3 (2.0)	0 (0.0)	4 (2.7)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA-BN at or after CED (N=256)	Unvaccinat ed (N=386)	Crossover (N=148)	1st dose MVA-BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
Atopic dermatitis (neurodermatitis)	12 (0.6)	8 (0.8)	1 (0.4)	2 (0.5)	0 (0.0)	1 (1.1)	0 (0.0)
Gender (at birth) Not specified	2 (0.1)	0 (0.0)	1 (0.4)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Male	1774 (92.4)	956 (92.5)	238 (93.0)	349 (90.4)	137 (92.6)	88 (93.6)	143 (95.3)
Female	2 (0.1)	1 (0.1)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	142 (7.4)	77 (7.4)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)
Gender Identity Not specified	2 (0.1)	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Male	1750 (91.1)	939 (90.8)	237 (92.6)	346 (89.6)	135 (91.2)	86 (91.5)	142 (94.7)
Female	6 (0.3)	3 (0.3)	0 (0.0)	2 (0.5)	0 (0.0)	1 (1.1)	0 (0.0)
Trans male	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Trans female	2 (0.1)	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Non-binary	17 (0.9)	10 (1.0)	2 (0.8)	3 (0.8)	2 (1.4)	1 (1.1)	1 (0.7)
Missing	142 (7.4)	77 (7.4)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)
Smallpox vaccine Not specified	240 (12.5)	117 (11.3)	45 (17.6)	37 (9.6)	13 (8.8)	12 (12.8)	29 (19.3)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA-BN at or after CED (N=256)	Unvaccinat ed (N=386)	Crossover (N=148)	1st dose MVA-BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
None	904 (47.1)	496 (48.0)	110 (43.0)	201 (52.1)	72 (48.6)	30 (31.9)	67 (44.7)
Yes, vacc. certificate, once	194 (10.1)	87 (8.4)	41 (16.0)	26 (6.7)	15 (10.1)	20 (21.3)	20 (13.3)
Yes, vacc certificate twice	160 (8.3)	64 (6.2)	31 (12.1)	35 (9.1)	17 (11.5)	8 (8.5)	22 (14.7)
Yes, probably (one scar/patient history)	286 (14.9)	173 (16.7)	24 (9.4)	55 (14.2)	15 (10.1)	23 (24.5)	11 (7.3)
Yes, probably (two scars/patient history)	136 (7.1)	97 (9.4)	5 (2.0)	32 (8.3)	16 (10.8)	1 (1.1)	1 (0.7)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Supplementary Table 4: Baseline characteristics of PrEP user participants by vaccination status

	All included (N=3009)	1st dose MVA-BN at CED (N=1375)	2nd dose MVA-BN at or after CED (N=490)	Unvaccinated (N=621)	Crossover (N=302)	1st dose MVA-BN prior to CED (N=167)	2nd dose MVA- BN prior to CED (N=356)
	<i>Mean (SD) or n(%)</i>						
Age	37.21 (9.86)	37.16 (9.90)	36.02 (8.56)	36.68 (10.51)	38.23 (10.42)	42.59 (11.46)	37.46 (8.51)
Height	180.44 (7.16)	180.38 (7.04)	180.40 (7.31)	180.11 (6.92)	180.21 (6.63)	180.87 (6.57)	181.01 (8.00)

	All included (N=3009)	1st dose MVA-BN at CED (N=1375)	2nd dose MVA-BN at or after CED (N=490)	Unvaccinated (N=621)	Crossover (N=302)	1st dose MVA-BN prior to CED (N=167)	2nd dose MVA- BN prior to CED (N=356)
Weight	79.79 (15.02)	78.87 (14.16)	78.23 (13.41)	80.98 (16.57)	81.91 (16.48)	82.20 (14.34)	81.75 (16.99)
BMI	24.51 (5.17)	24.24 (4.49)	23.96 (3.54)	24.94 (4.85)	25.18 (4.71)	25.09 (3.94)	25.16 (8.70)
Antiretroviral therapy (ART)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
CD4 count cells per microliter	NA	NA	NA	NA	NA	NA	NA
HIV viral copies per mL	NA	NA	NA	NA	NA	NA	NA
HIV viral copies under detection limit	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
PrEP users	3009 (100.0)	1375 (100.0)	490 (100.0)	621 (100.0)	302 (100.0)	167 (100.0)	356 (100.0)
SIT*	3 (0.1)	3 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
No immunosuppressive therapy	2263 (75.2)	1039 (75.6)	371 (75.7)	501 (80.7)	244 (80.8)	109 (65.3)	243 (68.3)
Immunosuppression (non- HIV)	12 (0.4)	9 (0.7)	1 (0.2)	2 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
HIV infection	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
STI infection	403 (13.4)	211 (15.3)	47 (9.6)	61 (9.8)	29 (9.6)	24 (14.4)	60 (16.9)
Rheumatological disease	19 (0.6)	11 (0.8)	3 (0.6)	3 (0.5)	2 (0.7)	1 (0.6)	1 (0.3)
Tumor/malignancy	22 (0.7)	6 (0.4)	6 (1.2)	3 (0.5)	3 (1.0)	4 (2.4)	3 (0.8)

[illegible]

*Systemic immunosuppressive therapy (e.g. systemic glucocorticoids)

Supplementary Table 5: Baseline characteristics of participants with a history of smallpox vaccine (HSMV) by vaccination status.

	All included (N=1739)	1st dose MVA- BN at CED (N=936)	2nd dose MVA- BN at or after CED (N=221)	Unvaccinated (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
	<i>Mean (SD) or n(%)</i>						
Age	53.61 (8.74)	54.03 (8.42)	51.36 (10.12)	54.28 (8.82)	54.43 (7.23)	53.49 (7.43)	52.80 (9.23)
Height	180.38 (6.93)	180.41 (6.94)	180.24 (7.09)	180.18 (6.70)	179.79 (6.41)	180.63 (7.38)	180.65 (6.60)
Weight	83.25 (14.80)	82.76 (14.14)	82.57 (13.68)	85.55 (17.13)	85.27 (17.13)	83.29 (14.92)	81.70 (14.18)
BMI	25.55 (4.14)	25.40 (3.91)	25.33 (3.61)	26.33 (5.06)	26.34 (4.95)	25.48 (4.15)	24.99 (3.57)
Antiretroviral therapy (ART)	937 (53.9)	511 (54.6)	126 (57.0)	173 (54.7)	72 (52.9)	62 (39.7)	65 (59.1)
CD4 count cells per microliter	768.38 (297.31)	753.28 (284.59)	739.15 (286.00)	819.09 (346.69)	818.84 (360.67)	785.07 (274.58)	784.95 (279.00)
HIV viral copies per mL	2375.66 (21195.81)	1439.05 (9134.48)	26.69 (22.00)	8354.47 (48175.68)	35163.75 (99332.86)	1255.78 (6410.51)	27.12 (11.38)
HIV viral copies under detection limit	709 (40.8)	392 (41.9)	99 (44.8)	140 (44.3)	62 (45.6)	33 (21.2)	45 (40.9)
PrEP users	466 (26.8)	206 (22.0)	55 (24.9)	92 (29.1)	46 (33.8)	74 (47.4)	39 (35.5)
Systemic immunosuppressi	6 (0.3)	3 (0.3)	1 (0.5)	2 (0.6)	2 (1.5)	0 (0.0)	0 (0.0)

	All included (N=1739)	1st dose MVA- BN at CED (N=936)	2nd dose MVA- BN at or after CED (N=221)	Unvaccinated (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
ve therapy (e.g. systemic glucocorticoids)							
No immunosuppressi ve therapy	501 (28.8)	293 (31.3)	55 (24.9)	81 (25.6)	41 (30.1)	44 (28.2)	28 (25.5)
Immunosuppressi on (non-HIV)	7 (0.4)	7 (0.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HIV infection	944 (54.3)	514 (54.9)	127 (57.5)	176 (55.7)	72 (52.9)	62 (39.7)	65 (59.1)
STI infection	196 (11.3)	101 (10.8)	17 (7.7)	37 (11.7)	11 (8.1)	30 (19.2)	11 (10.0)
Rheumatological disease	15 (0.9)	11 (1.2)	2 (0.9)	2 (0.6)	2 (1.5)	0 (0.0)	0 (0.0)
Tumor/malignanc y	49 (2.8)	20 (2.1)	10 (4.5)	10 (3.2)	5 (3.7)	5 (3.2)	4 (3.6)
Hematological disease	14 (0.8)	6 (0.6)	2 (0.9)	2 (0.6)	1 (0.7)	2 (1.3)	2 (1.8)
Chronic Cardiovascular disease	286 (16.4)	103 (11.0)	57 (25.8)	69 (21.8)	30 (22.1)	32 (20.5)	25 (22.7)
Chronic lung disease	86 (4.9)	29 (3.1)	19 (8.6)	19 (6.0)	8 (5.9)	15 (9.6)	4 (3.6)
Chronic kidney disease	33 (1.9)	15 (1.6)	5 (2.3)	7 (2.2)	5 (3.7)	3 (1.9)	3 (2.7)

	All included (N=1739)	1st dose MVA- BN at CED (N=936)	2nd dose MVA- BN at or after CED (N=221)	Unvaccinated (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
Chronic liver disease	74 (4.3)	31 (3.3)	15 (6.8)	17 (5.4)	7 (5.1)	7 (4.5)	4 (3.6)
Diabetes mellitus	60 (3.5)	26 (2.8)	13 (5.9)	13 (4.1)	6 (4.4)	3 (1.9)	5 (4.5)
Atopic dermatitis (neurodermatitis)	10 (0.6)	6 (0.6)	1 (0.5)	1 (0.3)	0 (0.0)	1 (0.6)	1 (0.9)
Gender (at birth) Not specified	2 (0.1)	1 (0.1)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Male	1614 (92.8)	869 (92.8)	206 (93.2)	291 (92.1)	131 (96.3)	145 (92.9)	103 (93.6)
Female	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	122 (7.0)	65 (6.9)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)
Gender Identity Not specified	4 (0.2)	3 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)
Male	1599 (91.9)	859 (91.8)	206 (93.2)	287 (90.8)	129 (94.9)	144 (92.3)	103 (93.6)
Female	4 (0.2)	3 (0.3)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Trans male	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Trans female	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Non-binary	8 (0.5)	4 (0.4)	0 (0.0)	4 (1.3)	2 (1.5)	0 (0.0)	0 (0.0)
Missing	122 (7.0)	65 (6.9)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)

Supplementary Table 6: Baseline Sexual behaviour in the overall MSM cohort and by subgroup.

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
Sexually attracted to:				
Men	5629 (89.8)	1754 (91.4)	2687 (89.3)	1602 (92.1)
Women	371 (5.9)	74 (3.9)	179 (5.9)	63 (3.6)
Non-binary	338 (5.4)	54 (2.8)	201 (6.7)	38 (2.2)
None	12 (0.2)	4 (0.2)	3 (0.1)	4 (0.2)
Not specified	23 (0.4)	11 (0.6)	9 (0.3)	10 (0.6)
Missing	576 (9.2)	143 (7.4)	305 (10.1)	122 (7.0)
Sexually active last 3 months				
Not specified	8 (0.1)	6 (0.3)	1 (0.0)	6 (0.3)
No	462 (7.4)	253 (13.2)	102 (3.4)	211 (12.1)
Yes	5223 (83.4)	1519 (79.1)	2604 (86.5)	1400 (80.5)
Missing	572 (9.1)	142 (7.4)	302 (10.0)	122 (7.0)
# of male sexual partners last 3 months				
Not specified	35 (0.6)	18 (0.9)	12 (0.4)	14 (0.8)
0	494 (7.9)	259 (13.5)	109 (3.6)	217 (12.5)
1	847 (13.5)	316 (16.5)	251 (8.3)	235 (13.5)

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
2	723 (11.5)	193 (10.1)	339 (11.3)	203 (11.7)
3	681 (10.9)	189 (9.8)	339 (11.3)	176 (10.1)
4	510 (8.1)	131 (6.8)	276 (9.2)	141 (8.1)
5	528 (8.4)	134 (7.0)	296 (9.8)	122 (7.0)
6-10	975 (15.6)	245 (12.8)	575 (19.1)	251 (14.4)
>10	890 (14.2)	286 (14.9)	508 (16.9)	252 (14.5)
Missing	582 (9.3)	149 (7.8)	304 (10.1)	128 (7.4)
# of female sexual partners last 3 months				
Not specified	179 (2.9)	79 (4.1)	67 (2.2)	76 (4.4)
0	5291 (84.5)	1650 (85.9)	2535 (84.2)	1492 (85.8)
1	123 (2.0)	26 (1.4)	60 (2.0)	26 (1.5)
2	43 (0.7)	9 (0.5)	22 (0.7)	13 (0.7)
3	17 (0.3)	4 (0.2)	6 (0.2)	1 (0.1)
4	9 (0.1)	0 (0.0)	6 (0.2)	0 (0.0)
5	5 (0.1)	0 (0.0)	3 (0.1)	0 (0.0)
6-10	8 (0.1)	0 (0.0)	3 (0.1)	0 (0.0)
>10	4 (0.1)	1 (0.1)	2 (0.1)	1 (0.1)
Missing	586 (9.4)	151 (7.9)	305 (10.1)	130 (7.5)
# many sexual partners you had sex without a condom last 3 months				
Not specified	89 (1.4)	35 (1.8)	29 (1.0)	36 (2.1)

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
0	1088 (17.4)	372 (19.4)	325 (10.8)	395 (22.7)
1	1161 (18.5)	329 (17.1)	449 (14.9)	255 (14.7)
2	687 (11.0)	182 (9.5)	388 (12.9)	169 (9.7)
3	576 (9.2)	183 (9.5)	303 (10.1)	158 (9.1)
4	358 (5.7)	108 (5.6)	216 (7.2)	94 (5.4)
5	384 (6.1)	111 (5.8)	225 (7.5)	106 (6.1)
6-10	680 (10.9)	210 (10.9)	399 (13.3)	198 (11.4)
>10	660 (10.5)	241 (12.6)	371 (12.3)	200 (11.5)
Missing	582 (9.3)	149 (7.8)	304 (10.1)	128 (7.4)
In what ways have you had sex in the last 3 months?				
Oral - passive	4490 (71.7)	1173 (61.1)	2347 (78.0)	1121 (64.5)
Oral - active	4489 (71.7)	1257 (65.5)	2308 (76.7)	1126 (64.7)
Anal - passive	3444 (55.0)	1093 (56.9)	1774 (59.0)	846 (48.6)
Anal - active	3618 (57.7)	954 (49.7)	1940 (64.5)	907 (52.2)
Vaginal - passive	29 (0.5)	5 (0.3)	10 (0.3)	5 (0.3)
Vaginal - active	175 (2.8)	36 (1.9)	79 (2.6)	37 (2.1)
Other	530 (8.5)	184 (9.6)	216 (7.2)	167 (9.6)
Not specified	46 (0.7)	26 (1.4)	12 (0.4)	23 (1.3)

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
In the last 3 months did you knowingly have sex with a person who				
You did not know before	3628 (57.9)	965 (50.3)	1994 (66.3)	944 (54.3)
Did not use condoms	3146 (50.2)	979 (51.0)	1750 (58.2)	834 (48.0)
Intravenously takes drugs (injects)	245 (3.9)	136 (7.1)	89 (3.0)	90 (5.2)
Sex worker	262 (4.2)	96 (5.0)	126 (4.2)	90 (5.2)
None of the special partner group	777 (12.4)	242 (12.6)	268 (8.9)	213 (12.2)
Not specified	173 (2.8)	71 (3.7)	62 (2.1)	61 (3.5)
Have you had an STI in the last 3 months?				
Not specified	35 (0.6)	18 (0.9)	12 (0.4)	8 (0.5)
No	4695 (74.9)	1491 (77.7)	2144 (71.3)	1429 (82.2)
Yes, one	766 (12.2)	221 (11.5)	436 (14.5)	149 (8.6)
Yes, several	129 (2.1)	30 (1.6)	81 (2.7)	15 (0.9)
Uncertain/Unclear (I had symptoms but did not get tested)	57 (0.9)	11 (0.6)	31 (1.0)	10 (0.6)
Missing	583 (9.3)	149 (7.8)	305 (10.1)	128 (7.4)
Have taken HIV post exposure prophylaxis (PEP) in the last 3 months				
Not specified	116 (1.9)	73 (3.8)	31 (1.0)	56 (3.2)

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
No	5342 (85.3)	1666 (86.8)	2509 (83.4)	1503 (86.4)
Yes, once	48 (0.8)	7 (0.4)	33 (1.1)	6 (0.3)
Yes, twice	10 (0.2)	0 (0.0)	8 (0.3)	1 (0.1)
Yes, three times or more	165 (2.6)	24 (1.2)	123 (4.1)	44 (2.5)
Missing	584 (9.3)	150 (7.8)	305 (10.1)	129 (7.4)
Have taken HIV PrEP in the last 3 months				
Not specified	94 (1.5)	67 (3.5)	18 (0.6)	38 (2.2)
No	2828 (45.1)	1521 (79.2)	352 (11.7)	1069 (61.5)
Yes, regularly and daily	2039 (32.5)	179 (9.3)	1723 (57.3)	387 (22.3)
Yes, regularly, but not currently	114 (1.8)	1 (0.1)	89 (3.0)	16 (0.9)
Yes, irregularly and several times a week	120 (1.9)	3 (0.2)	109 (3.6)	18 (1.0)
Yes, but only when I needed it (on demand PrEP/event based dosing)	496 (7.9)	6 (0.3)	415 (13.8)	88 (5.1)
Missing	574 (9.2)	143 (7.4)	303 (10.1)	123 (7.1)
Have you had contact with person with mpox in the last 4 weeks				
Not specified	106 (1.7)	34 (1.8)	55 (1.8)	40 (2.3)

	All Participants (N=6265)	All PLWHIV (N=1920)	All Participants PrEP users (N=3009)	All Participants HSMV (N=1739)
No	5393 (86.1)	1666 (86.8)	2580 (85.7)	1525 (87.7)
Yes	190 (3.0)	77 (4.0)	69 (2.3)	50 (2.9)
Missing	576 (9.2)	143 (7.4)	305 (10.1)	124 (7.1)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last 4 weeks				
Not specified	31 (0.5)	11 (0.6)	16 (0.5)	8 (0.5)
No	5494 (87.7)	1724 (89.8)	2600 (86.4)	1568 (90.2)
Yes	165 (2.6)	42 (2.2)	89 (3.0)	40 (2.3)
Missing	575 (9.2)	143 (7.4)	304 (10.1)	123 (7.1)

Supplementary Table 7: Baseline Sexual Behaviour for the overall MSM cohort stratified by vaccination status, *including all categories in number of sexual partners.*

	All included (N=6265)	1st dose MVA-BN at CED (N=3308)	2nd dose MVA-BN at or after CED (N=938)	Unvaccinated (N=1188)	Crossover (N=542)	1st dose MVA-BN prior to CED (N=300)	2nd dose MVA- BN prior to CED (N=531)
	Mean (SD) or n(%)						
Sexually attracted to: Men	5629 (89.8)	2981 (90.1)	837 (89.2)	1032 (86.9)	489 (90.2)	276 (92.0)	503 (94.7)

	All included (N=6265)	1st dose MVA-BN at CED (N=3308)	2nd dose MVA-BN at or after CED (N=938)	Unvaccinated (N=1188)	Crossover (N=542)	1st dose MVA-BN prior to CED (N=300)	2nd dose MVA- BN prior to CED (N=531)
Women	371 (5.9)	214 (6.5)	44 (4.7)	75 (6.3)	32 (5.9)	13 (4.3)	25 (4.7)
Non-binary	338 (5.4)	184 (5.6)	57 (6.1)	61 (5.1)	29 (5.4)	12 (4.0)	24 (4.5)
None	12 (0.2)	8 (0.2)	0 (0.0)	3 (0.3)	2 (0.4)	1 (0.3)	0 (0.0)
Not specified	23 (0.4)	14 (0.4)	1 (0.1)	4 (0.3)	1 (0.2)	3 (1.0)	1 (0.2)
Missing	576 (9.2)	294 (8.9)	99 (10.6)	138 (11.6)	48 (8.9)	19 (6.3)	26 (4.9)
Sexually active last 3 months							
Not specified	8 (0.1)	6 (0.2)	0 (0.0)	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)
No	462 (7.4)	251 (7.6)	49 (5.2)	131 (11.0)	50 (9.2)	16 (5.3)	15 (2.8)
Yes	5223 (83.4)	2759 (83.4)	791 (84.3)	918 (77.3)	445 (82.1)	265 (88.3)	490 (92.3)
Missing	572 (9.1)	292 (8.8)	98 (10.4)	137 (11.5)	47 (8.7)	19 (6.3)	26 (4.9)
# of male sexual partners last 3 months							
Not specified	35 (0.6)	20 (0.6)	6 (0.6)	4 (0.3)	2 (0.4)	3 (1.0)	2 (0.4)
0	494 (7.9)	269 (8.1)	51 (5.4)	143 (12.0)	56 (10.3)	16 (5.3)	15 (2.8)
1	847 (13.5)	495 (15.0)	107 (11.4)	173 (14.6)	63 (11.6)	31 (10.3)	41 (7.7)
2	723 (11.5)	404 (12.2)	86 (9.2)	159 (13.4)	82 (15.1)	34 (11.3)	40 (7.5)
3	681 (10.9)	369 (11.2)	100 (10.7)	120 (10.1)	61 (11.3)	24 (8.0)	68 (12.8)
4	510 (8.1)	248 (7.5)	90 (9.6)	103 (8.7)	58 (10.7)	21 (7.0)	48 (9.0)
5	528 (8.4)	284 (8.6)	77 (8.2)	91 (7.7)	51 (9.4)	32 (10.7)	44 (8.3)
6-10	975 (15.6)	486 (14.7)	150 (16.0)	157 (13.2)	78 (14.4)	57 (19.0)	125 (23.5)

	All included (N=6265)	1st dose MVA-BN at CED (N=3308)	2nd dose MVA-BN at or after CED (N=938)	Unvaccinated (N=1188)	Crossover (N=542)	1st dose MVA-BN prior to CED (N=300)	2nd dose MVA- BN prior to CED (N=531)
>10	890 (14.2)	435 (13.1)	172 (18.3)	98 (8.2)	43 (7.9)	63 (21.0)	122 (23.0)
Missing	582 (9.3)	298 (9.0)	99 (10.6)	140 (11.8)	48 (8.9)	19 (6.3)	26 (4.9)
# of female sexual partners last 3 months							
Not specified	179 (2.9)	93 (2.8)	20 (2.1)	48 (4.0)	21 (3.9)	8 (2.7)	10 (1.9)
0	5291 (84.5)	2806 (84.8)	786 (83.8)	952 (80.1)	456 (84.1)	262 (87.3)	485 (91.3)
1	123 (2.0)	68 (2.1)	20 (2.1)	21 (1.8)	6 (1.1)	8 (2.7)	6 (1.1)
2	43 (0.7)	23 (0.7)	5 (0.5)	10 (0.8)	4 (0.7)	2 (0.7)	3 (0.6)
3	17 (0.3)	5 (0.2)	5 (0.5)	7 (0.6)	4 (0.7)	0 (0.0)	0 (0.0)
4	9 (0.1)	4 (0.1)	0 (0.0)	4 (0.3)	2 (0.4)	0 (0.0)	1 (0.2)
5	5 (0.1)	2 (0.1)	1 (0.1)	2 (0.2)	1 (0.2)	0 (0.0)	0 (0.0)
6-10	8 (0.1)	4 (0.1)	1 (0.1)	2 (0.2)	0 (0.0)	1 (0.3)	0 (0.0)
>10	4 (0.1)	1 (0.0)	1 (0.1)	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	586 (9.4)	302 (9.1)	99 (10.6)	140 (11.8)	48 (8.9)	19 (6.3)	26 (4.9)
# many sexual partners you had sex without a condom last 3 months							
Not specified	89 (1.4)	52 (1.6)	5 (0.5)	18 (1.5)	9 (1.7)	7 (2.3)	7 (1.3)
0	1088 (17.4)	635 (19.2)	125 (13.3)	243 (20.5)	99 (18.3)	38 (12.7)	47 (8.9)
1	1161 (18.5)	643 (19.4)	160 (17.1)	241 (20.3)	114 (21.0)	45 (15.0)	72 (13.6)
2	687 (11.0)	365 (11.0)	95 (10.1)	154 (13.0)	65 (12.0)	31 (10.3)	42 (7.9)

	All included (N=6265)	1st dose MVA-BN at CED (N=3308)	2nd dose MVA-BN at or after CED (N=938)	Unvaccinated (N=1188)	Crossover (N=542)	1st dose MVA-BN prior to CED (N=300)	2nd dose MVA- BN prior to CED (N=531)
Not specified	116 (1.9)	72 (2.2)	19 (2.0)	15 (1.3)	6 (1.1)	4 (1.3)	6 (1.1)
No	5342 (85.3)	2831 (85.6)	790 (84.2)	983 (82.7)	466 (86.0)	265 (88.3)	473 (89.1)
Yes, once	48 (0.8)	24 (0.7)	3 (0.3)	13 (1.1)	5 (0.9)	3 (1.0)	5 (0.9)
Yes, twice	10 (0.2)	7 (0.2)	0 (0.0)	1 (0.1)	1 (0.2)	2 (0.7)	0 (0.0)
Yes, three times or more	165 (2.6)	74 (2.2)	27 (2.9)	36 (3.0)	16 (3.0)	7 (2.3)	21 (4.0)
Missing	584 (9.3)	300 (9.1)	99 (10.6)	140 (11.8)	48 (8.9)	19 (6.3)	26 (4.9)
Have taken HIV PrEP in the last 3 months							
Not specified	94 (1.5)	55 (1.7)	14 (1.5)	13 (1.1)	5 (0.9)	6 (2.0)	6 (1.1)
No	2828 (45.1)	1649 (49.8)	362 (38.6)	522 (43.9)	227 (41.9)	126 (42.0)	169 (31.8)
Yes, regularly and daily	2039 (32.5)	947 (28.6)	352 (37.5)	365 (30.7)	186 (34.3)	109 (36.3)	266 (50.1)
Yes, regularly, but not currently	114 (1.8)	61 (1.8)	19 (2.0)	20 (1.7)	9 (1.7)	4 (1.3)	10 (1.9)
Yes, irregularly and several times a week	120 (1.9)	49 (1.5)	24 (2.6)	23 (1.9)	14 (2.6)	9 (3.0)	15 (2.8)
Yes, but only when I needed it (on demand PrEP/event based dosing)	496 (7.9)	253 (7.6)	69 (7.4)	108 (9.1)	54 (10.0)	27 (9.0)	39 (7.3)
Missing	574 (9.2)	294 (8.9)	98 (10.4)	137 (11.5)	47 (8.7)	19 (6.3)	26 (4.9)

	All included (N=6265)	1st dose MVA-BN at CED (N=3308)	2nd dose MVA-BN at or after CED (N=938)	Unvaccinated (N=1188)	Crossover (N=542)	1st dose MVA-BN prior to CED (N=300)	2nd dose MVA- BN prior to CED (N=531)
Have you had contact with person with mpox in the last 4 weeks							
Not specified	106 (1.7)	63 (1.9)	12 (1.3)	17 (1.4)	7 (1.3)	4 (1.3)	10 (1.9)
No	5393 (86.1)	2817 (85.2)	811 (86.5)	1002 (84.3)	471 (86.9)	272 (90.7)	491 (92.5)
Yes	190 (3.0)	132 (4.0)	17 (1.8)	32 (2.7)	17 (3.1)	5 (1.7)	4 (0.8)
Missing	576 (9.2)	296 (8.9)	98 (10.4)	137 (11.5)	47 (8.7)	19 (6.3)	26 (4.9)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last 4 weeks							
Not specified	31 (0.5)	20 (0.6)	1 (0.1)	5 (0.4)	1 (0.2)	1 (0.3)	4 (0.8)
No	5494 (87.7)	2921 (88.3)	813 (86.7)	1004 (84.5)	472 (87.1)	268 (89.3)	488 (91.9)
Yes	165 (2.6)	72 (2.2)	26 (2.8)	42 (3.5)	22 (4.1)	12 (4.0)	13 (2.4)
Missing	575 (9.2)	295 (8.9)	98 (10.4)	137 (11.5)	47 (8.7)	19 (6.3)	26 (4.9)

Supplementary Table 8: Baseline Sexual Behaviour in PLWHIV participants by vaccination status, *including all categories in number of sexual partners.*

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
Sexually attracted to:							
Men	1754 (91.4)	945 (91.4)	238 (93.0)	343 (88.9)	136 (91.9)	86 (91.5)	142 (94.7)
Women	74 (3.9)	44 (4.3)	11 (4.3)	11 (2.8)	2 (1.4)	4 (4.3)	4 (2.7)
Non-binary	54 (2.8)	33 (3.2)	6 (2.3)	9 (2.3)	2 (1.4)	3 (3.2)	3 (2.0)
None	4 (0.2)	3 (0.3)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
Not specified	11 (0.6)	7 (0.7)	0 (0.0)	3 (0.8)	0 (0.0)	1 (1.1)	0 (0.0)
Missing	143 (7.4)	77 (7.4)	18 (7.0)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)
Sexually active last 3 months							
Not specified	6 (0.3)	4 (0.4)	0 (0.0)	2 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)
No	253 (13.2)	126 (12.2)	23 (9.0)	86 (22.3)	28 (18.9)	12 (12.8)	6 (4.0)
Yes	1519 (79.1)	827 (80.0)	216 (84.4)	263 (68.1)	109 (73.6)	76 (80.9)	137 (91.3)
Missing	142 (7.4)	77 (7.4)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)
# of male sexual partners last 3 months							
Not specified	18 (0.9)	12 (1.2)	3 (1.2)	1 (0.3)	1 (0.7)	2 (2.1)	0 (0.0)
0	259 (13.5)	129 (12.5)	23 (9.0)	89 (23.1)	29 (19.6)	12 (12.8)	6 (4.0)
1	316 (16.5)	159 (15.4)	36 (14.1)	91 (23.6)	29 (19.6)	14 (14.9)	16 (10.7)
2	193 (10.1)	103 (10.0)	16 (6.2)	45 (11.7)	17 (11.5)	12 (12.8)	17 (11.3)
3	189 (9.8)	100 (9.7)	29 (11.3)	29 (7.5)	16 (10.8)	7 (7.4)	24 (16.0)
4	131 (6.8)	62 (6.0)	26 (10.2)	27 (7.0)	16 (10.8)	8 (8.5)	8 (5.3)
5	134 (7.0)	79 (7.6)	21 (8.2)	21 (5.4)	9 (6.1)	6 (6.4)	7 (4.7)
6-10	245 (12.8)	147 (14.2)	32 (12.5)	24 (6.2)	12 (8.1)	14 (14.9)	28 (18.7)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
>10	286 (14.9)	162 (15.7)	52 (20.3)	22 (5.7)	8 (5.4)	13 (13.8)	37 (24.7)
Missing	149 (7.8)	81 (7.8)	18 (7.0)	37 (9.6)	11 (7.4)	6 (6.4)	7 (4.7)
# of female sexual partners last 3 months							
Not specified	79 (4.1)	44 (4.3)	9 (3.5)	21 (5.4)	7 (4.7)	3 (3.2)	2 (1.3)
0	1650 (85.9)	886 (85.7)	222 (86.7)	320 (82.9)	129 (87.2)	83 (88.3)	139 (92.7)
1	26 (1.4)	15 (1.5)	3 (1.2)	5 (1.3)	0 (0.0)	1 (1.1)	2 (1.3)
2	9 (0.5)	5 (0.5)	1 (0.4)	2 (0.5)	1 (0.7)	1 (1.1)	0 (0.0)
3	4 (0.2)	1 (0.1)	2 (0.8)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6-10	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
>10	1 (0.1)	0 (0.0)	1 (0.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	151 (7.9)	83 (8.0)	18 (7.0)	37 (9.6)	11 (7.4)	6 (6.4)	7 (4.7)
# many sexual partners you had sex without a condom last 3 months							
Not specified	35 (1.8)	23 (2.2)	2 (0.8)	4 (1.0)	3 (2.0)	4 (4.3)	2 (1.3)
0	372 (19.4)	185 (17.9)	35 (13.7)	123 (31.9)	38 (25.7)	17 (18.1)	12 (8.0)
1	329 (17.1)	163 (15.8)	40 (15.6)	87 (22.5)	32 (21.6)	15 (16.0)	24 (16.0)
2	182 (9.5)	103 (10.0)	19 (7.4)	37 (9.6)	13 (8.8)	9 (9.6)	14 (9.3)
3	183 (9.5)	94 (9.1)	30 (11.7)	30 (7.8)	17 (11.5)	12 (12.8)	17 (11.3)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
4	108 (5.6)	63 (6.1)	16 (6.2)	19 (4.9)	11 (7.4)	2 (2.1)	8 (5.3)
5	111 (5.8)	63 (6.1)	17 (6.6)	16 (4.1)	7 (4.7)	4 (4.3)	11 (7.3)
6-10	210 (10.9)	123 (11.9)	33 (12.9)	16 (4.1)	10 (6.8)	12 (12.8)	26 (17.3)
>10	241 (12.6)	136 (13.2)	46 (18.0)	17 (4.4)	6 (4.1)	13 (13.8)	29 (19.3)
Missing	149 (7.8)	81 (7.8)	18 (7.0)	37 (9.6)	11 (7.4)	6 (6.4)	7 (4.7)
In what ways have you had sex in the last 3 months?							
Oral - passive	1173 (61.1)	642 (62.1)	174 (68.0)	189 (49.0)	87 (58.8)	62 (66.0)	106 (70.7)
Oral - active	1257 (65.5)	683 (66.1)	177 (69.1)	213 (55.2)	94 (63.5)	65 (69.1)	119 (79.3)
Anal - passive	1093 (56.9)	600 (58.0)	165 (64.5)	168 (43.5)	73 (49.3)	56 (59.6)	104 (69.3)
Anal - active	954 (49.7)	521 (50.4)	147 (57.4)	144 (37.3)	71 (48.0)	48 (51.1)	94 (62.7)
Vaginal - passive	5 (0.3)	1 (0.1)	0 (0.0)	3 (0.8)	0 (0.0)	0 (0.0)	1 (0.7)
Vaginal - active	36 (1.9)	19 (1.8)	5 (2.0)	7 (1.8)	1 (0.7)	1 (1.1)	4 (2.7)
Other	184 (9.6)	112 (10.8)	27 (10.5)	22 (5.7)	14 (9.5)	2 (2.1)	21 (14.0)
Not specified	26 (1.4)	19 (1.8)	2 (0.8)	4 (1.0)	0 (0.0)	0 (0.0)	1 (0.7)
In the last 3 months did you knowingly have sex with a person who							
You did not know before	965 (50.3)	531 (51.4)	157 (61.3)	131 (33.9)	66 (44.6)	49 (52.1)	97 (64.7)
Did not use condoms	979 (51.0)	536 (51.8)	150 (58.6)	144 (37.3)	69 (46.6)	47 (50.0)	102 (68.0)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
Intravenously takes drugs (injects)	136 (7.1)	75 (7.3)	28 (10.9)	13 (3.4)	7 (4.7)	5 (5.3)	15 (10.0)
Sex worker	96 (5.0)	50 (4.8)	18 (7.0)	13 (3.4)	6 (4.1)	6 (6.4)	9 (6.0)
None of the special partner group	242 (12.6)	120 (11.6)	26 (10.2)	67 (17.4)	23 (15.5)	15 (16.0)	14 (9.3)
Not specified	71 (3.7)	45 (4.4)	8 (3.1)	10 (2.6)	3 (2.0)	3 (3.2)	5 (3.3)
Have you had an STI in the last 3 months?							
Not specified	18 (0.9)	8 (0.8)	2 (0.8)	6 (1.6)	2 (1.4)	1 (1.1)	1 (0.7)
No	1491 (77.7)	794 (76.8)	202 (78.9)	307 (79.5)	118 (79.7)	73 (77.7)	115 (76.7)
Yes, one	221 (11.5)	132 (12.8)	26 (10.2)	30 (7.8)	14 (9.5)	10 (10.6)	23 (15.3)
Yes, several	30 (1.6)	15 (1.5)	7 (2.7)	2 (0.5)	1 (0.7)	3 (3.2)	3 (2.0)
Uncertain/Unclear (I had symptoms but did not get tested)	11 (0.6)	4 (0.4)	1 (0.4)	4 (1.0)	2 (1.4)	1 (1.1)	1 (0.7)
Missing	149 (7.8)	81 (7.8)	18 (7.0)	37 (9.6)	11 (7.4)	6 (6.4)	7 (4.7)
Have taken HIV post exposure prophylaxis (PEP) in the last 3 months							
Not specified	73 (3.8)	46 (4.4)	11 (4.3)	9 (2.3)	4 (2.7)	3 (3.2)	4 (2.7)
No	1666 (86.8)	887 (85.8)	220 (85.9)	338 (87.6)	132 (89.2)	84 (89.4)	137 (91.3)
Yes, once	7 (0.4)	4 (0.4)	2 (0.8)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
Yes, twice	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, three times or more	24 (1.2)	15 (1.5)	5 (2.0)	1 (0.3)	1 (0.7)	1 (1.1)	2 (1.3)
Missing	150 (7.8)	82 (7.9)	18 (7.0)	37 (9.6)	11 (7.4)	6 (6.4)	7 (4.7)
Have taken HIV PrEP in the last 3 months							
Not specified	67 (3.5)	43 (4.2)	9 (3.5)	7 (1.8)	2 (1.4)	4 (4.3)	4 (2.7)
No	1521 (79.2)	793 (76.7)	208 (81.2)	307 (79.5)	117 (79.1)	81 (86.2)	132 (88.0)
Yes, regularly and daily	179 (9.3)	113 (10.9)	22 (8.6)	35 (9.1)	17 (11.5)	2 (2.1)	7 (4.7)
Yes, regularly, but not currently	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, irregularly and several times a week	3 (0.2)	2 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.1)	0 (0.0)
Yes, but only when I needed it (on demand PrEP/event based dosing)	6 (0.3)	4 (0.4)	0 (0.0)	2 (0.5)	1 (0.7)	0 (0.0)	0 (0.0)
Missing	143 (7.4)	78 (7.5)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)
Have you had contact with person with mpox in the last 4 weeks							
Not specified	34 (1.8)	22 (2.1)	5 (2.0)	3 (0.8)	1 (0.7)	3 (3.2)	1 (0.7)
No	1666 (86.8)	878 (84.9)	231 (90.2)	335 (86.8)	130 (87.8)	83 (88.3)	139 (92.7)
Yes	77 (4.0)	56 (5.4)	3 (1.2)	13 (3.4)	6 (4.1)	2 (2.1)	3 (2.0)
Missing	143 (7.4)	78 (7.5)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)

	All included (N=1920)	1st dose MVA-BN at CED (N=1034)	2nd dose MVA- BN at or after CED (N=256)	Unvaccinate d (N=386)	Crossover (N=148)	1st dose MVA- BN prior to CED (N=94)	2nd dose MVA- BN prior to CED (N=150)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last 4 weeks							
Not specified	11 (0.6)	8 (0.8)	0 (0.0)	2 (0.5)	1 (0.7)	1 (1.1)	0 (0.0)
No	1724 (89.8)	928 (89.7)	232 (90.6)	337 (87.3)	132 (89.2)	85 (90.4)	142 (94.7)
Yes	42 (2.2)	20 (1.9)	7 (2.7)	12 (3.1)	4 (2.7)	2 (2.1)	1 (0.7)
Missing	143 (7.4)	78 (7.5)	17 (6.6)	35 (9.1)	11 (7.4)	6 (6.4)	7 (4.7)

Supplementary Table 9: Baseline Sexual Behaviour in PrEP users by vaccination status, *including all categories in number of sexual partners.*

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
	<i>Mean (SD) or n(%)</i>						
Sexually attracted to: Men	2687 (89.3)	1223 (88.9)	429 (87.6)	542 (87.3)	273 (90.4)	156 (93.4)	337 (94.7)
Women	179 (5.9)	91 (6.6)	19 (3.9)	43 (6.9)	20 (6.6)	7 (4.2)	19 (5.3)
Non-binary	201 (6.7)	96 (7.0)	35 (7.1)	41 (6.6)	21 (7.0)	9 (5.4)	20 (5.6)
None	3 (0.1)	2 (0.1)	0 (0.0)	1 (0.2)	1 (0.3)	0 (0.0)	0 (0.0)
Not specified	9 (0.3)	6 (0.4)	1 (0.2)	0 (0.0)	0 (0.0)	1 (0.6)	1 (0.3)
Missing	305 (10.1)	142 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
Sexually active last 3 months							
Not specified	1 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
No	102 (3.4)	59 (4.3)	13 (2.7)	20 (3.2)	10 (3.3)	3 (1.8)	7 (2.0)
Yes	2604 (86.5)	1175 (85.5)	418 (85.3)	526 (84.7)	265 (87.7)	154 (92.2)	331 (93.0)
Missing	302 (10.0)	140 (10.2)	59 (12.0)	75 (12.1)	27 (8.9)	10 (6.0)	18 (5.1)
# of male sexual partners last 3 months							
Not specified	12 (0.4)	4 (0.3)	2 (0.4)	3 (0.5)	1 (0.3)	1 (0.6)	2 (0.6)
0	109 (3.6)	63 (4.6)	14 (2.9)	22 (3.5)	11 (3.6)	3 (1.8)	7 (2.0)
1	251 (8.3)	134 (9.7)	39 (8.0)	45 (7.2)	19 (6.3)	9 (5.4)	24 (6.7)
2	339 (11.3)	161 (11.7)	44 (9.0)	95 (15.3)	54 (17.9)	18 (10.8)	21 (5.9)
3	339 (11.3)	159 (11.6)	48 (9.8)	78 (12.6)	38 (12.6)	15 (9.0)	39 (11.0)
4	276 (9.2)	121 (8.8)	49 (10.0)	58 (9.3)	31 (10.3)	11 (6.6)	37 (10.4)

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
5	296 (9.8)	136 (9.9)	44 (9.0)	57 (9.2)	32 (10.6)	24 (14.4)	35 (9.8)
6-10	575 (19.1)	241 (17.5)	88 (18.0)	117 (18.8)	55 (18.2)	35 (21.0)	94 (26.4)
>10	508 (16.9)	215 (15.6)	103 (21.0)	70 (11.3)	33 (10.9)	41 (24.6)	79 (22.2)
Missing	304 (10.1)	141 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
# of female sexual partners last 3 months							
Not specified	67 (2.2)	24 (1.7)	9 (1.8)	21 (3.4)	11 (3.6)	5 (3.0)	8 (2.2)
0	2535 (84.2)	1164 (84.7)	406 (82.9)	498 (80.2)	252 (83.4)	144 (86.2)	323 (90.7)
1	60 (2.0)	29 (2.1)	12 (2.4)	9 (1.4)	4 (1.3)	6 (3.6)	4 (1.1)
2	22 (0.7)	9 (0.7)	2 (0.4)	8 (1.3)	3 (1.0)	1 (0.6)	2 (0.6)
3	6 (0.2)	3 (0.2)	1 (0.2)	2 (0.3)	1 (0.3)	0 (0.0)	0 (0.0)
4	6 (0.2)	1 (0.1)	0 (0.0)	4 (0.6)	2 (0.7)	0 (0.0)	1 (0.3)
5	3 (0.1)	1 (0.1)	0 (0.0)	2 (0.3)	1 (0.3)	0 (0.0)	0 (0.0)
6-10	3 (0.1)	1 (0.1)	1 (0.2)	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)
>10	2 (0.1)	1 (0.1)	0 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	305 (10.1)	142 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
# many sexual partners you had sex without a condom last 3 months							
Not specified	29 (1.0)	11 (0.8)	3 (0.6)	9 (1.4)	2 (0.7)	2 (1.2)	4 (1.1)
0	325 (10.8)	178 (12.9)	39 (8.0)	66 (10.6)	32 (10.6)	14 (8.4)	28 (7.9)

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
1	449 (14.9)	208 (15.1)	71 (14.5)	106 (17.1)	55 (18.2)	19 (11.4)	45 (12.6)
2	388 (12.9)	182 (13.2)	58 (11.8)	100 (16.1)	44 (14.6)	21 (12.6)	27 (7.6)
3	303 (10.1)	137 (10.0)	48 (9.8)	62 (10.0)	40 (13.2)	19 (11.4)	37 (10.4)
4	216 (7.2)	85 (6.2)	41 (8.4)	48 (7.7)	26 (8.6)	9 (5.4)	33 (9.3)
5	225 (7.5)	105 (7.6)	30 (6.1)	37 (6.0)	20 (6.6)	17 (10.2)	36 (10.1)
6-10	399 (13.3)	169 (12.3)	66 (13.5)	73 (11.8)	33 (10.9)	20 (12.0)	71 (19.9)
>10	371 (12.3)	159 (11.6)	75 (15.3)	44 (7.1)	22 (7.3)	36 (21.6)	57 (16.0)
Missing	304 (10.1)	141 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
In what ways have you had sex in the last 3 months?							
Oral - passive	2347 (78.0)	1064 (77.4)	382 (78.0)	466 (75.0)	237 (78.5)	139 (83.2)	296 (83.1)
Oral - active	2308 (76.7)	1048 (76.2)	382 (78.0)	453 (72.9)	234 (77.5)	134 (80.2)	291 (81.7)
Anal - passive	1774 (59.0)	789 (57.4)	307 (62.7)	350 (56.4)	171 (56.6)	100 (59.9)	228 (64.0)
Anal - active	1940 (64.5)	857 (62.3)	309 (63.1)	384 (61.8)	191 (63.2)	121 (72.5)	269 (75.6)
Vaginal - passive	10 (0.3)	3 (0.2)	3 (0.6)	4 (0.6)	2 (0.7)	0 (0.0)	0 (0.0)
Vaginal - active	79 (2.6)	37 (2.7)	12 (2.4)	20 (3.2)	10 (3.3)	3 (1.8)	7 (2.0)
Other	216 (7.2)	106 (7.7)	29 (5.9)	45 (7.2)	20 (6.6)	13 (7.8)	23 (6.5)

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
Not specified	12 (0.4)	4 (0.3)	2 (0.4)	3 (0.5)	0 (0.0)	1 (0.6)	2 (0.6)
In the last 3 months did you knowingly have sex with a person who							
You did not know before	1994 (66.3)	881 (64.1)	328 (66.9)	389 (62.6)	197 (65.2)	125 (74.9)	271 (76.1)
Did not use condoms	1750 (58.2)	760 (55.3)	297 (60.6)	335 (53.9)	169 (56.0)	111 (66.5)	247 (69.4)
Intravenously takes drugs (injects)	89 (3.0)	52 (3.8)	7 (1.4)	14 (2.3)	8 (2.6)	8 (4.8)	8 (2.2)
Sex worker	126 (4.2)	55 (4.0)	18 (3.7)	22 (3.5)	10 (3.3)	10 (6.0)	21 (5.9)
None of the special partner group	268 (8.9)	135 (9.8)	38 (7.8)	62 (10.0)	28 (9.3)	13 (7.8)	20 (5.6)
Not specified	62 (2.1)	30 (2.2)	5 (1.0)	17 (2.7)	10 (3.3)	5 (3.0)	5 (1.4)
Have you had an STI in the last 3 months?							
Not specified	12 (0.4)	4 (0.3)	4 (0.8)	2 (0.3)	0 (0.0)	1 (0.6)	1 (0.3)
No	2144 (71.3)	998 (72.6)	330 (67.3)	452 (72.8)	226 (74.8)	114 (68.3)	250 (70.2)
Yes, one	436 (14.5)	185 (13.5)	71 (14.5)	80 (12.9)	41 (13.6)	32 (19.2)	68 (19.1)
Yes, several	81 (2.7)	32 (2.3)	23 (4.7)	5 (0.8)	3 (1.0)	7 (4.2)	14 (3.9)
Uncertain/Unclear (I had symptoms but did not get tested)	31 (1.0)	14 (1.0)	3 (0.6)	6 (1.0)	4 (1.3)	3 (1.8)	5 (1.4)

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
Missing	305 (10.1)	142 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
Have taken HIV post exposure prophylaxis (PEP) in the last 3 months							
Not specified	31 (1.0)	18 (1.3)	4 (0.8)	6 (1.0)	2 (0.7)	1 (0.6)	2 (0.6)
No	2509 (83.4)	1150 (83.6)	406 (82.9)	492 (79.2)	252 (83.4)	148 (88.6)	313 (87.9)
Yes, once	33 (1.1)	13 (0.9)	1 (0.2)	12 (1.9)	5 (1.7)	2 (1.2)	5 (1.4)
Yes, twice	8 (0.3)	5 (0.4)	0 (0.0)	1 (0.2)	1 (0.3)	2 (1.2)	0 (0.0)
Yes, three times or more	123 (4.1)	47 (3.4)	20 (4.1)	34 (5.5)	14 (4.6)	4 (2.4)	18 (5.1)
Missing	305 (10.1)	142 (10.3)	59 (12.0)	76 (12.2)	28 (9.3)	10 (6.0)	18 (5.1)
Have taken HIV PrEP in the last 3 months							
Not specified	18 (0.6)	7 (0.5)	2 (0.4)	6 (1.0)	3 (1.0)	1 (0.6)	2 (0.6)
No	352 (11.7)	198 (14.4)	39 (8.0)	76 (12.2)	34 (11.3)	18 (10.8)	21 (5.9)
Yes, regularly and daily	1723 (57.3)	750 (54.5)	294 (60.0)	324 (52.2)	166 (55.0)	103 (61.7)	252 (70.8)
Yes, regularly, but not currently	89 (3.0)	42 (3.1)	15 (3.1)	19 (3.1)	8 (2.6)	3 (1.8)	10 (2.8)
Yes, irregularly and several times a week	109 (3.6)	41 (3.0)	23 (4.7)	23 (3.7)	14 (4.6)	7 (4.2)	15 (4.2)

	All included (N=3009)	1st MVA-BN at CED (N=1375)	2nd vaccination at or after CED (N=490)	Unvaccina ted (N=621)	Crossover (N=302)	1 dose MVA- BN prior to CED (N=167)	2 doses MVA-BN prior to CED (N=356)
Yes, but only when I needed it (on demand PrEP/event based dosing)	415 (13.8)	196 (14.3)	58 (11.8)	98 (15.8)	50 (16.6)	25 (15.0)	38 (10.7)
Missing	303 (10.1)	141 (10.3)	59 (12.0)	75 (12.1)	27 (8.9)	10 (6.0)	18 (5.1)
Have you had contact with person with mpox in the last 4 weeks							
Not specified	55 (1.8)	27 (2.0)	7 (1.4)	12 (1.9)	5 (1.7)	0 (0.0)	9 (2.5)
No	2580 (85.7)	1161 (84.4)	417 (85.1)	519 (83.6)	260 (86.1)	155 (92.8)	328 (92.1)
Yes	69 (2.3)	44 (3.2)	7 (1.4)	15 (2.4)	10 (3.3)	2 (1.2)	1 (0.3)
Missing	305 (10.1)	143 (10.4)	59 (12.0)	75 (12.1)	27 (8.9)	10 (6.0)	18 (5.1)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last 4 weeks							
Not specified	16 (0.5)	9 (0.7)	1 (0.2)	2 (0.3)	0 (0.0)	0 (0.0)	4 (1.1)
No	2600 (86.4)	1193 (86.8)	412 (84.1)	521 (83.9)	260 (86.1)	150 (89.8)	324 (91.0)
Yes	89 (3.0)	31 (2.3)	18 (3.7)	23 (3.7)	15 (5.0)	7 (4.2)	10 (2.8)
Missing	304 (10.1)	142 (10.3)	59 (12.0)	75 (12.1)	27 (8.9)	10 (6.0)	18 (5.1)

Supplementary Table 10: Baseline Sexual Behaviour in those participants with HSMV by vaccination status, *including all categories in number of sexual partners.*

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
	Mean (SD) or n(%)						
Sexually attracted to:							
Men	1602 (92.1)	863 (92.2)	206 (93.2)	288 (91.1)	131 (96.3)	143 (91.7)	102 (92.7)
Women	63 (3.6)	36 (3.8)	9 (4.1)	11 (3.5)	2 (1.5)	6 (3.8)	1 (0.9)
Non-binary	38 (2.2)	17 (1.8)	6 (2.7)	8 (2.5)	1 (0.7)	5 (3.2)	2 (1.8)
None	4 (0.2)	2 (0.2)	0 (0.0)	2 (0.6)	1 (0.7)	0 (0.0)	0 (0.0)
Not specified	10 (0.6)	6 (0.6)	0 (0.0)	2 (0.6)	0 (0.0)	1 (0.6)	1 (0.9)
Missing	122 (7.0)	65 (6.9)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)
Sexually active last 3 months							
Not specified	6 (0.3)	5 (0.5)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)
No	211 (12.1)	107 (11.4)	22 (10.0)	63 (19.9)	22 (16.2)	15 (9.6)	4 (3.6)
Yes	1400 (80.5)	759 (81.1)	184 (83.3)	228 (72.2)	109 (80.1)	130 (83.3)	99 (90.0)
Missing	122 (7.0)	65 (6.9)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)
# of male sexual partners last 3 months							
Not specified	14 (0.8)	8 (0.9)	3 (1.4)	0 (0.0)	0 (0.0)	2 (1.3)	1 (0.9)
0	217 (12.5)	112 (12.0)	22 (10.0)	64 (20.3)	23 (16.9)	15 (9.6)	4 (3.6)
1	235 (13.5)	139 (14.9)	27 (12.2)	52 (16.5)	21 (15.4)	10 (6.4)	7 (6.4)
2	203 (11.7)	113 (12.1)	24 (10.9)	37 (11.7)	18 (13.2)	21 (13.5)	8 (7.3)
3	176 (10.1)	91 (9.7)	26 (11.8)	31 (9.8)	16 (11.8)	14 (9.0)	14 (12.7)

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
4	141 (8.1)	79 (8.4)	15 (6.8)	26 (8.2)	17 (12.5)	10 (6.4)	11 (10.0)
5	122 (7.0)	67 (7.2)	17 (7.7)	20 (6.3)	7 (5.1)	13 (8.3)	5 (4.5)
6-10	251 (14.4)	128 (13.7)	32 (14.5)	33 (10.4)	17 (12.5)	31 (19.9)	27 (24.5)
>10	252 (14.5)	129 (13.8)	40 (18.1)	28 (8.9)	12 (8.8)	29 (18.6)	26 (23.6)
Missing	128 (7.4)	70 (7.5)	15 (6.8)	25 (7.9)	5 (3.7)	11 (7.1)	7 (6.4)
# of female sexual partners last 3 months							
Not specified	76 (4.4)	40 (4.3)	7 (3.2)	21 (6.6)	11 (8.1)	5 (3.2)	3 (2.7)
0	1492 (85.8)	802 (85.7)	193 (87.3)	262 (82.9)	118 (86.8)	135 (86.5)	100 (90.9)
1	26 (1.5)	10 (1.1)	6 (2.7)	6 (1.9)	1 (0.7)	4 (2.6)	0 (0.0)
2	13 (0.7)	10 (1.1)	0 (0.0)	2 (0.6)	1 (0.7)	1 (0.6)	0 (0.0)
3	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6-10	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
>10	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	130 (7.5)	72 (7.7)	15 (6.8)	25 (7.9)	5 (3.7)	11 (7.1)	7 (6.4)
# many sexual partners you had sex without a condom last 3 months							
Not specified	36 (2.1)	24 (2.6)	1 (0.5)	4 (1.3)	2 (1.5)	4 (2.6)	3 (2.7)
0	395 (22.7)	213 (22.8)	45 (20.4)	99 (31.3)	35 (25.7)	25 (16.0)	13 (11.8)

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
1	255 (14.7)	150 (16.0)	29 (13.1)	54 (17.1)	27 (19.9)	13 (8.3)	9 (8.2)
2	169 (9.7)	91 (9.7)	22 (10.0)	32 (10.1)	12 (8.8)	19 (12.2)	5 (4.5)
3	158 (9.1)	81 (8.7)	21 (9.5)	22 (7.0)	17 (12.5)	20 (12.8)	14 (12.7)
4	94 (5.4)	51 (5.4)	12 (5.4)	16 (5.1)	8 (5.9)	8 (5.1)	7 (6.4)
5	106 (6.1)	54 (5.8)	15 (6.8)	16 (5.1)	8 (5.9)	12 (7.7)	9 (8.2)
6-10	198 (11.4)	105 (11.2)	26 (11.8)	25 (7.9)	13 (9.6)	18 (11.5)	24 (21.8)
>10	200 (11.5)	97 (10.4)	35 (15.8)	23 (7.3)	9 (6.6)	26 (16.7)	19 (17.3)
Missing	128 (7.4)	70 (7.5)	15 (6.8)	25 (7.9)	5 (3.7)	11 (7.1)	7 (6.4)
In what ways have you had sex in the last 3 months?							
Oral - passive	1121 (64.5)	607 (64.9)	150 (67.9)	175 (55.4)	86 (63.2)	114 (73.1)	75 (68.2)
Oral - active	1126 (64.7)	603 (64.4)	150 (67.9)	177 (56.0)	87 (64.0)	110 (70.5)	86 (78.2)
Anal - passive	846 (48.6)	433 (46.3)	122 (55.2)	133 (42.1)	63 (46.3)	83 (53.2)	75 (68.2)
Anal - active	907 (52.2)	491 (52.5)	120 (54.3)	139 (44.0)	68 (50.0)	92 (59.0)	65 (59.1)
Vaginal - passive	5 (0.3)	3 (0.3)	0 (0.0)	1 (0.3)	0 (0.0)	0 (0.0)	1 (0.9)
Vaginal - active	37 (2.1)	20 (2.1)	5 (2.3)	10 (3.2)	3 (2.2)	1 (0.6)	1 (0.9)
Other	167 (9.6)	102 (10.9)	19 (8.6)	16 (5.1)	7 (5.1)	13 (8.3)	17 (15.5)
Not specified	23 (1.3)	15 (1.6)	3 (1.4)	4 (1.3)	0 (0.0)	0 (0.0)	1 (0.9)
In the last 3 months did you knowingly have sex with a person who							
You did not know before	944 (54.3)	485 (51.8)	138 (62.4)	146 (46.2)	73 (53.7)	98 (62.8)	77 (70.0)

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
Did not use condoms	834 (48.0)	441 (47.1)	113 (51.1)	124 (39.2)	60 (44.1)	88 (56.4)	68 (61.8)
Intravenously takes drugs (injects)	90 (5.2)	47 (5.0)	20 (9.0)	8 (2.5)	5 (3.7)	4 (2.6)	11 (10.0)
Sex worker	90 (5.2)	46 (4.9)	16 (7.2)	11 (3.5)	4 (2.9)	10 (6.4)	7 (6.4)
None of the special partner group	213 (12.2)	126 (13.5)	22 (10.0)	46 (14.6)	22 (16.2)	10 (6.4)	9 (8.2)
Not specified	61 (3.5)	34 (3.6)	9 (4.1)	8 (2.5)	4 (2.9)	7 (4.5)	3 (2.7)
Have you had an STI in the last 3 months?							
Not specified	8 (0.5)	3 (0.3)	2 (0.9)	3 (0.9)	1 (0.7)	0 (0.0)	0 (0.0)
No	1429 (82.2)	779 (83.2)	182 (82.4)	264 (83.5)	118 (86.8)	123 (78.8)	81 (73.6)
Yes, one	149 (8.6)	75 (8.0)	16 (7.2)	22 (7.0)	11 (8.1)	17 (10.9)	19 (17.3)
Yes, several	15 (0.9)	5 (0.5)	4 (1.8)	1 (0.3)	1 (0.7)	2 (1.3)	3 (2.7)
Uncertain/Unclear (I had symptoms but did not get tested)	10 (0.6)	4 (0.4)	2 (0.9)	1 (0.3)	0 (0.0)	3 (1.9)	0 (0.0)
Missing	128 (7.4)	70 (7.5)	15 (6.8)	25 (7.9)	5 (3.7)	11 (7.1)	7 (6.4)
Have taken HIV post exposure prophylaxis (PEP) in the last 3 months							
Not specified	56 (3.2)	35 (3.7)	10 (4.5)	6 (1.9)	3 (2.2)	2 (1.3)	3 (2.7)
No	1503 (86.4)	807 (86.2)	189 (85.5)	271 (85.8)	121 (89.0)	139 (89.1)	97 (88.2)

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
Yes, once	6 (0.3)	2 (0.2)	1 (0.5)	3 (0.9)	1 (0.7)	0 (0.0)	0 (0.0)
Yes, twice	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, three times or more	44 (2.5)	20 (2.1)	6 (2.7)	11 (3.5)	6 (4.4)	4 (2.6)	3 (2.7)
Missing	129 (7.4)	71 (7.6)	15 (6.8)	25 (7.9)	5 (3.7)	11 (7.1)	7 (6.4)
Have taken HIV PrEP in the last 3 months							
Not specified	38 (2.2)	25 (2.7)	4 (1.8)	3 (0.9)	2 (1.5)	3 (1.9)	3 (2.7)
No	1069 (61.5)	599 (64.0)	139 (62.9)	193 (61.1)	84 (61.8)	76 (48.7)	62 (56.4)
Yes, regularly and daily	387 (22.3)	189 (20.2)	48 (21.7)	66 (20.9)	32 (23.5)	50 (32.1)	34 (30.9)
Yes, regularly, but not currently	16 (0.9)	12 (1.3)	1 (0.5)	3 (0.9)	1 (0.7)	0 (0.0)	0 (0.0)
Yes, irregularly and several times a week	18 (1.0)	8 (0.9)	2 (0.9)	4 (1.3)	3 (2.2)	2 (1.3)	2 (1.8)
Yes, but only when I needed it (on demand PrEP/event based dosing)	88 (5.1)	37 (4.0)	12 (5.4)	23 (7.3)	9 (6.6)	14 (9.0)	2 (1.8)
Missing	123 (7.1)	66 (7.1)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)
Have you had contact with person with mpox in the last 4 weeks							
Not specified	40 (2.3)	24 (2.6)	4 (1.8)	5 (1.6)	1 (0.7)	4 (2.6)	3 (2.7)
No	1525 (87.7)	811 (86.6)	199 (90.0)	278 (88.0)	125 (91.9)	140 (89.7)	97 (88.2)
Yes	50 (2.9)	34 (3.6)	3 (1.4)	9 (2.8)	5 (3.7)	1 (0.6)	3 (2.7)
Missing	124 (7.1)	67 (7.2)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)

	All included (N=1739)	1st dose MVA-BN at CED (N=936)	2nd dose MVA-BN at or after CED (N=221)	Unvaccinate d (N=316)	Crossover (N=136)	1st dose MVA-BN prior to CED (N=156)	2nd dose MVA-BN prior to CED (N=110)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last 4 weeks							
Not specified	8 (0.5)	5 (0.5)	0 (0.0)	1 (0.3)	0 (0.0)	1 (0.6)	1 (0.9)
No	1568 (90.2)	846 (90.4)	200 (90.5)	281 (88.9)	128 (94.1)	140 (89.7)	101 (91.8)
Yes	40 (2.3)	19 (2.0)	6 (2.7)	10 (3.2)	3 (2.2)	4 (2.6)	1 (0.9)
Missing	123 (7.1)	66 (7.1)	15 (6.8)	24 (7.6)	5 (3.7)	11 (7.1)	7 (6.4)

Supplementary Table 11: Cumulative incidence and vaccine effectiveness in the VE cohort, PLWHIV subgroup before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	<i>Unvaccinated</i>	<i>Vaccinated</i>	<i>Unvaccinated</i>	<i>Vaccinated</i>
1st MVA-BN				
<i>Participants</i>	382	1162	-	-
<i>Mpox events</i>	0	7	-	-
<i>Cumulative incidence</i>	0	0.0066 (95% CI 0.0017-0.0115)	-	-

<i>VE with 1 dose</i>	-	-	-	-
2nd MVA-BN				
<i>Participants</i>	382	1085		
<i>Mpox events</i>	0	1		
<i>Cumulative incidence</i>	0	0.0038 (95% CI 0.00-0.0114)	-	-
<i>VE with 2 doses</i>	-	-	-	-

Supplementary Table 12: Cumulative incidence and vaccine effectiveness in the VE cohort, PrEP users subgroup before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	<i>Unvaccinated</i>	<i>Vaccinated</i>	<i>Unvaccinated</i>	<i>Vaccinated</i>
1st MVA-BN				
<i>Participants</i>	577	1589	-	-
<i>Mpox events</i>	0	4	-	-
<i>Cumulative incidence</i>	0	0.003 (95% CI 0.0004-0.0059)	-	-
<i>VE with 1 dose</i>	-	-	-	-
2nd MVA-BN				
<i>Participants</i>	577	1456		
<i>Mpox events</i>	0	1		

<i>Cumulative incidence</i>	0	0.0011 (95% CI 0-0.0034)	-	-
<i>VE with 2 doses</i>	-	-	-	-

Supplementary Table 13: Cumulative incidence and vaccine effectiveness in the VE cohort, HSMV subgroup before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	<i>Unvaccinated</i>	<i>Vaccinated</i>	<i>Unvaccinated</i>	<i>Vaccinated</i>
1st MVA-BN				
<i>Participants</i>	310	994	-	-
<i>Mpox events</i>	0	2	-	-
<i>Cumulative incidence</i>	0	0.0022 (95% CI 0.00-0.0053)	-	-
<i>VE with 1 dose</i>	-	-	-	-
2nd MVA-BN				
<i>Participants</i>	310	793		
<i>Mpox events</i>	0	0		
<i>Cumulative incidence</i>	0	0	-	-
<i>VE with 2 doses</i>	-	-	-	-

Supplementary Table 14: Cumulative incidence and vaccine effectiveness stratified by time period after vaccination in the VE cohort PLWHIV subgroup, before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	Unvaccinated	Vaccinated	Unvaccinated	Vaccinated
1st MVA-BN				
<i>Participants</i>	382	1162		
<i>Mpox events 0-13 days</i>	0	2		
<i>Cumulative Incidence 0-13 days</i>	0	0.0019 (95% CI 0-0.0046)		
<i>VE with 1 dose 0-13 days</i>	-	-		
<i>Mpox events ≥14 days</i>	0	5		
<i>Cumulative Incidence ≥14 days</i>	0	0.0047 (95% CI 0.0006-0.0088)		
<i>VE with 1 dose ≥14 days</i>	-	-		
2nd MVA-BN				
<i>Participants</i>	382	1085		
<i>Mpox events 0-13 days</i>	0	1		
<i>Cumulative Incidence 0-13 days</i>	0	0.0038 (95% CI 0-0.0114)		
<i>VE with 2 doses 0-13 days</i>	-	-		

<i>Mpox events ≥14 days</i>	0	MISSING		
<i>Cumulative Incidence ≥14 days</i>	0	0 (95% CI 0-0)		
<i>VE with 2 doses ≥14 days</i>	-	-		

Supplementary Table 15: Cumulative incidence and vaccine effectiveness stratified by time period after vaccination in the VE cohort PrEP users subgroup, before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	Unvaccinated	Vaccinated	Unvaccinated	Vaccinated
1st MVA-BN				
<i>Participants</i>	577	1589		
<i>Mpox events 0-13 days</i>	0	3		
<i>Cumulative Incidence 0-13 days</i>	0	0.0023 (95% CI 0-0.0048)		
<i>VE with 1 dose 0-13 days</i>	-	-		
<i>Mpox events ≥14 days</i>	0	1		

<i>Cumulative Incidence ≥14 days</i>	0	0.0007(95% CI 0-0.0022)		
<i>VE with 1 dose ≥14 days</i>	-	-		
2nd MVA-BN				
<i>Participants</i>	577	1456		
<i>Mpox events 0-13 days</i>	0	MISSING		
<i>Cumulative Incidence 0-13 days</i>	0	0.00 (95% CI 0.00-0.00)		
<i>VE with 2 doses 0-13 days</i>	-	-		
<i>Mpox events ≥14 days</i>	0	1		
<i>Cumulative Incidence ≥14 days</i>	0	0.0011 (95% CI 0-0.0034)		
<i>VE with 2 doses ≥14 days</i>	-	-		

Supplementary Table 16: Cumulative incidence and vaccine effectiveness stratified by time period after vaccination in the VE cohort HSMV subgroup, before and after PS-matching.

	Overall unmatched population		Overall PS-matched population	
	Unvaccinated Subjects	Vaccinated	Unvaccinated	Vaccinated
1st MVA-BN				
<i>Participants</i>	310	994		
<i>Mpox events 0-13 days</i>	0	1		
<i>Cumulative Incidence 0-13 days</i>	0	0.0011 (95% CI 0-0.0034)		
<i>VE with 1 dose 0-13 days</i>	-	-		
<i>Mpox events ≥14 days</i>	0	1		
<i>Cumulative Incidence ≥14 days</i>	0	0.0011 (95% CI 0-0.0032)		
<i>VE with 1 dose ≥14 days</i>	-	-		
2nd MVA-BN				
<i>Participants</i>	310	793		
<i>Mpox events 0-13 days</i>	0	MISSING		

<i>Cumulative Incidence 0-13 days</i>	0	0.00 (95% CI 0.00-0.00)		
<i>VE with 2 doses 0-13 days</i>	-	-		
<i>Mpox events ≥14 days</i>	0	MISSING		
<i>Cumulative Incidence ≥14 days</i>	0	0.00 (95% CI 0.00-0.00)		
<i>VE with 2 doses ≥14 days</i>	-	-		

Supplementary Table 17: Total n and cumulative incidence of experiencing an Adverse or Severe Adverse reaction (AR/SAR) by System Organ Class in the Safety Cohort **PLWHIV subgroup** who received the first and second dose of MVA-BN.

		First Dose		Second Dose
Systemic Organ Class	n	Cumulative Incidence (95% CI)	n	Cumulative Incidence (95% CI)
Any	6	0.0051 (95% CI 0.001-0.0092)	3	0.0027 (95% CI 0-0.0057)
Gastrointestinal disorders	1	0.0009 (95% CI 0-0.0026)	1	0.0009 (95% CI 0-0.0026)
Infections and Infestations	1	0.0009 (95% CI 0-0.0025)		
General disorders and administration site conditions	2	0.0017 (95% CI 0-0.0041)		
Skin and subcutaneous tissue	1	0.0008 (95% CI 0-0.0025)		

		First Dose		Second Dose
disorders				
Ear and labyrinth disorders	1	0.0008 (95% CI 0-0.0025)		
Nervous system disorders			1	0.0009 (95% CI 0-0.0026)
Hepatobiliary disorders			1	0.0009 (95% CI 0-0.0026)

Supplementary Table 18: Total n and cumulative incidence of experiencing an Adverse or Severe Adverse reaction (AR/SAR) by System Organ Class in the Safety Cohort **PrEP subgroup** who received the first and second dose of MVA-BN.

		First Dose		Second Dose
Systemic Organ Class	n	Cumulative Incidence (95% CI)	n	Cumulative Incidence (95% CI)
Any	3	0.0018 (95% CI 0-0.0039)	2	0.0012 (95% CI 0-0.0029)
Skin and subcutaneous tissue disorders	1	0.0006 (95% CI 0-0.0018)		
Gastrointestinal disorders	1	0.0006 (95% CI 0-0.0018)	1	0.0006 (95% CI 0-0.0018)
General disorders and administration site conditions	1	0.0006 (95% CI 0-0.0018)		
Immune system disorders			1	0.0006 (95% CI 0-0.0018)

Supplementary Table 19: Total n and cumulative incidence of experiencing an Adverse or Severe Adverse reaction (AR/SAR) by System Organ Class in the Safety Cohort **HSMV subgroup** who received the first and second dose of MVA-BN.

		First Dose		Second Dose
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Systemic Organ Class	n	Cumulative Incidence (95% CI)	n	Cumulative Incidence (95% CI)
Any	4	0.0039 (95% CI 0.0001- 0.0077)	1	0.0012 (95% CI 0-0.0035)
Gastrointestinal disorders	1	0.001 (95% CI 0-0.003)	1	0.0012 (95% CI 0-0.0035)
Ear and labyrinth disorders	1	0.0009 (95% CI 0-0.0028)		
Skin and subcutaneous tissue disorders	2	0.0019 (95% CI 0-0.0046)		

Supplementary Table 20: Reactogenicity as reported in the *PLWHIV subgroup* of **Safety Cohort** in the 7 days following first or second MVA-BN dose vaccination.

	MVA 1st dose at/after CED n=956	MVA 2nd dose at/after CED n=571
	%(95%CI)	
Any discomfort or a local reaction at the injection site	61.5% (58.3 - 64.6)	52% (47.8 - 56.2)
Any severe discomfort or a local reaction at the injection site	2% (1.2 - 3.1)	1.9% (1 - 3.5)
Pain in the area of the puncture site at rest: <i>Mild</i>	36.4% (33.4 - 39.6)	31.7% (27.9 - 35.7)
<i>Moderate</i>	7.5% (6 - 9.4)	6% (4.2 - 8.3)
<i>Severe</i>	0.9% (0.5 - 1.8)	0.7% (0.2 - 1.9)

	MVA 1st dose at/after CED n=956	MVA 2nd dose at/after CED n=571
Pain at the injection site with pressure and/or movement: <i>Mild</i>	40.2% (37.1 - 43.4)	37% (33 - 41.1)
<i>Moderate</i>	15.6% (13.4 - 18.1)	10.3% (8 - 13.2)
<i>Severe</i>	1.2% (0.6 - 2.1)	0.7% (0.2 - 1.9)
Size of redness: 2 - 5 cm	19% (16.6 - 21.7)	17.5% (14.5 - 20.9)
5.1 - 10 cm	2.9% (2 - 4.3)	6.3% (4.5 - 8.7)
> 10 cm	0.5% (0.2 - 1.3)	1.1% (0.4 - 2.4)
Size of swelling:		
2 - 5 cm	27.8% (25 - 30.8)	23.5% (20.1 - 27.2)
5.1 - 10 cm	2.8% (1.9 - 4.1)	3.5% (2.2 - 5.5)
> 10 cm	0.8% (0.4 - 1.7)	0.5% (0.1 - 1.7)
Any systemic complaints	19.8% (17.3 - 22.5)	15.2% (12.4 - 18.5)
Any severe systemic complaints	2.6% (1.7 - 3.9)	1.1% (0.4 - 2.4)
Fever present: Mild	1.6% (0.9 - 2.6)	2.3% (1.3 - 4)
<i>Moderate</i>	1.2% (0.6 - 2.1)	1.4% (0.7 - 2.9)

	MVA 1st dose at/after CED n=956	MVA 2nd dose at/after CED n=571
<i>Severe</i>	0.8% (0.4 - 1.7)	0.2% (0 - 1.1)
Fatigue: <i>Mild</i>	5% (3.8 - 6.7)	5.1% (3.5 - 7.3)
<i>Moderate</i>	7.2% (5.7 - 9.1)	6.5% (4.7 - 8.9)
<i>Severe</i>	1.4% (0.8 - 2.4)	0.4% (0.1 - 1.4)
Myalgia: <i>Mild</i>	2.5% (1.7 - 3.8)	1.2% (0.5 - 2.6)
<i>Moderate</i>	3.5% (2.4 - 4.9)	2.1% (1.1 - 3.7)
<i>Severe</i>	0.5% (0.2 - 1.3)	0.2% (0 - 1.1)
Arthralgia: <i>Mild</i>	0.3% (0.1 - 1)	0.7% (0.2 - 1.9)
<i>Moderate</i>	1.9% (1.2 - 3)	1.2% (0.5 - 2.6)
<i>Severe</i>	0.6% (0.3 - 1.4)	0% (0 - 0.8)
Headache: <i>Mild</i>	2.3% (1.5 - 3.5)	1.9% (1 - 3.5)
<i>Moderate</i>	3.6% (2.5 - 5)	2.8% (1.7 - 4.6)
<i>Severe</i>	0.7% (0.3 - 1.6)	0.4% (0.1 - 1.4)
Nausea: <i>Mild</i>	0.7% (0.3 - 1.6)	0.5% (0.1 - 1.7)

	MVA 1st dose at/after CED n=956	MVA 2nd dose at/after CED n=571
<i>Moderate</i>	0.2% (0 - 0.8)	0% (0 - 0.8)
<i>Severe</i>	0.2% (0 - 0.8)	0.4% (0.1 - 1.4)
Diarrhea: <i>Mild</i>	1% (0.5 - 2)	0.9% (0.3 - 2.2)
<i>Moderate</i>	0.8% (0.4 - 1.7)	0.5% (0.1 - 1.7)
<i>Severe</i>	0.2% (0 - 0.8)	0% (0 - 0.8)
Intake of analgesics, antipyretics	10.3% (8.4 - 12.4)	7.5% (5.6 - 10.1)
Intake of prophylactic analgesics, antipyretics	1.6% (0.9 - 2.6)	1.6% (0.8 - 3.1)

Supplementary Table 21: Reactogenicity as reported in the *PreP users subgroup* of **Safety Cohort** in the 7 days following first or second MVA-BN dose vaccination.

	MVA 1st dose at/after CED n=1289	MVA 2nd dose at/after CED n=843
	%(95%CI)	
Any discomfort or a local reaction at the injection site	73.3% (70.8 - 75.7)	57.1% (53.6 - 60.4)
Any severe discomfort or a local reaction at the injection site	1.1% (0.6 - 1.9)	1.9% (1.1 - 3.1)

	MVA 1st dose at/after CED n=1289	MVA 2nd dose at/after CED n=843
Pain in the area of the puncture site at rest:		
<i>Mild</i>	41.9% (39.2 - 44.6)	33.7% (30.5 - 37)
<i>Moderate</i>	7.1% (5.8 - 8.7)	7% (5.4 - 9)
<i>Severe</i>	0.2% (0 - 0.6)	0.1% (0 - 0.8)
Pain at the injection site with pressure and/or movement:		
<i>Mild</i>	49.3% (46.6 - 52.1)	39.9% (36.5 - 43.3)
<i>Moderate</i>	17.8% (15.7 - 20)	12% (9.9 - 14.4)
<i>Severe</i>	0.5% (0.2 - 1.2)	0% (0 - 0.6)
Size of redness:		
<i>2 - 5 cm</i>	23.1% (20.9 - 25.5)	17% (14.5 - 19.7)
<i>5.1 - 10 cm</i>	4.5% (3.5 - 5.8)	5% (3.7 - 6.7)
<i>> 10 cm</i>	0.2% (0.1 - 0.7)	1.7% (0.9 - 2.8)
Size of swelling:		
<i>2 - 5 cm</i>	32.5% (30 - 35.2)	22.5% (19.8 - 25.5)
<i>5.1 - 10 cm</i>	3.6% (2.7 - 4.9)	3.1% (2.1 - 4.6)
<i>> 10 cm</i>	0.2% (0.1 - 0.7)	0.7% (0.3 - 1.6)
Any systemic complaints	22.6% (20.3 - 25)	18.7% (16.2 - 21.6)

	MVA 1st dose at/after CED n=1289	MVA 2nd dose at/after CED n=843
Any severe systemic complaints	2.4% (1.7 - 3.4)	2.5% (1.6 - 3.8)
Fever present: <i>Mild</i>	1.6% (1 - 2.5)	1.9% (1.1 - 3.1)
<i>Moderate</i>	2.4% (1.7 - 3.4)	2.5% (1.6 - 3.8)
<i>Severe</i>	0.6% (0.3 - 1.3)	0.6% (0.2 - 1.5)
Fatigue: <i>Mild</i>	5.7% (4.6 - 7.2)	5% (3.7 - 6.7)
<i>Moderate</i>	8.8% (7.4 - 10.6)	8.7% (6.9 - 10.8)
<i>Severe</i>	1% (0.6 - 1.8)	1.3% (0.7 - 2.4)
Myalgia: <i>Mild</i>	2.2% (1.5 - 3.2)	1.9% (1.1 - 3.1)
<i>Moderate</i>	3.5% (2.6 - 4.7)	3.4% (2.4 - 5)
<i>Severe</i>	0.3% (0.1 - 0.9)	0.7% (0.3 - 1.6)
Arthralgia: <i>Mild</i>	0.5% (0.2 - 1.1)	0.9% (0.4 - 1.9)
<i>Moderate</i>	1.5% (0.9 - 2.3)	2.1% (1.3 - 3.4)
<i>Severe</i>	0.2% (0.1 - 0.7)	0.5% (0.2 - 1.3)
Headache: <i>Mild</i>	4.3% (3.3 - 5.6)	3.1% (2.1 - 4.6)

	MVA 1st dose at/after CED n=1289	MVA 2nd dose at/after CED n=843
<i>Moderate</i>	3.8% (2.9 - 5)	3% (2 - 4.4)
<i>Severe</i>	0.5% (0.2 - 1.2)	0.6% (0.2 - 1.5)
Nausea: <i>Mild</i>	0.6% (0.3 - 1.3)	0.6% (0.2 - 1.5)
<i>Moderate</i>	0.4% (0.1 - 1)	0.2% (0 - 1)
<i>Severe</i>	0.3% (0.1 - 0.9)	0.2% (0 - 1)
Diarrhea: <i>Mild</i>	0.6% (0.3 - 1.3)	0.9% (0.4 - 1.9)
<i>Moderate</i>	0.5% (0.2 - 1.2)	0.5% (0.2 - 1.3)
<i>Severe</i>	0.4% (0.1 - 1)	0.4% (0.1 - 1.1)
Intake of analgesics, antipyretics	9.4% (7.9 - 11.1)	7% (5.4 - 9)
Intake of prophylactic analgesics, antipyretics	1.6% (1 - 2.4)	0.8% (0.4 - 1.8)

Supplementary Table 22: Reactogenicity as reported in the *HSMV subgroup* of **Safety Cohort** in the 7 days following first or second MVA-BN dose vaccination.

	MVA 1st dose at/after CED n=864	MVA 2nd dose at/after CED n=488
	% (95%CI)	
Any discomfort or a local reaction at the injection site	63.7% (60.3 - 66.9)	5.7% (51.2 - 60.2)
Any severe discomfort or a local reaction at the injection site	2.1% (1.3 - 3.3)	2% (1 - 3.9)
Pain in the area of the puncture site at rest: <i>Mild</i>	35.9% (32.7 - 39.2)	33.6% (29.5 - 38)
<i>Moderate</i>	8.2% (6.5 - 10.3)	6.8% (4.8 - 9.5)
<i>Severe</i>	0.8% (0.4 - 1.7)	0.2% (0 - 1.3)
Pain at the injection site with pressure and/or movement: <i>Mild</i>	42.6% (39.3 - 46)	40% (35.6 - 44.5)
<i>Moderate</i>	15.7% (13.4 - 18.4)	10% (7.6 - 13.1)
<i>Severe</i>	1% (0.5 - 2)	0.6% (0.2 - 1.9)
Size of redness: <i>2 - 5 cm</i>	20.7% (18.1 - 23.6)	19.5% (16.1 - 23.3)
<i>5.1 - 10 cm</i>	4.1% (2.9 - 5.6)	6.1% (4.3 - 8.8)
<i>> 10 cm</i>	0.8% (0.4 - 1.7)	1.4% (0.6 - 3.1)

	MVA 1st dose at/after CED n=864	MVA 2nd dose at/after CED n=488
Size of swelling:		
2 - 5 cm	28% (25.1 - 31.2)	24.6% (20.9 - 28.7)
5.1 - 10 cm	4.2% (3 - 5.8)	4.1% (2.6 - 6.4)
> 10 cm	0.5% (0.1 - 1.3)	0.2% (0 - 1.3)
Any systemic complaints	20.8% (18.2 - 23.7)	12.9% (10.1 - 16.3)
Any severe systemic complaints	2.4% (1.5 - 3.8)	0.8% (0.3 - 2.2)
Fever present: <i>Mild</i>	1.7% (1 - 2.9)	1.4% (0.6 - 3.1)
<i>Moderate</i>	0.9% (0.4 - 1.9)	1% (0.4 - 2.5)
<i>Severe</i>	0.6% (0.2 - 1.4)	0% (0 - 1)
Fatigue: <i>Mild</i>	4.3% (3.1 - 5.9)	4.7% (3.1 - 7.1)
<i>Moderate</i>	9.3% (7.5 - 11.4)	5.1% (3.4 - 7.6)
<i>Severe</i>	1.3% (0.7 - 2.3)	0.6% (0.2 - 1.9)
Myalgia: <i>Mild</i>	1.6% (0.9 - 2.8)	0.8% (0.3 - 2.2)
<i>Moderate</i>	4.5% (3.3 - 6.2)	2% (1 - 3.9)
<i>Severe</i>	0.3% (0.1 - 1.1)	0.2% (0 - 1.3)

	MVA 1st dose at/after CED n=864	MVA 2nd dose at/after CED n=488
Arthralgia: <i>Mild</i>	0.8% (0.4 - 1.7)	1% (0.4 - 2.5)
<i>Moderate</i>	2.2% (1.4 - 3.5)	1.2% (0.5 - 2.8)
<i>Severe</i>	0.6% (0.2 - 1.4)	0.2% (0 - 1.3)
Headache: <i>Mild</i>	3.8% (2.7 - 5.4)	1.2% (0.5 - 2.8)
<i>Moderate</i>	3.5% (2.4 - 5)	2% (1 - 3.9)
<i>Severe</i>	0.8% (0.4 - 1.7)	0% (0 - 1)
Nausea: <i>Mild</i>	0.8% (0.4 - 1.7)	0.4% (0.1 - 1.6)
<i>Moderate</i>	0% (0 - 0.6)	0% (0 - 1)
<i>Severe</i>	0.5% (0.1 - 1.3)	0% (0 - 1)
Diarrhea: <i>Mild</i>	0.6% (0.2 - 1.4)	0.8% (0.3 - 2.2)
<i>Moderate</i>	0.6% (0.2 - 1.4)	0.4% (0.1 - 1.6)
<i>Severe</i>	0.2% (0 - 0.9)	0.2% (0 - 1.3)
Intake of analgesics, antipyretics	9.1% (7.3 - 11.3)	4.9% (3.2 - 7.3)
Intake of prophylactic analgesics, antipyretics	1.3% (0.7 - 2.3)	0.6% (0.2 - 1.9)

Supplementary Table 23: Sexual Behaviour in the overall MSM cohort reported by patients monthly during follow-up.

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
Allocation of group membership																		
Unvaccinated, n(%)	108 (16.7)	178 (15.0)	230 (12.5)	217 (9.6)	264 (9.0)	312 (9.5)	316 (9.2)	357 (9.4)	294 (9.1)	393 (9.5)	410 (9.9)	415 (10.1)	418 (10.1)	411 (10.4)	424 (11.4)	360 (12.0)	349 (12.3)	318 (13.5)
Vaccinated with 1st dose, n(%)	539 (83.3)	848 (71.5)	1221 (66.3)	1296 (57.3)	1318 (44.8)	1197 (36.6)	1043 (30.2)	1027 (27.2)	806 (25.0)	1005 (24.4)	973 (23.4)	920 (22.3)	888 (21.4)	846 (21.4)	793 (21.3)	614 (20.4)	563 (19.9)	453 (19.3)
Vaccinated with 2nd dose, n(%)	0 (0.0)	160 (13.5)	390 (21.2)	750 (33.1)	1357 (46.2)	1759 (53.8)	2092 (60.6)	2398 (63.4)	2124 (65.9)	2726 (66.1)	2775 (66.7)	2794 (67.7)	2835 (68.5)	2697 (68.2)	2502 (67.3)	2030 (67.6)	1917 (67.8)	1576 (67.1)
Sexually active this month																		
Not specified	4 (0.6)	5 (0.4)	9 (0.5)	6 (0.3)	18 (0.6)	11 (0.3)	10 (0.3)	10 (0.3)	10 (0.3)	14 (0.3)	11 (0.3)	9 (0.2)	11 (0.3)	9 (0.2)	6 (0.2)	6 (0.2)	8 (0.3)	4 (0.2)
No	116 (17.9)	242 (20.4)	318 (17.3)	408 (18.0)	529 (18.0)	614 (18.8)	757 (21.9)	811 (21.4)	681 (21.1)	811 (19.7)	828 (19.9)	803 (19.4)	797 (19.2)	785 (19.9)	792 (21.3)	658 (21.9)	685 (24.2)	500 (21.3)
Yes	527 (81.5)	939 (79.2)	1514 (82.2)	1849 (81.7)	2392 (81.4)	2643 (80.9)	2684 (77.8)	2961 (78.3)	2533 (78.6)	3299 (80.0)	3319 (79.8)	3317 (80.3)	3333 (80.5)	3160 (79.9)	2921 (78.5)	2340 (77.9)	2136 (75.5)	1843 (78.5)
# of male sexual partners this month																		
Not specified	4 (0.6)	5 (0.4)	9 (0.5)	5 (0.2)	31 (1.1)	16 (0.5)	15 (0.4)	12 (0.3)	24 (0.7)	16 (0.4)	20 (0.5)	13 (0.3)	17 (0.4)	15 (0.4)	20 (0.5)	12 (0.4)	7 (0.2)	7 (0.3)
0	118 (18.2)	250 (21.1)	332 (18.0)	422 (18.6)	561 (19.1)	644 (19.7)	798 (23.1)	854 (22.6)	718 (22.3)	848 (20.6)	873 (21.0)	851 (20.6)	837 (20.2)	833 (21.1)	840 (22.6)	694 (23.1)	715 (25.3)	531 (22.6)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
1	122 (18.9)	259 (21.8)	424 (23.0)	543 (24.0)	675 (23.0)	772 (23.6)	833 (24.1)	932 (24.6)	758 (23.5)	993 (24.1)	974 (23.4)	957 (23.2)	944 (22.8)	968 (24.5)	864 (23.2)	741 (24.7)	653 (23.1)	579 (24.7)
2	103 (15.9)	173 (14.6)	331 (18.0)	393 (17.4)	486 (16.5)	522 (16.0)	529 (15.3)	579 (15.3)	452 (14.0)	604 (14.6)	604 (14.5)	626 (15.2)	623 (15.0)	583 (14.7)	547 (14.7)	436 (14.5)	398 (14.1)	372 (15.9)
3	88 (13.6)	153 (12.9)	203 (11.0)	249 (11.0)	324 (11.0)	386 (11.8)	356 (10.3)	375 (9.9)	347 (10.8)	434 (10.5)	489 (11.8)	456 (11.0)	442 (10.7)	393 (9.9)	379 (10.2)	309 (10.3)	278 (9.8)	232 (9.9)
4	54 (8.3)	106 (8.9)	155 (8.4)	174 (7.7)	206 (7.0)	223 (6.8)	241 (7.0)	271 (7.2)	245 (7.6)	311 (7.5)	298 (7.2)	342 (8.3)	292 (7.1)	289 (7.3)	262 (7.0)	197 (6.6)	185 (6.5)	172 (7.3)
5 or more	154 (23.8)	235 (19.8)	378 (20.5)	471 (20.8)	638 (21.7)	694 (21.2)	668 (19.4)	749 (19.8)	670 (20.8)	904 (21.9)	889 (21.4)	875 (21.2)	975 (23.5)	864 (21.9)	801 (21.5)	608 (20.2)	585 (20.7)	450 (19.2)
Missing	4 (0.6)	5 (0.4)	9 (0.5)	6 (0.3)	18 (0.6)	11 (0.3)	11 (0.3)	10 (0.3)	10 (0.3)	14 (0.3)	11 (0.3)	9 (0.2)	11 (0.3)	9 (0.2)	6 (0.2)	7 (0.2)	8 (0.3)	4 (0.2)
# of female sexual partners this month																		
Not specified	24 (3.7)	32 (2.7)	58 (3.2)	61 (2.7)	38 (1.3)	41 (1.3)	44 (1.3)	32 (0.8)	29 (0.9)	49 (1.2)	35 (0.8)	32 (0.8)	33 (0.8)	30 (0.8)	26 (0.7)	16 (0.5)	18 (0.6)	16 (0.7)
0	610 (94.3)	1133 (95.5)	1746 (94.8)	2166 (95.7)	2825 (96.1)	3155 (96.5)	3328 (96.4)	3667 (97.0)	3113 (96.6)	3983 (96.6)	4033 (97.0)	3995 (96.8)	4015 (97.0)	3834 (97.0)	3619 (97.3)	2923 (97.3)	2759 (97.5)	2277 (97.0)
1	7 (1.1)	10 (0.8)	21 (1.1)	16 (0.7)	38 (1.3)	35 (1.1)	46 (1.3)	40 (1.1)	42 (1.3)	51 (1.2)	43 (1.0)	59 (1.4)	62 (1.5)	57 (1.4)	44 (1.2)	41 (1.4)	27 (1.0)	32 (1.4)
2	2 (0.3)	2 (0.2)	4 (0.2)	10 (0.4)	12 (0.4)	16 (0.5)	12 (0.3)	22 (0.6)	15 (0.5)	10 (0.2)	20 (0.5)	19 (0.5)	12 (0.3)	15 (0.4)	16 (0.4)	12 (0.4)	9 (0.3)	10 (0.4)
3	0 (0.0)	2 (0.2)	1 (0.1)	1 (0.0)	5 (0.2)	3 (0.1)	4 (0.1)	5 (0.1)	5 (0.2)	6 (0.1)	10 (0.2)	7 (0.2)	4 (0.1)	3 (0.1)	5 (0.1)	4 (0.1)	6 (0.2)	1 (0.0)
4	0 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	1 (0.0)	2 (0.1)	5 (0.1)	1 (0.0)	3 (0.1)	5 (0.1)	1 (0.0)	7 (0.2)	3 (0.1)	2 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)	3 (0.1)
5 or more	0 (0.0)	1 (0.1)	1 (0.1)	3 (0.1)	2 (0.1)	5 (0.2)	1 (0.0)	5 (0.1)	7 (0.2)	6 (0.1)	5 (0.1)	1 (0.0)	1 (0.0)	4 (0.1)	2 (0.1)	1 (0.0)	2 (0.1)	4 (0.2)
Missing	4 (0.6)	5 (0.4)	9 (0.5)	6	18 (0.6)	11	11 (0.3)	10 (0.3)	10 (0.3)	14	11 (0.3)	9 (0.2)	11	9 (0.2)	6 (0.2)	7 (0.2)	8 (0.3)	4 (0.2)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
				(0.3)		(0.3)				(0.3)			(0.3)					
# of non-binary sexual partners this month																		
Not specified	0 (0.0)	0 (0.0)	2 (0.1)	2 (0.1)	99 (3.4)	109 (3.3)	92 (2.7)	95 (2.5)	97 (3.0)	119 (2.9)	111 (2.7)	107 (2.6)	119 (2.9)	119 (3.0)	79 (2.1)	57 (1.9)	49 (1.7)	39 (1.7)
0	4 (0.6)	6 (0.5)	14 (0.8)	25 (1.1)	2169 (73.8)	2412 (73.8)	2476 (71.7)	2738 (72.4)	2310 (71.7)	3033 (73.5)	3040 (73.1)	3057 (74.0)	3053 (73.7)	2921 (73.9)	2729 (73.4)	2192 (73.0)	2007 (70.9)	1724 (73.5)
1	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.0)	68 (2.3)	71 (2.2)	66 (1.9)	79 (2.1)	71 (2.2)	88 (2.1)	90 (2.2)	93 (2.3)	90 (2.2)	75 (1.9)	61 (1.6)	50 (1.7)	43 (1.5)	47 (2.0)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	29 (1.0)	21 (0.6)	17 (0.5)	23 (0.6)	11 (0.3)	25 (0.6)	22 (0.5)	24 (0.6)	21 (0.5)	13 (0.3)	21 (0.6)	11 (0.4)	14 (0.5)	13 (0.6)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (0.2)	7 (0.2)	8 (0.2)	5 (0.1)	15 (0.5)	4 (0.1)	16 (0.4)	10 (0.2)	14 (0.3)	7 (0.2)	13 (0.3)	9 (0.3)	4 (0.1)	5 (0.2)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (0.2)	7 (0.2)	10 (0.3)	8 (0.2)	10 (0.3)	12 (0.3)	8 (0.2)	7 (0.2)	11 (0.3)	7 (0.2)	5 (0.1)	7 (0.2)	5 (0.2)	1 (0.0)
5 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	15 (0.5)	16 (0.5)	14 (0.4)	13 (0.3)	19 (0.6)	18 (0.4)	32 (0.8)	19 (0.5)	25 (0.6)	18 (0.5)	13 (0.3)	13 (0.4)	14 (0.5)	14 (0.6)
Missing	643 (99.4)	1180 (99.5)	1824 (99.1)	2235 (98.8)	547 (18.6)	625 (19.1)	768 (22.3)	821 (21.7)	691 (21.4)	825 (20.0)	839 (20.2)	812 (19.7)	808 (19.5)	794 (20.1)	798 (21.5)	665 (22.1)	693 (24.5)	504 (21.5)
# sexual partners you had sex without a condom this month																		
Not specified	13 (2.0)	20 (1.7)	36 (2.0)	27 (1.2)	39 (1.3)	27 (0.8)	30 (0.9)	34 (0.9)	34 (1.1)	41 (1.0)	47 (1.1)	32 (0.8)	43 (1.0)	40 (1.0)	33 (0.9)	29 (1.0)	18 (0.6)	24 (1.0)
0	166 (25.7)	366 (30.9)	508 (27.6)	630 (27.8)	814 (27.7)	941 (28.8)	1077 (31.2)	1163 (30.8)	959 (29.7)	1174 (28.5)	1208 (29.1)	1162 (28.1)	1136 (27.4)	1095 (27.7)	1097 (29.5)	899 (29.9)	906 (32.0)	691 (29.4)
1	130 (20.1)	271 (22.8)	450 (24.4)	586 (25.9)	752 (25.6)	823 (25.2)	903 (26.2)	977 (25.8)	809 (25.1)	1055 (25.6)	1006 (24.2)	1050 (25.4)	1019 (24.6)	1023 (25.9)	911 (24.5)	768 (25.6)	697 (24.6)	608 (25.9)
2	83	148	275	318	408	441	458	503	392	526	560	554	543	532	500	402	359	327

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
	(12.8)	(12.5)	(14.9)	(14.1)	(13.9)	(13.5)	(13.3)	(13.3)	(12.2)	(12.8)	(13.5)	(13.4)	(13.1)	(13.5)	(13.4)	(13.4)	(12.7)	(13.9)
3	75 (11.6)	116 (9.8)	161 (8.7)	202 (8.9)	229 (7.8)	291 (8.9)	263 (7.6)	306 (8.1)	275 (8.5)	337 (8.2)	380 (9.1)	364 (8.8)	381 (9.2)	357 (9.0)	326 (8.8)	247 (8.2)	226 (8.0)	187 (8.0)
4	44 (6.8)	65 (5.5)	97 (5.3)	125 (5.5)	174 (5.9)	183 (5.6)	193 (5.6)	217 (5.7)	203 (6.3)	261 (6.3)	222 (5.3)	265 (6.4)	234 (5.7)	227 (5.7)	217 (5.8)	159 (5.3)	145 (5.1)	142 (6.1)
5 or more	132 (20.4)	195 (16.4)	305 (16.6)	369 (16.3)	505 (17.2)	551 (16.9)	516 (15.0)	572 (15.1)	542 (16.8)	716 (17.4)	724 (17.4)	693 (16.8)	774 (18.7)	671 (17.0)	629 (16.9)	493 (16.4)	470 (16.6)	364 (15.5)
Missing	4 (0.6)	5 (0.4)	9 (0.5)	6 (0.3)	18 (0.6)	11 (0.3)	11 (0.3)	10 (0.3)	10 (0.3)	14 (0.3)	11 (0.3)	9 (0.2)	11 (0.3)	9 (0.2)	6 (0.2)	7 (0.2)	8 (0.3)	4 (0.2)
In what ways have you had sex this month?																		
Oral - passive	438 (67.7)	762 (64.2)	1250 (67.9)	1553 (68.6)	2016 (68.6)	2236 (68.4)	2275 (65.9)	2490 (65.8)	2158 (66.9)	2788 (67.6)	2821 (67.8)	2828 (68.5)	2847 (68.8)	2692 (68.1)	2494 (67.1)	1990 (66.2)	1859 (65.7)	1567 (66.8)
Oral - active	451 (69.7)	770 (64.9)	1246 (67.7)	1524 (67.3)	1991 (67.7)	2224 (68.1)	2252 (65.3)	2479 (65.5)	2163 (67.1)	2781 (67.4)	2813 (67.7)	2814 (68.2)	2876 (69.5)	2706 (68.4)	2514 (67.6)	2014 (67.0)	1844 (65.2)	1581 (67.4)
Anal - passive	325 (50.2)	555 (46.8)	911 (49.5)	1125 (49.7)	1452 (49.4)	1587 (48.6)	1609 (46.6)	1739 (46.0)	1539 (47.7)	2002 (48.5)	2019 (48.6)	2008 (48.6)	2070 (50.0)	1909 (48.3)	1796 (48.3)	1403 (46.7)	1294 (45.7)	1103 (47.0)
Anal - active	335 (51.8)	577 (48.7)	972 (52.8)	1199 (53.0)	1547 (52.6)	1694 (51.8)	1663 (48.2)	1855 (49.0)	1645 (51.0)	2090 (50.7)	2119 (51.0)	2118 (51.3)	2136 (51.6)	2028 (51.3)	1843 (49.6)	1470 (48.9)	1347 (47.6)	1161 (49.5)
Vaginal passive	1 (0.2)	2 (0.2)	4 (0.2)	9 (0.4)	9 (0.3)	9 (0.3)	6 (0.2)	10 (0.3)	4 (0.1)	14 (0.3)	12 (0.3)	17 (0.4)	16 (0.4)	9 (0.2)	9 (0.2)	11 (0.4)	9 (0.3)	9 (0.4)
Vaginal active	8 (1.2)	17 (1.4)	23 (1.2)	27 (1.2)	50 (1.7)	47 (1.4)	59 (1.7)	65 (1.7)	63 (2.0)	69 (1.7)	75 (1.8)	83 (2.0)	82 (2.0)	73 (1.8)	76 (2.0)	56 (1.9)	45 (1.6)	42 (1.8)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
<i>Other</i>	65 (10.0)	122 (10.3)	137 (7.4)	188 (8.3)	251 (8.5)	263 (8.0)	265 (7.7)	292 (7.7)	258 (8.0)	306 (7.4)	324 (7.8)	300 (7.3)	342 (8.3)	295 (7.5)	277 (7.4)	211 (7.0)	206 (7.3)	187 (8.0)
<i>Not specified</i>	3 (0.5)	13 (1.1)	13 (0.7)	15 (0.7)	24 (0.8)	20 (0.6)	22 (0.6)	26 (0.7)	17 (0.5)	20 (0.5)	28 (0.7)	20 (0.5)	19 (0.5)	18 (0.5)	19 (0.5)	15 (0.5)	8 (0.3)	8 (0.3)
In this month did you knowingly have sex with a person who																		
<i>You did not know before</i>	331 (51.2)	564 (47.6)	900 (48.9)	1100 (48.6)	1390 (47.3)	1521 (46.5)	1473 (42.7)	1693 (44.8)	1462 (45.3)	1882 (45.6)	1934 (46.5)	1949 (47.2)	1982 (47.9)	1828 (46.2)	1732 (46.6)	1320 (43.9)	1228 (43.4)	1022 (43.5)
<i>Did not use condoms</i>	308 (47.6)	544 (45.9)	846 (46.0)	1027 (45.4)	1343 (45.7)	1525 (46.7)	1524 (44.2)	1631 (43.1)	1481 (45.9)	1913 (46.4)	1954 (47.0)	1930 (46.7)	1955 (47.2)	1810 (45.8)	1701 (45.7)	1347 (44.8)	1262 (44.6)	1062 (45.2)
<i>Intravenously takes drugs (injects)</i>	31 (4.8)	40 (3.4)	60 (3.3)	66 (2.9)	86 (2.9)	99 (3.0)	87 (2.5)	86 (2.3)	87 (2.7)	100 (2.4)	123 (3.0)	106 (2.6)	136 (3.3)	112 (2.8)	95 (2.6)	71 (2.4)	75 (2.7)	58 (2.5)
<i>Sex worker</i>	26 (4.0)	36 (3.0)	63 (3.4)	71 (3.1)	111 (3.8)	115 (3.5)	120 (3.5)	118 (3.1)	101 (3.1)	133 (3.2)	140 (3.4)	130 (3.1)	158 (3.8)	143 (3.6)	127 (3.4)	101 (3.4)	85 (3.0)	61 (2.6)
<i>None of the special partner group</i>	100 (15.5)	187 (15.8)	301 (16.3)	361 (16.0)	497 (16.9)	532 (16.3)	576 (16.7)	639 (16.9)	512 (15.9)	671 (16.3)	639 (15.4)	636 (15.4)	651 (15.7)	654 (16.5)	565 (15.2)	482 (16.0)	424 (15.0)	381 (16.2)
<i>Not specified</i>	12 (1.9)	24 (2.0)	44 (2.4)	46 (2.0)	78 (2.7)	71 (2.2)	84 (2.4)	96 (2.5)	72 (2.2)	91 (2.2)	92 (2.2)	106 (2.6)	95 (2.3)	82 (2.1)	81 (2.2)	61 (2.0)	55 (1.9)	60 (2.6)
Have you had an STI in the current month?																		
<i>Not specified</i>	1 (0.2)	7 (0.6)	13 (0.7)	11 (0.5)	24 (0.8)	13 (0.4)	10 (0.3)	13 (0.3)	19 (0.6)	17 (0.4)	15 (0.4)	20 (0.5)	19 (0.5)	19 (0.5)	12 (0.3)	10 (0.3)	7 (0.2)	10 (0.4)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
No	594 (91.8)	1106 (93.3)	1713 (93.0)	2106 (93.1)	2704 (92.0)	3003 (91.9)	3191 (92.5)	3527 (93.3)	2969 (92.1)	3796 (92.0)	3816 (91.8)	3810 (92.3)	3804 (91.9)	3651 (92.3)	3446 (92.7)	2781 (92.6)	2631 (93.0)	2174 (92.6)
Yes, one	38 (5.9)	56 (4.7)	87 (4.7)	110 (4.9)	172 (5.9)	217 (6.6)	203 (5.9)	184 (4.9)	180 (5.6)	244 (5.9)	274 (6.6)	249 (6.0)	265 (6.4)	230 (5.8)	225 (6.1)	173 (5.8)	150 (5.3)	134 (5.7)
Yes, several	1 (0.2)	3 (0.3)	7 (0.4)	12 (0.5)	7 (0.2)	11 (0.3)	11 (0.3)	19 (0.5)	19 (0.6)	21 (0.5)	11 (0.3)	16 (0.4)	23 (0.6)	21 (0.5)	12 (0.3)	12 (0.4)	21 (0.7)	15 (0.6)
Uncertain/Unclear (I had symptoms but did not get tested)																		
	9 (1.4)	9 (0.8)	12 (0.7)	18 (0.8)	14 (0.5)	13 (0.4)	25 (0.7)	29 (0.8)	27 (0.8)	32 (0.8)	31 (0.7)	25 (0.6)	19 (0.5)	24 (0.6)	18 (0.5)	21 (0.7)	12 (0.4)	10 (0.4)
Missing	4 (0.6)	5 (0.4)	9 (0.5)	6 (0.3)	18 (0.6)	11 (0.3)	11 (0.3)	10 (0.3)	10 (0.3)	14 (0.3)	11 (0.3)	9 (0.2)	11 (0.3)	9 (0.2)	6 (0.2)	7 (0.2)	8 (0.3)	4 (0.2)
Have taken HIV post exposure prophylaxis (PEP) in the last month																		
Not specified	17 (2.6)	30 (2.5)	27 (1.5)	30 (1.3)	20 (0.7)	11 (0.3)	17 (0.5)	16 (0.4)	18 (0.6)	16 (0.4)	21 (0.5)	22 (0.5)	13 (0.3)	15 (0.4)	8 (0.2)	9 (0.3)	10 (0.4)	6 (0.3)
No	603 (93.2)	1105 (93.2)	1704 (92.6)	2127 (94.0)	2069 (70.4)	2335 (71.5)	2544 (73.7)	2777 (73.4)	2376 (73.7)	3000 (72.7)	3016 (72.5)	3002 (72.7)	2983 (72.0)	2853 (72.2)	2751 (74.0)	2276 (75.8)	2167 (76.6)	1771 (75.5)
Yes	26 (4.0)	49 (4.1)	103 (5.6)	100 (4.4)	104 (3.5)	84 (2.6)	77 (2.2)	102 (2.7)	80 (2.5)	123 (3.0)	122 (2.9)	126 (3.1)	120 (2.9)	126 (3.2)	114 (3.1)	80 (2.7)	68 (2.4)	68 (2.9)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
Missing	1 (0.2)	2 (0.2)	7 (0.4)	6 (0.3)	746 (25.4)	838 (25.6)	813 (23.6)	887 (23.5)	750 (23.3)	985 (23.9)	999 (24.0)	979 (23.7)	1025 (24.8)	960 (24.3)	846 (22.7)	639 (21.3)	584 (20.6)	502 (21.4)
Have taken HIV PrEP in the current month																		
Not specified	20 (3.1)	32 (2.7)	33 (1.8)	24 (1.1)	10 (0.3)	6 (0.2)	13 (0.4)	11 (0.3)	6 (0.2)	6 (0.1)	7 (0.2)	6 (0.1)	8 (0.2)	11 (0.3)	6 (0.2)	5 (0.2)	7 (0.2)	3 (0.1)
No	350 (54.1)	647 (54.6)	937 (50.9)	1203 (53.2)	709 (24.1)	782 (23.9)	852 (24.7)	925 (24.5)	784 (24.3)	1002 (24.3)	974 (23.4)	940 (22.8)	874 (21.1)	869 (22.0)	787 (21.2)	674 (22.4)	642 (22.7)	534 (22.8)
Yes, regularly and daily	227 (35.1)	402 (33.9)	665 (36.1)	809 (35.7)	950 (32.3)	1049 (32.1)	1123 (32.5)	1243 (32.9)	1096 (34.0)	1385 (33.6)	1417 (34.1)	1452 (35.2)	1445 (34.9)	1376 (34.8)	1367 (36.8)	1106 (36.8)	1010 (35.7)	830 (35.4)
Yes, regularly, but not currently	6 (0.9)	12 (1.0)	23 (1.2)	25 (1.1)	27 (0.9)	43 (1.3)	37 (1.1)	32 (0.8)	34 (1.1)	51 (1.2)	45 (1.1)	42 (1.0)	47 (1.1)	37 (0.9)	45 (1.2)	43 (1.4)	32 (1.1)	39 (1.7)
Yes, irregularly and several times a week	3 (0.5)	12 (1.0)	35 (1.9)	38 (1.7)	41 (1.4)	56 (1.7)	61 (1.8)	63 (1.7)	50 (1.6)	70 (1.7)	69 (1.7)	75 (1.8)	66 (1.6)	62 (1.6)	56 (1.5)	57 (1.9)	55 (1.9)	35 (1.5)
Yes, but only when I needed it (on demand PrEP/event based dosing)	39 (6.0)	78 (6.6)	141 (7.7)	155 (6.8)	201 (6.8)	214 (6.5)	219 (6.3)	266 (7.0)	221 (6.9)	277 (6.7)	284 (6.8)	270 (6.5)	320 (7.7)	277 (7.0)	274 (7.4)	217 (7.2)	218 (7.7)	191 (8.1)
Missing	2 (0.3)	3 (0.3)	7 (0.4)	9 (0.4)	1001 (34.1)	1118 (34.2)	1146 (33.2)	1242 (32.8)	1033 (32.0)	1333 (32.3)	1362 (32.8)	1344 (32.6)	1381 (33.3)	1322 (33.4)	1184 (31.8)	902 (30.0)	865 (30.6)	715 (30.5)

	Jul 22 N=64 7	Aug 22 N=11 86	Sep 22 N=18 41	Oct 22 N=2 263	Nov 22 N=29 39	Dec 22 N=32 68	Jan 23 N=345 1	Feb 23 N=378 2	Mar 23 N=32 24	Apr 23 N=41 24	May 23 N=41 58	Jun 23 N=41 29	Jul 23 N=4 141	Aug 23 N=39 54	Sep 23 N=37 19	Oct 23 N=30 04	Nov 23 N=2 829	Dec 23 N=23 47
Have you had contact with person with mpox in the current month																		
Not specified	13 (2.0)	19 (1.6)	28 (1.5)	28 (1.2)	36 (1.2)	28 (0.9)	22 (0.6)	28 (0.7)	29 (0.9)	30 (0.7)	19 (0.5)	35 (0.8)	25 (0.6)	31 (0.8)	15 (0.4)	11 (0.4)	19 (0.7)	13 (0.6)
No	590 (91.2)	1124 (94.8)	1786 (97.0)	2224 (98.3)	2886 (98.2)	3227 (98.7)	3410 (98.8)	3738 (98.8)	3177 (98.5)	4074 (98.8)	4127 (99.3)	4081 (98.8)	4097 (98.9)	3916 (99.0)	3694 (99.3)	2983 (99.3)	2796 (98.8)	2325 (99.1)
Yes	44 (6.8)	43 (3.6)	27 (1.5)	11 (0.5)	17 (0.6)	13 (0.4)	19 (0.6)	16 (0.4)	18 (0.6)	20 (0.5)	12 (0.3)	13 (0.3)	19 (0.5)	7 (0.2)	10 (0.3)	10 (0.3)	14 (0.5)	9 (0.4)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the current month																		
Not specified	0 (0.0)	6 (0.5)	1 (0.1)	12 (0.5)	13 (0.4)	8 (0.2)	8 (0.2)	8 (0.2)	7 (0.2)	9 (0.2)	13 (0.3)	12 (0.3)	9 (0.2)	12 (0.3)	6 (0.2)	5 (0.2)	6 (0.2)	4 (0.2)
No	627 (96.9)	1148 (96.8)	1798 (97.7)	2198 (97.1)	2866 (97.5)	3185 (97.5)	3356 (97.2)	3679 (97.3)	3142 (97.5)	4026 (97.6)	4054 (97.5)	4018 (97.3)	4032 (97.4)	3850 (97.4)	3618 (97.3)	2938 (97.8)	2757 (97.5)	2297 (97.9)
Yes	20 (3.1)	32 (2.7)	42 (2.3)	53 (2.3)	60 (2.0)	75 (2.3)	87 (2.5)	95 (2.5)	75 (2.3)	89 (2.2)	91 (2.2)	99 (2.4)	100 (2.4)	92 (2.3)	95 (2.6)	61 (2.0)	66 (2.3)	46 (2.0)

Supplementary Table 24: Sexual behaviour during monthly follow-up in the *PLWHIV* subgroup.

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=111 8	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
Allocation of group membership																		
Unvaccinated, n(%)	42 (13.7)	57 (11.4)	53 (8.0)	69 (8.7)	102 (10.2)	135 (12.1)	143 (12.5)	147 (11.9)	111 (10.8)	158 (11.8)	168 (12.3)	167 (12.4)	172 (12.4)	172 (13.0)	170 (14.3)	151 (16.7)	143 (16.5)	127 (17.8)

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=1118	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
Vaccinated with 1st dose, n(%)	264 (86.3)	398 (79.9)	480 (72.1)	445 (56.3)	422 (42.2)	385 (34.4)	305 (26.6)	305 (24.6)	238 (23.1)	292 (21.9)	280 (20.5)	256 (19.0)	256 (18.5)	249 (18.8)	233 (19.6)	173 (19.1)	164 (18.9)	134 (18.7)
Vaccinated with 2nd dose, n(%)	0 (0.0)	43 (8.6)	133 (20.0)	276 (34.9)	475 (47.5)	598 (53.5)	697 (60.9)	788 (63.5)	681 (66.1)	884 (66.3)	915 (67.1)	924 (68.6)	956 (69.1)	904 (68.2)	784 (66.0)	581 (64.2)	559 (64.5)	454 (63.5)
Sexually active last month																		
Not specified	3 (1.0)	2 (0.4)	6 (0.9)	2 (0.3)	5 (0.5)	5 (0.4)	5 (0.4)	5 (0.4)	7 (0.7)	8 (0.6)	5 (0.4)	4 (0.3)	5 (0.4)	6 (0.5)	4 (0.3)	1 (0.1)	2 (0.2)	1 (0.1)
No	70 (22.9)	132 (26.5)	165 (24.8)	203 (25.7)	255 (25.5)	281 (25.1)	334 (29.2)	356 (28.7)	283 (27.5)	349 (26.2)	363 (26.6)	367 (27.2)	358 (25.9)	363 (27.4)	339 (28.6)	265 (29.3)	281 (32.4)	213 (29.8)
Yes	233 (76.1)	364 (73.1)	495 (74.3)	585 (74.1)	739 (74.0)	832 (74.4)	806 (70.4)	879 (70.9)	740 (71.8)	977 (73.2)	995 (73.0)	976 (72.5)	1021 (73.8)	956 (72.2)	844 (71.1)	639 (70.6)	583 (67.3)	501 (70.1)
# of male sexual partners last month																		
Not specified	2 (0.7)	3 (0.6)	3 (0.5)	3 (0.4)	10 (1.0)	4 (0.4)	7 (0.6)	6 (0.5)	10 (1.0)	4 (0.3)	5 (0.4)	3 (0.2)	3 (0.2)	8 (0.6)	6 (0.5)	0 (0.0)	0 (0.0)	0 (0.0)
0	70 (22.9)	133 (26.7)	168 (25.2)	206 (26.1)	259 (25.9)	285 (25.5)	338 (29.5)	362 (29.2)	289 (28.1)	357 (26.8)	373 (27.4)	374 (27.8)	368 (26.6)	374 (28.2)	351 (29.6)	269 (29.7)	287 (33.1)	218 (30.5)
1	50 (16.3)	101 (20.3)	146 (21.9)	169 (21.4)	208 (20.8)	254 (22.7)	266 (23.2)	271 (21.9)	223 (21.7)	298 (22.3)	282 (20.7)	296 (22.0)	308 (22.3)	289 (21.8)	271 (22.8)	215 (23.8)	192 (22.2)	162 (22.7)
2	34 (11.1)	64 (12.9)	108 (16.2)	124 (15.7)	130 (13.0)	156 (14.0)	143 (12.5)	171 (13.8)	122 (11.8)	187 (14.0)	194 (14.2)	176 (13.1)	191 (13.8)	188 (14.2)	152 (12.8)	140 (15.5)	109 (12.6)	92 (12.9)
3	42 (13.7)	52 (10.4)	61 (9.2)	73 (9.2)	97 (9.7)	112 (10.0)	99 (8.6)	115 (9.3)	112 (10.9)	109 (8.2)	136 (10.0)	133 (9.9)	127 (9.2)	123 (9.3)	98 (8.3)	78 (8.6)	59 (6.8)	65 (9.1)
4	25 (8.2)	41 (8.2)	49 (7.4)	51 (6.5)	63 (6.3)	64 (5.7)	67 (5.9)	84 (6.8)	68 (6.6)	90 (6.7)	101 (7.4)	96 (7.1)	96 (6.9)	78 (5.9)	73 (6.1)	50 (5.5)	56 (6.5)	47 (6.6)
5 or more	80 (26.1)	102 (20.5)	125 (18.8)	162 (20.5)	227 (22.7)	238 (21.3)	219 (19.1)	226 (18.2)	199 (19.3)	281 (21.1)	267 (19.6)	265 (19.7)	286 (20.7)	259 (19.5)	232 (19.5)	152 (16.8)	161 (18.6)	130 (18.2)
Missing	3 (1.0)	2 (0.4)	6 (0.9)	2 (0.3)	5 (0.5)	5 (0.4)	6 (0.5)	5 (0.4)	7 (0.7)	8 (0.6)	5 (0.4)	4 (0.3)	5 (0.4)	6 (0.5)	4 (0.3)	1 (0.1)	2 (0.2)	1 (0.1)

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=1118	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
# of female sexual partners last month																		
Not specified	15 (4.9)	14 (2.8)	23 (3.5)	29 (3.7)	17 (1.7)	20 (1.8)	21 (1.8)	18 (1.5)	9 (0.9)	19 (1.4)	16 (1.2)	10 (0.7)	15 (1.1)	9 (0.7)	7 (0.6)	7 (0.8)	7 (0.8)	2 (0.3)
0	283 (92.5)	478 (96.0)	631 (94.7)	754 (95.4)	964 (96.5)	1077 (96.3)	1105 (96.5)	1202 (96.9)	1001 (97.2)	1288 (96.6)	1327 (97.4)	1318 (97.8)	1347 (97.3)	1294 (97.7)	1161 (97.8)	887 (98.0)	851 (98.3)	705 (98.6)
1	4 (1.3)	3 (0.6)	5 (0.8)	4 (0.5)	9 (0.9)	9 (0.8)	10 (0.9)	9 (0.7)	9 (0.9)	15 (1.1)	8 (0.6)	12 (0.9)	14 (1.0)	13 (1.0)	9 (0.8)	7 (0.8)	6 (0.7)	6 (0.8)
2	1 (0.3)	0 (0.0)	0 (0.0)	1 (0.1)	2 (0.2)	1 (0.1)	0 (0.0)	3 (0.2)	2 (0.2)	1 (0.1)	4 (0.3)	2 (0.1)	1 (0.1)	1 (0.1)	4 (0.3)	2 (0.2)	0 (0.0)	1 (0.1)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.2)	1 (0.1)	1 (0.1)	1 (0.1)	2 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)
4	0 (0.0)	0 (0.0)	1 (0.2)	0 (0.0)	1 (0.1)	1 (0.1)	2 (0.2)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	2 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)
5 or more	0 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)	1 (0.1)	3 (0.3)	0 (0.0)	2 (0.2)	1 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	3 (1.0)	2 (0.4)	6 (0.9)	2 (0.3)	5 (0.5)	5 (0.4)	6 (0.5)	5 (0.4)	7 (0.7)	8 (0.6)	5 (0.4)	4 (0.3)	5 (0.4)	6 (0.5)	4 (0.3)	1 (0.1)	2 (0.2)	1 (0.1)
# of non-binary sexual partners last month																		
Not specified	0 (0.0)	0 (0.0)	1 (0.2)	0 (0.0)	42 (4.2)	46 (4.1)	42 (3.7)	39 (3.1)	30 (2.9)	45 (3.4)	38 (2.8)	38 (2.8)	38 (2.7)	29 (2.2)	26 (2.2)	14 (1.5)	16 (1.8)	4 (0.6)
0	1 (0.3)	2 (0.4)	6 (0.9)	6 (0.8)	658 (65.9)	745 (66.6)	730 (63.8)	808 (65.2)	671 (65.1)	888 (66.6)	904 (66.3)	883 (65.6)	930 (67.2)	889 (67.1)	777 (65.5)	597 (66.0)	543 (62.7)	472 (66.0)
1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (1.6)	25 (2.2)	18 (1.6)	18 (1.5)	19 (1.8)	26 (1.9)	24 (1.8)	35 (2.6)	26 (1.9)	20 (1.5)	23 (1.9)	16 (1.8)	10 (1.2)	17 (2.4)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	9 (0.9)	7 (0.6)	5 (0.4)	7 (0.6)	4 (0.4)	5 (0.4)	8 (0.6)	8 (0.6)	7 (0.5)	5 (0.4)	6 (0.5)	3 (0.3)	5 (0.6)	3 (0.4)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (0.4)	1 (0.1)	3 (0.3)	2 (0.2)	4 (0.4)	1 (0.1)	5 (0.4)	3 (0.2)	6 (0.4)	4 (0.3)	5 (0.4)	1 (0.1)	3 (0.3)	1 (0.1)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.3)	1 (0.1)	3 (0.3)	2 (0.2)	3 (0.3)	4 (0.3)	4 (0.3)	2 (0.1)	6 (0.4)	3 (0.2)	2 (0.2)	4 (0.4)	2 (0.2)	0 (0.0)
5 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (0.7)	7 (0.6)	4 (0.3)	3 (0.2)	9 (0.9)	8 (0.6)	12 (0.9)	7 (0.5)	8 (0.6)	6 (0.5)	5 (0.4)	4 (0.4)	4 (0.5)	4 (0.6)

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=1118	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
Missing	305 (99.7)	496 (99.6)	659 (98.9)	784 (99.2)	260 (26.0)	286 (25.6)	340 (29.7)	361 (29.1)	290 (28.2)	357 (26.8)	368 (27.0)	371 (27.5)	363 (26.2)	369 (27.8)	343 (28.9)	266 (29.4)	283 (32.7)	214 (29.9)
# sexual partners you had sex without a condom last month																		
Not specified	5 (1.6)	9 (1.8)	15 (2.3)	10 (1.3)	17 (1.7)	6 (0.5)	9 (0.8)	14 (1.1)	12 (1.2)	9 (0.7)	19 (1.4)	11 (0.8)	15 (1.1)	11 (0.8)	9 (0.8)	2 (0.2)	3 (0.3)	2 (0.3)
0	79 (25.8)	156 (31.3)	210 (31.5)	239 (30.3)	307 (30.7)	349 (31.2)	393 (34.3)	412 (33.2)	327 (31.7)	412 (30.9)	444 (32.6)	427 (31.7)	433 (31.3)	421 (31.8)	401 (33.8)	312 (34.5)	329 (38.0)	243 (34.0)
1	51 (16.7)	98 (19.7)	139 (20.9)	174 (22.0)	203 (20.3)	245 (21.9)	259 (22.6)	265 (21.4)	234 (22.7)	309 (23.2)	272 (20.0)	298 (22.1)	305 (22.0)	308 (23.2)	265 (22.3)	211 (23.3)	191 (22.1)	163 (22.8)
2	33 (10.8)	66 (13.3)	97 (14.6)	116 (14.7)	138 (13.8)	151 (13.5)	144 (12.6)	173 (14.0)	112 (10.9)	166 (12.4)	182 (13.4)	182 (13.5)	184 (13.3)	170 (12.8)	147 (12.4)	127 (14.0)	101 (11.7)	95 (13.3)
3	41 (13.4)	48 (9.6)	53 (8.0)	58 (7.3)	79 (7.9)	93 (8.3)	85 (7.4)	99 (8.0)	98 (9.5)	100 (7.5)	125 (9.2)	116 (8.6)	113 (8.2)	114 (8.6)	89 (7.5)	76 (8.4)	61 (7.0)	56 (7.8)
4	20 (6.5)	29 (5.8)	40 (6.0)	48 (6.1)	55 (5.5)	60 (5.4)	62 (5.4)	73 (5.9)	63 (6.1)	81 (6.1)	84 (6.2)	81 (6.0)	84 (6.1)	72 (5.4)	63 (5.3)	43 (4.8)	44 (5.1)	44 (6.2)
5 or more	74 (24.2)	90 (18.1)	106 (15.9)	143 (18.1)	195 (19.5)	209 (18.7)	187 (16.3)	199 (16.0)	177 (17.2)	249 (18.7)	232 (17.0)	228 (16.9)	245 (17.7)	223 (16.8)	209 (17.6)	133 (14.7)	135 (15.6)	111 (15.5)
Missing	3 (1.0)	2 (0.4)	6 (0.9)	2 (0.3)	5 (0.5)	5 (0.4)	6 (0.5)	5 (0.4)	7 (0.7)	8 (0.6)	5 (0.4)	4 (0.3)	5 (0.4)	6 (0.5)	4 (0.3)	1 (0.1)	2 (0.2)	1 (0.1)
In what ways have you had sex last month?																		
Oral - passive	175 (57.2)	267 (53.6)	376 (56.5)	452 (57.2)	573 (57.4)	642 (57.4)	635 (55.5)	693 (55.9)	587 (57.0)	771 (57.8)	791 (58.0)	743 (55.2)	792 (57.2)	751 (56.7)	660 (55.6)	492 (54.4)	476 (55.0)	395 (55.2)
Oral - active	200 (65.4)	296 (59.4)	405 (60.8)	473 (59.9)	604 (60.5)	691 (61.8)	679 (59.3)	721 (58.1)	629 (61.1)	819 (61.4)	836 (61.3)	805 (59.8)	856 (61.8)	808 (61.0)	696 (58.6)	533 (58.9)	488 (56.4)	414 (57.9)
Anal - passive	169 (55.2)	244 (49.0)	339 (50.9)	412 (52.2)	524 (52.5)	570 (51.0)	552 (48.2)	605 (48.8)	515 (50.0)	679 (50.9)	676 (49.6)	674 (50.0)	723 (52.2)	645 (48.7)	592 (49.9)	439 (48.5)	409 (47.2)	344 (48.1)

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=1118	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
Anal - active	148 (48.4)	232 (46.6)	301 (45.2)	384 (48.6)	454 (45.4)	498 (44.5)	483 (42.2)	518 (41.8)	445 (43.2)	581 (43.6)	589 (43.2)	566 (42.0)	606 (43.8)	566 (42.7)	498 (42.0)	373 (41.2)	327 (37.8)	297 (41.5)
Vaginal - passive	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	0 (0.0)	2 (0.1)	1 (0.1)	2 (0.1)	3 (0.2)	2 (0.2)	2 (0.2)	3 (0.3)	2 (0.2)	2 (0.3)
Vaginal - active	4 (1.3)	5 (1.0)	3 (0.5)	5 (0.6)	14 (1.4)	6 (0.5)	14 (1.2)	11 (0.9)	10 (1.0)	14 (1.0)	11 (0.8)	13 (1.0)	15 (1.1)	12 (0.9)	12 (1.0)	11 (1.2)	7 (0.8)	4 (0.6)
Other	42 (13.7)	62 (12.4)	68 (10.2)	76 (9.6)	96 (9.6)	99 (8.9)	99 (8.6)	113 (9.1)	97 (9.4)	113 (8.5)	128 (9.4)	108 (8.0)	134 (9.7)	106 (8.0)	93 (7.8)	71 (7.8)	69 (8.0)	71 (9.9)
Not specified	0 (0.0)	6 (1.2)	5 (0.8)	5 (0.6)	11 (1.1)	4 (0.4)	10 (0.9)	13 (1.0)	7 (0.7)	8 (0.6)	11 (0.8)	8 (0.6)	8 (0.6)	7 (0.5)	11 (0.9)	5 (0.6)	4 (0.5)	1 (0.1)
In the last month did you knowingly have sex with a person who																		
You did not know before	154 (50.3)	211 (42.4)	289 (43.4)	353 (44.7)	430 (43.0)	474 (42.4)	431 (37.6)	480 (38.7)	416 (40.4)	544 (40.8)	569 (41.7)	559 (41.5)	589 (42.6)	523 (39.5)	472 (39.8)	343 (37.9)	306 (35.3)	268 (37.5)
Did not use condoms	157 (51.3)	241 (48.4)	301 (45.2)	374 (47.3)	469 (46.9)	517 (46.2)	504 (44.0)	556 (44.8)	483 (46.9)	626 (46.9)	639 (46.9)	618 (45.9)	664 (48.0)	587 (44.3)	525 (44.2)	400 (44.2)	381 (44.0)	335 (46.9)
Intravenously takes drugs (injects)	21 (6.9)	24 (4.8)	35 (5.3)	35 (4.4)	52 (5.2)	54 (4.8)	49 (4.3)	52 (4.2)	50 (4.9)	59 (4.4)	72 (5.3)	63 (4.7)	87 (6.3)	66 (5.0)	56 (4.7)	39 (4.3)	41 (4.7)	39 (5.5)
Sex worker	13 (4.2)	22 (4.4)	31 (4.7)	39 (4.9)	44 (4.4)	52 (4.7)	58 (5.1)	55 (4.4)	45 (4.4)	59 (4.4)	57 (4.2)	50 (3.7)	70 (5.1)	62 (4.7)	57 (4.8)	45 (5.0)	41 (4.7)	26 (3.6)
None of the special partner group	32 (10.5)	67 (13.5)	86 (12.9)	89 (11.3)	129 (12.9)	140 (12.5)	157 (13.7)	169 (13.6)	127 (12.3)	182 (13.6)	174 (12.8)	165 (12.2)	176 (12.7)	183 (13.8)	148 (12.5)	114 (12.6)	110 (12.7)	79 (11.0)
Not specified	4 (1.3)	9 (1.8)	22 (3.3)	19 (2.4)	25 (2.5)	37 (3.3)	28 (2.4)	35 (2.8)	28 (2.7)	30 (2.2)	30 (2.2)	31 (2.3)	36 (2.6)	32 (2.4)	29 (2.4)	25 (2.8)	17 (2.0)	14 (2.0)
Have you had an STI in the last month?																		
Not specified	1 (0.3)	5 (1.0)	6 (0.9)	4 (0.5)	11 (1.1)	8 (0.7)	4 (0.3)	8 (0.6)	5 (0.5)	8 (0.6)	6 (0.4)	8 (0.6)	7 (0.5)	6 (0.5)	4 (0.3)	2 (0.2)	3 (0.3)	2 (0.3)

[illegible]

	Jul 22 N=306	Aug 22 N=498	Sep 22 N=666	Oct 22 N=790	Nov 22 N=999	Dec 22 N=1118	Jan 23 N=1145	Feb 23 N=1240	Mar 23 N=1030	Apr 23 N=1334	May 23 N=1363	Jun 23 N=1347	Jul 23 N=1384	Aug 23 N=1325	Sep 23 N=1187	Oct 23 N=905	Nov 23 N=866	Dec 23 N=715
Yes, regularly, but not currently	0 (0.0)	0 (0.0)	2 (0.3)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, irregularly and several times a week	0 (0.0)	0 (0.0)	1 (0.2)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Yes, but only when I needed it (on demand PrEP/event based dosing)	2 (0.7)	3 (0.6)	2 (0.3)	2 (0.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Missing	2 (0.7)	3 (0.6)	7 (1.1)	9 (1.1)	997 (99.8)	1115 (99.7)	1142 (99.7)	1238 (99.8)	1027 (99.7)	1331 (99.8)	1361 (99.9)	1344 (99.8)	1381 (99.8)	1322 (99.8)	1184 (99.7)	902 (99.7)	865 (99.9)	715 (100.0)
Have you had contact with person with mpox in the last month																		
Not specified	7 (2.3)	9 (1.8)	13 (2.0)	13 (1.6)	11 (1.1)	11 (1.0)	9 (0.8)	11 (0.9)	13 (1.3)	12 (0.9)	4 (0.3)	10 (0.7)	7 (0.5)	8 (0.6)	7 (0.6)	3 (0.3)	5 (0.6)	4 (0.6)
No	282 (92.2)	468 (94.0)	645 (96.8)	771 (97.6)	982 (98.3)	1100 (98.4)	1125 (98.3)	1220 (98.4)	1007 (97.8)	1316 (98.7)	1355 (99.4)	1329 (98.7)	1365 (98.6)	1312 (99.0)	1179 (99.3)	895 (98.9)	853 (98.5)	709 (99.2)
Yes	17 (5.6)	21 (4.2)	8 (1.2)	6 (0.8)	6 (0.6)	7 (0.6)	11 (1.0)	9 (0.7)	10 (1.0)	6 (0.4)	4 (0.3)	8 (0.6)	12 (0.9)	5 (0.4)	1 (0.1)	7 (0.8)	8 (0.9)	2 (0.3)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last month																		
Not specified	0 (0.0)	2 (0.4)	0 (0.0)	5 (0.6)	5 (0.5)	5 (0.4)	5 (0.4)	5 (0.4)	4 (0.4)	5 (0.4)	6 (0.4)	7 (0.5)	3 (0.2)	3 (0.2)	3 (0.3)	1 (0.1)	1 (0.1)	0 (0.0)
No	295 (96.4)	477 (95.8)	651 (97.7)	767 (97.1)	975 (97.6)	1091 (97.6)	1116 (97.5)	1210 (97.6)	1001 (97.2)	1304 (97.8)	1337 (98.1)	1319 (97.9)	1355 (97.9)	1294 (97.7)	1155 (97.3)	885 (97.8)	846 (97.7)	696 (97.3)

Supplementary Table 25: Sexual behaviour during monthly follow-up in the *PrEP users subgroup*

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
Allocation of group membership																		
Unvaccinated, n(%)	45 (19.2)	81 (18.6)	120 (15.6)	83 (8.6)	84 (6.7)	108 (7.8)	110 (7.3)	138 (8.4)	124 (8.6)	167 (8.9)	173 (9.1)	184 (9.6)	193 (10.0)	186 (10.1)	198 (11.0)	170 (11.4)	171 (12.3)	163 (13.8)
Vaccinated with 1st dose, n(%)	189 (80.8)	269 (61.7)	483 (62.9)	562 (58.4)	574 (46.1)	508 (36.7)	466 (31.0)	451 (27.3)	365 (25.2)	454 (24.3)	449 (23.6)	429 (22.5)	411 (21.3)	389 (21.2)	376 (20.9)	295 (19.9)	263 (18.9)	225 (19.1)
Vaccinated with 2nd dose, n(%)	0 (0.0)	86 (19.7)	165 (21.5)	317 (33.0)	588 (47.2)	769 (55.5)	929 (61.7)	1060 (64.3)	958 (66.2)	1250 (66.8)	1279 (67.3)	1295 (67.9)	1322 (68.6)	1262 (68.7)	1228 (68.1)	1021 (68.7)	959 (68.8)	790 (67.1)
Sexually active last month																		
Not specified	1 (0.4)	2 (0.5)	1 (0.1)	3 (0.3)	9 (0.7)	2 (0.1)	3 (0.2)	3 (0.2)	0 (0.0)	2 (0.1)	3 (0.2)	1 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	3 (0.2)	2 (0.2)
No	28 (12.0)	64 (14.7)	91 (11.8)	111 (11.5)	161 (12.9)	184 (13.3)	233 (15.5)	250 (15.2)	216 (14.9)	255 (13.6)	260 (13.7)	249 (13.1)	273 (14.2)	256 (13.9)	285 (15.8)	242 (16.3)	251 (18.0)	177 (15.0)
Yes	205 (87.6)	370 (84.9)	676 (88.0)	848 (88.1)	1076 (86.4)	1199 (86.6)	1269 (84.3)	1396 (84.7)	1231 (85.1)	1614 (86.3)	1638 (86.2)	1658 (86.9)	1651 (85.7)	1581 (86.1)	1517 (84.2)	1243 (83.6)	1139 (81.8)	999 (84.8)
# of male sexual partners last month																		
Not specified	2 (0.9)	1 (0.2)	5 (0.7)	1 (0.1)	16 (1.3)	7 (0.5)	5 (0.3)	4 (0.2)	10 (0.7)	9 (0.5)	11 (0.6)	9 (0.5)	10 (0.5)	6 (0.3)	11 (0.6)	9 (0.6)	6 (0.4)	5 (0.4)
0	29 (12.4)	65 (14.9)	93 (12.1)	111 (11.5)	175 (14.0)	198 (14.3)	250 (16.6)	267 (16.2)	229 (15.8)	269 (14.4)	277 (14.6)	268 (14.0)	286 (14.8)	271 (14.8)	301 (16.7)	259 (17.4)	264 (19.0)	187 (15.9)
1	40 (17.1)	80 (18.3)	149 (19.4)	216 (22.5)	263 (21.1)	295 (21.3)	349 (23.2)	395 (24.0)	322 (22.3)	416 (22.2)	430 (22.6)	406 (21.3)	396 (20.6)	437 (23.8)	390 (21.6)	364 (24.5)	310 (22.3)	286 (24.3)

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
2	48 (20.5)	65 (14.9)	148 (19.3)	173 (18.0)	214 (17.2)	228 (16.5)	250 (16.6)	277 (16.8)	228 (15.8)	299 (16.0)	286 (15.0)	317 (16.6)	300 (15.6)	298 (16.2)	284 (15.8)	216 (14.5)	203 (14.6)	214 (18.2)
3	36 (15.4)	68 (15.6)	95 (12.4)	123 (12.8)	149 (12.0)	190 (13.7)	175 (11.6)	169 (10.2)	161 (11.1)	213 (11.4)	249 (13.1)	236 (12.4)	236 (12.3)	207 (11.3)	222 (12.3)	171 (11.5)	167 (12.0)	125 (10.6)
4	19 (8.1)	48 (11.0)	74 (9.6)	96 (10.0)	107 (8.6)	116 (8.4)	130 (8.6)	144 (8.7)	130 (9.0)	163 (8.7)	141 (7.4)	193 (10.1)	147 (7.6)	143 (7.8)	139 (7.7)	103 (6.9)	95 (6.8)	92 (7.8)
5 or more	59 (25.2)	107 (24.5)	203 (26.4)	239 (24.8)	313 (25.1)	349 (25.2)	343 (22.8)	390 (23.7)	367 (25.4)	500 (26.7)	504 (26.5)	478 (25.1)	549 (28.5)	475 (25.9)	455 (25.2)	363 (24.4)	345 (24.8)	267 (22.7)
Missing	1 (0.4)	2 (0.5)	1 (0.1)	3 (0.3)	9 (0.7)	2 (0.1)	3 (0.2)	3 (0.2)	0 (0.0)	2 (0.1)	3 (0.2)	1 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	3 (0.2)	2 (0.2)
# of female sexual partners last month																		
Not specified	6 (2.6)	11 (2.5)	21 (2.7)	18 (1.9)	15 (1.2)	14 (1.0)	18 (1.2)	9 (0.5)	12 (0.8)	19 (1.0)	12 (0.6)	15 (0.8)	13 (0.7)	18 (1.0)	15 (0.8)	5 (0.3)	7 (0.5)	9 (0.8)
0	225 (96.2)	418 (95.9)	737 (96.0)	932 (96.9)	1198 (96.1)	1343 (97.0)	1456 (96.7)	1611 (97.7)	1407 (97.2)	1823 (97.4)	1848 (97.2)	1850 (97.0)	1878 (97.5)	1783 (97.1)	1759 (97.6)	1455 (97.9)	1364 (97.9)	1142 (96.9)
1	1 (0.4)	3 (0.7)	7 (0.9)	4 (0.4)	14 (1.1)	14 (1.0)	20 (1.3)	14 (0.8)	16 (1.1)	14 (0.7)	20 (1.1)	24 (1.3)	26 (1.3)	24 (1.3)	19 (1.1)	16 (1.1)	10 (0.7)	15 (1.3)
2	1 (0.4)	1 (0.2)	1 (0.1)	3 (0.3)	7 (0.6)	9 (0.6)	7 (0.5)	8 (0.5)	6 (0.4)	4 (0.2)	8 (0.4)	11 (0.6)	5 (0.3)	7 (0.4)	5 (0.3)	7 (0.5)	7 (0.5)	5 (0.4)
3	0 (0.0)	1 (0.2)	1 (0.1)	0 (0.0)	3 (0.2)	1 (0.1)	1 (0.1)	1 (0.1)	2 (0.1)	3 (0.2)	5 (0.3)	4 (0.2)	0 (0.0)	2 (0.1)	3 (0.2)	1 (0.1)	1 (0.1)	0 (0.0)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	2 (0.1)	2 (0.1)	1 (0.1)	3 (0.2)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.2)
5 or more	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.2)	0 (0.0)	1 (0.1)	0 (0.0)	2 (0.1)	2 (0.1)	4 (0.2)	4 (0.2)	0 (0.0)	1 (0.1)	3 (0.2)	1 (0.1)	1 (0.1)	1 (0.1)	3 (0.3)
Missing	1 (0.4)	2 (0.5)	1 (0.1)	3 (0.3)	9 (0.7)	2 (0.1)	3 (0.2)	3 (0.2)	0 (0.0)	2 (0.1)	3 (0.2)	1 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	3 (0.2)	2 (0.2)

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
# of non-binary sexual partners last month																		
Not specified	0 (0.0)	0 (0.0)	1 (0.1)	2 (0.2)	44 (3.5)	48 (3.5)	38 (2.5)	39 (2.4)	54 (3.7)	53 (2.8)	58 (3.1)	57 (3.0)	60 (3.1)	72 (3.9)	41 (2.3)	32 (2.2)	26 (1.9)	26 (2.2)
0	3 (1.3)	4 (0.9)	7 (0.9)	15 (1.6)	972 (78.0)	1103 (79.6)	1183 (78.6)	1292 (78.4)	1119 (77.3)	1494 (79.9)	1500 (78.9)	1537 (80.6)	1522 (79.0)	1458 (79.4)	1430 (79.4)	1174 (79.0)	1079 (77.5)	935 (79.4)
1	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)	39 (3.1)	25 (1.8)	26 (1.7)	38 (2.3)	37 (2.6)	38 (2.0)	43 (2.3)	35 (1.8)	36 (1.9)	35 (1.9)	22 (1.2)	21 (1.4)	20 (1.4)	17 (1.4)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	12 (1.0)	6 (0.4)	6 (0.4)	12 (0.7)	1 (0.1)	13 (0.7)	10 (0.5)	12 (0.6)	10 (0.5)	4 (0.2)	11 (0.6)	7 (0.5)	5 (0.4)	7 (0.6)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (0.2)	4 (0.3)	3 (0.2)	3 (0.2)	9 (0.6)	2 (0.1)	8 (0.4)	5 (0.3)	4 (0.2)	0 (0.0)	6 (0.3)	1 (0.1)	1 (0.1)	4 (0.3)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	6 (0.4)	6 (0.4)	6 (0.4)	4 (0.3)	6 (0.3)	3 (0.2)	4 (0.2)	5 (0.3)	3 (0.2)	2 (0.1)	1 (0.1)	1 (0.1)	1 (0.1)
5 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (0.6)	7 (0.5)	7 (0.5)	6 (0.4)	7 (0.5)	8 (0.4)	16 (0.8)	8 (0.4)	14 (0.7)	9 (0.5)	5 (0.3)	7 (0.5)	7 (0.5)	9 (0.8)
Missing	231 (98.7)	432 (99.1)	759 (98.8)	944 (98.1)	170 (13.6)	186 (13.4)	236 (15.7)	253 (15.3)	216 (14.9)	257 (13.7)	263 (13.8)	250 (13.1)	275 (14.3)	256 (13.9)	285 (15.8)	243 (16.4)	254 (18.2)	179 (15.2)
# sexual partners you had sex without a condom last month																		
Not specified	6 (2.6)	6 (1.4)	12 (1.6)	7 (0.7)	15 (1.2)	13 (0.9)	9 (0.6)	8 (0.5)	15 (1.0)	20 (1.1)	19 (1.0)	12 (0.6)	16 (0.8)	20 (1.1)	13 (0.7)	18 (1.2)	11 (0.8)	16 (1.4)
0	43 (18.4)	96 (22.0)	150 (19.5)	181 (18.8)	245 (19.7)	283 (20.4)	342 (22.7)	379 (23.0)	315 (21.8)	387 (20.7)	402 (21.1)	398 (20.9)	403 (20.9)	384 (20.9)	408 (22.6)	356 (24.0)	348 (25.0)	270 (22.9)
1	48 (20.5)	101 (23.2)	181 (23.6)	249 (25.9)	322 (25.8)	349 (25.2)	406 (27.0)	438 (26.6)	359 (24.8)	468 (25.0)	471 (24.8)	485 (25.4)	465 (24.1)	463 (25.2)	442 (24.5)	373 (25.1)	345 (24.8)	306 (26.0)
2	44 (18.8)	59 (13.5)	130 (16.9)	157 (16.3)	191 (15.3)	204 (14.7)	237 (15.7)	250 (15.2)	214 (14.8)	284 (15.2)	280 (14.7)	279 (14.6)	272 (14.1)	288 (15.7)	266 (14.8)	221 (14.9)	192 (13.8)	183 (15.5)

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
3	27 (11.5)	54 (12.4)	80 (10.4)	110 (11.4)	118 (9.5)	157 (11.3)	136 (9.0)	153 (9.3)	130 (9.0)	169 (9.0)	202 (10.6)	193 (10.1)	206 (10.7)	189 (10.3)	195 (10.8)	130 (8.7)	130 (9.3)	104 (8.8)
4	15 (6.4)	29 (6.7)	45 (5.9)	65 (6.8)	98 (7.9)	103 (7.4)	106 (7.0)	120 (7.3)	104 (7.2)	151 (8.1)	107 (5.6)	151 (7.9)	120 (6.2)	124 (6.8)	120 (6.7)	89 (6.0)	83 (6.0)	76 (6.5)
5 or more	50 (21.4)	89 (20.4)	169 (22.0)	190 (19.8)	248 (19.9)	274 (19.8)	266 (17.7)	298 (18.1)	310 (21.4)	390 (20.8)	417 (21.9)	389 (20.4)	442 (22.9)	369 (20.1)	358 (19.9)	298 (20.1)	281 (20.2)	221 (18.8)
Missing	1 (0.4)	2 (0.5)	1 (0.1)	3 (0.3)	9 (0.7)	2 (0.1)	3 (0.2)	3 (0.2)	0 (0.0)	2 (0.1)	3 (0.2)	1 (0.1)	2 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	3 (0.2)	2 (0.2)
In what ways have you had sex last month?																		
Oral - passive	187 (79.9)	323 (74.1)	578 (75.3)	749 (77.9)	934 (75.0)	1055 (76.2)	1111 (73.8)	1212 (73.5)	1082 (74.8)	1412 (75.5)	1432 (75.3)	1473 (77.2)	1469 (76.3)	1400 (76.2)	1344 (74.6)	1103 (74.2)	1014 (72.8)	876 (74.4)
Oral - active	180 (76.9)	324 (74.3)	581 (75.7)	728 (75.7)	920 (73.8)	1041 (75.2)	1082 (71.9)	1206 (73.1)	1074 (74.2)	1385 (74.0)	1417 (74.5)	1440 (75.5)	1456 (75.6)	1374 (74.8)	1349 (74.9)	1095 (73.7)	1007 (72.3)	876 (74.4)
Anal - passive	119 (50.9)	226 (51.8)	425 (55.3)	520 (54.1)	665 (53.4)	729 (52.6)	780 (51.8)	825 (50.0)	753 (52.0)	991 (53.0)	1021 (53.7)	1017 (53.3)	1042 (54.1)	967 (52.6)	944 (52.4)	746 (50.2)	690 (49.5)	602 (51.1)
Anal - active	133 (56.8)	240 (55.0)	472 (61.5)	566 (58.8)	733 (58.8)	821 (59.3)	829 (55.1)	927 (56.2)	859 (59.4)	1097 (58.6)	1113 (58.5)	1147 (60.1)	1138 (59.1)	1081 (58.8)	1007 (55.9)	839 (56.5)	787 (56.5)	673 (57.1)
Vaginal - passive	0 (0.0)	1 (0.2)	2 (0.3)	3 (0.3)	5 (0.4)	3 (0.2)	2 (0.1)	4 (0.2)	1 (0.1)	7 (0.4)	6 (0.3)	7 (0.4)	6 (0.3)	4 (0.2)	6 (0.3)	4 (0.3)	7 (0.5)	5 (0.4)
Vaginal - active	2 (0.9)	4 (0.9)	8 (1.0)	7 (0.7)	19 (1.5)	24 (1.7)	22 (1.5)	28 (1.7)	22 (1.5)	28 (1.5)	39 (2.1)	37 (1.9)	36 (1.9)	31 (1.7)	37 (2.1)	24 (1.6)	19 (1.4)	21 (1.8)
Other	12 (5.1)	36 (8.3)	40 (5.2)	61 (6.3)	89 (7.1)	88 (6.4)	100 (6.6)	102 (6.2)	95 (6.6)	115 (6.1)	116 (6.1)	110 (5.8)	125 (6.5)	119 (6.5)	121 (6.7)	92 (6.2)	91 (6.5)	76 (6.5)
Not specified	2 (0.9)	2 (0.5)	4 (0.5)	4 (0.4)	8 (0.6)	10 (0.7)	5 (0.3)	6 (0.4)	3 (0.2)	9 (0.5)	15 (0.8)	9 (0.5)	7 (0.4)	8 (0.4)	6 (0.3)	8 (0.5)	3 (0.2)	5 (0.4)
In the last month did you knowingly have sex with a person who																		

[illegible]

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
Not specified	0 (0.0)	1 (0.2)	5 (0.7)	11 (1.1)	15 (1.2)	9 (0.6)	14 (0.9)	11 (0.7)	11 (0.8)	14 (0.7)	17 (0.9)	17 (0.9)	10 (0.5)	11 (0.6)	4 (0.2)	8 (0.5)	7 (0.5)	5 (0.4)
No	225 (96.2)	417 (95.6)	713 (92.8)	887 (92.2)	1146 (92.0)	1315 (94.9)	1426 (94.8)	1557 (94.4)	1373 (94.9)	1753 (93.7)	1784 (93.8)	1779 (93.2)	1820 (94.5)	1719 (93.6)	1701 (94.4)	1414 (95.2)	1329 (95.4)	1114 (94.6)
Yes	9 (3.8)	18 (4.1)	50 (6.5)	64 (6.7)	85 (6.8)	61 (4.4)	65 (4.3)	81 (4.9)	63 (4.4)	104 (5.6)	100 (5.3)	112 (5.9)	96 (5.0)	107 (5.8)	97 (5.4)	64 (4.3)	57 (4.1)	59 (5.0)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Have taken HIV PrEP in the last month																		
Not specified	1 (0.4)	1 (0.2)	1 (0.1)	1 (0.1)	4 (0.3)	1 (0.1)	7 (0.5)	1 (0.1)	0 (0.0)	2 (0.1)	3 (0.2)	2 (0.1)	0 (0.0)	6 (0.3)	2 (0.1)	3 (0.2)	4 (0.3)	2 (0.2)
No	26 (11.1)	52 (11.9)	95 (12.4)	125 (13.0)	188 (15.1)	213 (15.4)	253 (16.8)	275 (16.7)	250 (17.3)	336 (18.0)	345 (18.1)	338 (17.7)	320 (16.6)	338 (18.4)	303 (16.8)	268 (18.0)	263 (18.9)	231 (19.6)
Yes, regularly and daily	167 (71.4)	300 (68.8)	519 (67.6)	660 (68.6)	838 (67.3)	918 (66.3)	986 (65.5)	1073 (65.1)	945 (65.3)	1204 (64.4)	1229 (64.7)	1261 (66.1)	1258 (65.3)	1190 (64.8)	1181 (65.5)	961 (64.7)	878 (63.0)	724 (61.5)
Yes, regularly, but not currently	6 (2.6)	10 (2.3)	17 (2.2)	14 (1.5)	20 (1.6)	36 (2.6)	31 (2.1)	30 (1.8)	25 (1.7)	43 (2.3)	37 (1.9)	33 (1.7)	37 (1.9)	32 (1.7)	41 (2.3)	35 (2.4)	25 (1.8)	34 (2.9)
Yes, irregularly and several times a week	2 (0.9)	12 (2.8)	28 (3.6)	33 (3.4)	33 (2.6)	50 (3.6)	50 (3.3)	54 (3.3)	40 (2.8)	58 (3.1)	59 (3.1)	59 (3.1)	51 (2.6)	47 (2.6)	47 (2.6)	44 (3.0)	37 (2.7)	33 (2.8)
Yes, but only when I needed it (on demand PrEP/event based dosing)	32 (13.7)	61 (14.0)	108 (14.1)	129 (13.4)	163 (13.1)	167 (12.1)	178 (11.8)	216 (13.1)	187 (12.9)	228 (12.2)	228 (12.0)	215 (11.3)	260 (13.5)	224 (12.2)	228 (12.7)	175 (11.8)	186 (13.4)	154 (13.1)
Missing	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Have you had contact with person with mpox in the last month																		
Not specified	5 (2.1)	5 (1.1)	10 (1.3)	9 (0.9)	15 (1.2)	12 (0.9)	10 (0.7)	13 (0.8)	12 (0.8)	15 (0.8)	12 (0.6)	16 (0.8)	12 (0.6)	16 (0.9)	5 (0.3)	4 (0.3)	11 (0.8)	6 (0.5)

	Jul 22 N=234	Aug 22 N=436	Sep 22 N=768	Oct 22 N=962	Nov 22 N=1246	Dec 22 N=1385	Jan 23 N=1505	Feb 23 N=1649	Mar 23 N=1447	Apr 23 N=1871	May 23 N=1901	Jun 23 N=1908	Jul 23 N=1926	Aug 23 N=1837	Sep 23 N=1802	Oct 23 N=1486	Nov 23 N=1393	Dec 23 N=1178
No	212 (90.6)	417 (95.6)	747 (97.3)	950 (98.8)	1222 (98.1)	1369 (98.8)	1489 (98.9)	1631 (98.9)	1431 (98.9)	1848 (98.8)	1884 (99.1)	1887 (98.9)	1908 (99.1)	1820 (99.1)	1792 (99.4)	1480 (99.6)	1378 (98.9)	1167 (99.1)
Yes	17 (7.3)	14 (3.2)	11 (1.4)	3 (0.3)	9 (0.7)	4 (0.3)	6 (0.4)	5 (0.3)	4 (0.3)	8 (0.4)	5 (0.3)	5 (0.3)	6 (0.3)	1 (0.1)	5 (0.3)	2 (0.1)	4 (0.3)	5 (0.4)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last month																		
Not specified	0 (0.0)	3 (0.7)	1 (0.1)	5 (0.5)	5 (0.4)	2 (0.1)	2 (0.1)	2 (0.1)	1 (0.1)	3 (0.2)	5 (0.3)	2 (0.1)	4 (0.2)	8 (0.4)	1 (0.1)	3 (0.2)	3 (0.2)	2 (0.2)
No	229 (97.9)	426 (97.7)	749 (97.5)	933 (97.0)	1222 (98.1)	1348 (97.3)	1454 (96.6)	1601 (97.1)	1407 (97.2)	1822 (97.4)	1842 (96.9)	1854 (97.2)	1867 (96.9)	1782 (97.0)	1749 (97.1)	1452 (97.7)	1355 (97.3)	1153 (97.9)
Yes	5 (2.1)	7 (1.6)	18 (2.3)	24 (2.5)	19 (1.5)	35 (2.5)	49 (3.3)	46 (2.8)	39 (2.7)	46 (2.5)	54 (2.8)	52 (2.7)	55 (2.9)	47 (2.6)	52 (2.9)	31 (2.1)	35 (2.5)	23 (2.0)

Supplementary Table 26: Sexual behaviour during monthly follow-up in the *HSMV* subgroup

	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
Allocation of group membership																		
Unvaccinated, n(%)	28 (13.9)	51 (13.3)	60 (11.3)	72 (10.9)	88 (9.7)	94 (9.1)	101 (9.3)	102 (8.8)	79 (8.4)	112 (9.0)	120 (9.4)	121 (9.6)	125 (9.7)	127 (10.3)	135 (11.9)	109 (11.9)	104 (11.8)	91 (12.3)
Vaccinated with 1st dose, n(%)	173 (86.1)	302 (78.6)	370 (69.9)	428 (64.7)	504 (55.5)	486 (47.2)	417 (38.2)	416 (36.0)	321 (34.1)	429 (34.5)	421 (33.0)	408 (32.3)	419 (32.5)	402 (32.5)	375 (33.0)	302 (32.9)	281 (31.9)	236 (31.8)

	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
Vaccinated with 2nd dose, n(%)	0 (0.0)	31 (8.1)	99 (18.7)	162 (24.5)	316 (34.8)	450 (43.7)	573 (52.5)	636 (55.1)	542 (57.5)	703 (56.5)	734 (57.6)	733 (58.1)	745 (57.8)	709 (57.3)	628 (55.2)	506 (55.2)	496 (56.3)	415 (55.9)
Sexually active last month																		
Not specified	2 (1.0)	3 (0.8)	5 (0.9)	1 (0.2)	3 (0.3)	2 (0.2)	2 (0.2)	3 (0.3)	4 (0.4)	5 (0.4)	4 (0.3)	4 (0.3)	4 (0.3)	5 (0.4)	4 (0.4)	4 (0.4)	4 (0.5)	2 (0.3)
No	39 (19.4)	101 (26.3)	112 (21.2)	157 (23.7)	207 (22.8)	246 (23.9)	297 (27.2)	316 (27.4)	249 (26.4)	300 (24.1)	317 (24.9)	318 (25.2)	303 (23.5)	301 (24.3)	297 (26.1)	243 (26.5)	261 (29.6)	208 (28.0)
Yes	160 (79.6)	280 (72.9)	412 (77.9)	504 (76.1)	698 (76.9)	782 (75.9)	792 (72.6)	835 (72.4)	689 (73.1)	939 (75.5)	954 (74.8)	940 (74.5)	982 (76.2)	932 (75.3)	837 (73.6)	670 (73.1)	616 (69.9)	532 (71.7)
# of male sexual partners last month																		
Not specified	0 (0.0)	2 (0.5)	4 (0.8)	4 (0.6)	8 (0.9)	4 (0.4)	6 (0.5)	6 (0.5)	7 (0.7)	6 (0.5)	5 (0.4)	2 (0.2)	3 (0.2)	4 (0.3)	6 (0.5)	1 (0.1)	0 (0.0)	0 (0.0)
0	39 (19.4)	103 (26.8)	116 (21.9)	158 (23.9)	210 (23.1)	248 (24.1)	303 (27.8)	323 (28.0)	256 (27.2)	304 (24.4)	323 (25.3)	324 (25.7)	305 (23.7)	306 (24.7)	304 (26.7)	246 (26.8)	265 (30.1)	213 (28.7)
1	31 (15.4)	73 (19.0)	108 (20.4)	146 (22.1)	192 (21.1)	238 (23.1)	252 (23.1)	253 (21.9)	193 (20.5)	273 (21.9)	263 (20.6)	247 (19.6)	250 (19.4)	267 (21.6)	243 (21.4)	197 (21.5)	182 (20.7)	162 (21.8)
2	29 (14.4)	48 (12.5)	82 (15.5)	100 (15.1)	138 (15.2)	153 (14.9)	145 (13.3)	160 (13.9)	129 (13.7)	182 (14.6)	182 (14.3)	173 (13.7)	206 (16.0)	186 (15.0)	156 (13.7)	133 (14.5)	106 (12.0)	94 (12.7)
3	33 (16.4)	43 (11.2)	64 (12.1)	69 (10.4)	96 (10.6)	109 (10.6)	108 (9.9)	102 (8.8)	100 (10.6)	114 (9.2)	151 (11.8)	146 (11.6)	137 (10.6)	122 (9.9)	117 (10.3)	91 (9.9)	79 (9.0)	77 (10.4)
4	20 (10.0)	37 (9.6)	48 (9.1)	46 (6.9)	58 (6.4)	68 (6.6)	81 (7.4)	87 (7.5)	71 (7.5)	96 (7.7)	93 (7.3)	101 (8.0)	103 (8.0)	92 (7.4)	78 (6.9)	68 (7.4)	63 (7.2)	59 (8.0)
5 or more	47 (23.4)	75 (19.5)	102 (19.3)	138 (20.8)	203 (22.4)	208 (20.2)	193 (17.7)	220 (19.1)	182 (19.3)	264 (21.2)	254 (19.9)	265 (21.0)	281 (21.8)	256 (20.7)	230 (20.2)	177 (19.3)	182 (20.7)	135 (18.2)
Missing	2 (1.0)	3 (0.8)	5 (0.9)	1 (0.2)	3 (0.3)	2 (0.2)	3 (0.3)	3 (0.3)	4 (0.4)	5 (0.4)	4 (0.3)	4 (0.3)	4 (0.3)	5 (0.4)	4 (0.4)	4 (0.4)	4 (0.5)	2 (0.3)

	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
# of female sexual partners last month																		
Not specified	11 (5.5)	10 (2.6)	21 (4.0)	27 (4.1)	17 (1.9)	15 (1.5)	21 (1.9)	13 (1.1)	13 (1.4)	20 (1.6)	19 (1.5)	11 (0.9)	13 (1.0)	11 (0.9)	9 (0.8)	8 (0.9)	10 (1.1)	5 (0.7)
0	184 (91.5)	366 (95.3)	496 (93.8)	627 (94.7)	874 (96.3)	1001 (97.2)	1052 (96.4)	1122 (97.2)	911 (96.7)	1201 (96.5)	1234 (96.8)	1230 (97.5)	1252 (97.1)	1208 (97.6)	1111 (97.6)	897 (97.8)	857 (97.3)	728 (98.1)
1	3 (1.5)	5 (1.3)	6 (1.1)	5 (0.8)	12 (1.3)	10 (1.0)	14 (1.3)	11 (1.0)	10 (1.1)	15 (1.2)	11 (0.9)	13 (1.0)	17 (1.3)	10 (0.8)	7 (0.6)	6 (0.7)	6 (0.7)	3 (0.4)
2	1 (0.5)	0 (0.0)	1 (0.2)	2 (0.3)	1 (0.1)	1 (0.1)	1 (0.1)	3 (0.3)	2 (0.2)	1 (0.1)	6 (0.5)	3 (0.2)	2 (0.2)	2 (0.2)	5 (0.4)	2 (0.2)	3 (0.3)	2 (0.3)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	1 (0.1)	1 (0.1)	2 (0.2)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)
4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)
5 or more	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.1)	1 (0.1)	0 (0.0)	0 (0.0)	1 (0.1)
Missing	2 (1.0)	3 (0.8)	5 (0.9)	1 (0.2)	3 (0.3)	2 (0.2)	3 (0.3)	3 (0.3)	4 (0.4)	5 (0.4)	4 (0.3)	4 (0.3)	4 (0.3)	5 (0.4)	4 (0.4)	4 (0.4)	4 (0.5)	2 (0.3)
# of non-binary sexual partners last month																		
Not specified	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	31 (3.4)	36 (3.5)	34 (3.1)	33 (2.9)	30 (3.2)	42 (3.4)	36 (2.8)	34 (2.7)	37 (2.9)	36 (2.9)	19 (1.7)	18 (2.0)	20 (2.3)	9 (1.2)
0	1 (0.5)	1 (0.3)	3 (0.6)	4 (0.6)	629 (69.3)	706 (68.5)	719 (65.9)	769 (66.6)	628 (66.7)	861 (69.2)	867 (68.0)	862 (68.3)	903 (70.1)	856 (69.1)	784 (68.9)	626 (68.3)	570 (64.7)	506 (68.2)
1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	16 (1.8)	18 (1.7)	23 (2.1)	12 (1.0)	12 (1.3)	22 (1.8)	21 (1.6)	23 (1.8)	19 (1.5)	20 (1.6)	18 (1.6)	10 (1.1)	12 (1.4)	10 (1.3)
2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	12 (1.3)	8 (0.8)	5 (0.5)	13 (1.1)	4 (0.4)	5 (0.4)	10 (0.8)	11 (0.9)	6 (0.5)	5 (0.4)	3 (0.3)	5 (0.5)	2 (0.2)	2 (0.3)
3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (0.3)	4 (0.4)	2 (0.2)	2 (0.2)	4 (0.4)	2 (0.2)	7 (0.5)	3 (0.2)	7 (0.5)	4 (0.3)	6 (0.5)	4 (0.4)	2 (0.2)	2 (0.3)

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	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
Oral - passive	125 (62.2)	209 (54.4)	305 (57.7)	386 (58.3)	541 (59.6)	624 (60.6)	636 (58.3)	653 (56.6)	542 (57.5)	740 (59.5)	747 (58.6)	732 (58.0)	774 (60.0)	726 (58.6)	664 (58.3)	522 (56.9)	500 (56.8)	421 (56.7)
Oral - active	135 (67.2)	216 (56.2)	315 (59.5)	382 (57.7)	537 (59.1)	601 (58.3)	607 (55.6)	641 (55.5)	550 (58.4)	741 (59.6)	739 (58.0)	740 (58.6)	789 (61.2)	740 (59.8)	665 (58.4)	547 (59.7)	495 (56.2)	433 (58.4)
Anal - passive	96 (47.8)	158 (41.1)	222 (42.0)	296 (44.7)	396 (43.6)	431 (41.8)	435 (39.9)	458 (39.7)	381 (40.4)	541 (43.5)	541 (42.4)	536 (42.5)	581 (45.1)	534 (43.1)	487 (42.8)	396 (43.2)	366 (41.5)	318 (42.9)
Anal - active	101 (50.2)	168 (43.8)	243 (45.9)	315 (47.6)	425 (46.8)	473 (45.9)	472 (43.3)	501 (43.4)	431 (45.8)	558 (44.9)	569 (44.6)	535 (42.4)	603 (46.8)	573 (46.3)	504 (44.3)	405 (44.2)	359 (40.7)	335 (45.1)
Vaginal - passive	0 (0.0)	0 (0.0)	0 (0.0)	1 (0.2)	1 (0.1)	1 (0.1)	1 (0.1)	2 (0.2)	0 (0.0)	1 (0.1)	2 (0.2)	3 (0.2)	3 (0.2)	1 (0.1)	0 (0.0)	2 (0.2)	1 (0.1)	1 (0.1)
Vaginal - active	4 (2.0)	7 (1.8)	7 (1.3)	5 (0.8)	12 (1.3)	10 (1.0)	15 (1.4)	15 (1.3)	13 (1.4)	12 (1.0)	14 (1.1)	16 (1.3)	14 (1.1)	8 (0.6)	13 (1.1)	11 (1.2)	9 (1.0)	7 (0.9)
Other	22 (10.9)	47 (12.2)	48 (9.1)	55 (8.3)	85 (9.4)	92 (8.9)	109 (10.0)	121 (10.5)	87 (9.2)	111 (8.9)	119 (9.3)	120 (9.5)	133 (10.3)	124 (10.0)	107 (9.4)	85 (9.3)	89 (10.1)	80 (10.8)
Not specified	1 (0.5)	6 (1.6)	8 (1.5)	5 (0.8)	11 (1.2)	7 (0.7)	8 (0.7)	6 (0.5)	9 (1.0)	6 (0.5)	8 (0.6)	12 (1.0)	10 (0.8)	6 (0.5)	9 (0.8)	4 (0.4)	5 (0.6)	1 (0.1)
In the last month did you knowingly have sex with a person who																		
You did not know before	103 (51.2)	163 (42.4)	247 (46.7)	279 (42.1)	399 (43.9)	443 (43.0)	432 (39.6)	479 (41.5)	406 (43.1)	546 (43.9)	564 (44.2)	578 (45.8)	597 (46.3)	541 (43.7)	498 (43.8)	383 (41.8)	364 (41.3)	299 (40.3)
Did not use condoms	92 (45.8)	166 (43.2)	214 (40.5)	294 (44.4)	384 (42.3)	440 (42.7)	443 (40.6)	460 (39.9)	399 (42.4)	537 (43.2)	550 (43.1)	538 (42.6)	570 (44.2)	508 (41.0)	469 (41.2)	389 (42.4)	373 (42.3)	314 (42.3)
Intravenously takes drugs (injects)	10 (5.0)	18 (4.7)	18 (3.4)	24 (3.6)	37 (4.1)	34 (3.3)	32 (2.9)	29 (2.5)	31 (3.3)	33 (2.7)	43 (3.4)	41 (3.2)	54 (4.2)	43 (3.5)	33 (2.9)	26 (2.8)	30 (3.4)	28 (3.8)

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	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
Not specified	8 (4.0)	12 (3.1)	10 (1.9)	12 (1.8)	8 (0.9)	3 (0.3)	7 (0.6)	4 (0.3)	5 (0.5)	5 (0.4)	9 (0.7)	8 (0.6)	5 (0.4)	4 (0.3)	2 (0.2)	3 (0.3)	3 (0.3)	2 (0.3)
No	180 (89.6)	354 (92.2)	486 (91.9)	622 (94.0)	493 (54.3)	586 (56.9)	653 (59.9)	683 (59.2)	550 (58.4)	715 (57.5)	739 (58.0)	731 (57.9)	750 (58.2)	718 (58.0)	680 (59.8)	558 (60.9)	552 (62.7)	469 (63.2)
Yes	12 (6.0)	17 (4.4)	31 (5.9)	27 (4.1)	32 (3.5)	25 (2.4)	18 (1.6)	27 (2.3)	21 (2.2)	27 (2.2)	33 (2.6)	35 (2.8)	29 (2.2)	36 (2.9)	33 (2.9)	22 (2.4)	24 (2.7)	16 (2.2)
Missing	1 (0.5)	1 (0.3)	2 (0.4)	1 (0.2)	375 (41.3)	416 (40.4)	413 (37.9)	440 (38.1)	366 (38.9)	497 (40.0)	494 (38.7)	488 (38.7)	505 (39.2)	480 (38.8)	423 (37.2)	334 (36.4)	302 (34.3)	255 (34.4)
Have taken HIV PrEP in the last month																		
Not specified	10 (5.0)	14 (3.6)	16 (3.0)	11 (1.7)	4 (0.4)	3 (0.3)	5 (0.5)	5 (0.4)	3 (0.3)	3 (0.2)	4 (0.3)	3 (0.2)	6 (0.5)	4 (0.3)	1 (0.1)	1 (0.1)	3 (0.3)	2 (0.3)
No	128 (63.7)	267 (69.5)	354 (66.9)	469 (70.8)	189 (20.8)	213 (20.7)	232 (21.3)	242 (21.0)	198 (21.0)	259 (20.8)	261 (20.5)	255 (20.2)	245 (19.0)	235 (19.0)	224 (19.7)	178 (19.4)	171 (19.4)	151 (20.4)
Yes, regularly and daily	52 (25.9)	85 (22.1)	130 (24.6)	148 (22.4)	157 (17.3)	179 (17.4)	193 (17.7)	209 (18.1)	173 (18.4)	221 (17.8)	252 (19.8)	256 (20.3)	256 (19.9)	252 (20.4)	243 (21.4)	199 (21.7)	195 (22.1)	161 (21.7)
Yes, regularly, but not currently	2 (1.0)	1 (0.3)	3 (0.6)	3 (0.5)	3 (0.3)	4 (0.4)	4 (0.4)	7 (0.6)	5 (0.5)	7 (0.6)	6 (0.5)	6 (0.5)	4 (0.3)	2 (0.2)	4 (0.4)	3 (0.3)	1 (0.1)	5 (0.7)
Yes, irregularly and several times a week	0 (0.0)	1 (0.3)	3 (0.6)	5 (0.8)	4 (0.4)	6 (0.6)	6 (0.5)	7 (0.6)	5 (0.5)	8 (0.6)	3 (0.2)	5 (0.4)	4 (0.3)	5 (0.4)	4 (0.4)	9 (1.0)	3 (0.3)	4 (0.5)
Yes, but only when I needed it (on demand PrEP/event based dosing)	8 (4.0)	15 (3.9)	21 (4.0)	24 (3.6)	34 (3.7)	43 (4.2)	44 (4.0)	42 (3.6)	37 (3.9)	58 (4.7)	51 (4.0)	46 (3.6)	63 (4.9)	56 (4.5)	50 (4.4)	45 (4.9)	44 (5.0)	35 (4.7)
Missing	1 (0.5)	1 (0.3)	2 (0.4)	2 (0.3)	517 (56.9)	582 (56.5)	607 (55.6)	642 (55.6)	521 (55.3)	688 (55.3)	698 (54.7)	691 (54.8)	711 (55.2)	684 (55.3)	612 (53.8)	482 (52.6)	464 (52.7)	384 (51.8)

	Jul 22 N=201	Aug 22 N=384	Sep 22 N=529	Oct 22 N=662	Nov 22 N=908	Dec 22 N=1030	Jan 23 N=1091	Feb 23 N=1154	Mar 23 N=942	Apr 23 N=1244	May 23 N=1275	Jun 23 N=1262	Jul 23 N=1289	Aug 23 N=1238	Sep 23 N=1138	Oct 23 N=917	Nov 23 N=881	Dec 23 N=742
Have you had contact with person with mpox in the last month																		
Not specified	4 (2.0)	6 (1.6)	15 (2.8)	13 (2.0)	14 (1.5)	7 (0.7)	9 (0.8)	9 (0.8)	12 (1.3)	8 (0.6)	5 (0.4)	11 (0.9)	10 (0.8)	6 (0.5)	4 (0.4)	4 (0.4)	5 (0.6)	3 (0.4)
No	190 (94.5)	369 (96.1)	509 (96.2)	648 (97.9)	889 (97.9)	1020 (99.0)	1077 (98.7)	1142 (99.0)	922 (97.9)	1231 (99.0)	1266 (99.3)	1246 (98.7)	1271 (98.6)	1229 (99.3)	1129 (99.2)	909 (99.1)	872 (99.0)	737 (99.3)
Yes	7 (3.5)	9 (2.3)	5 (0.9)	1 (0.2)	5 (0.6)	3 (0.3)	5 (0.5)	3 (0.3)	8 (0.8)	5 (0.4)	4 (0.3)	5 (0.4)	8 (0.6)	3 (0.2)	5 (0.4)	4 (0.4)	4 (0.5)	2 (0.3)
Have you had reddish skin lesions (rash/bubbles/pustules) that were painful in the last month																		
Not specified	0 (0.0)	2 (0.5)	0 (0.0)	6 (0.9)	2 (0.2)	2 (0.2)	4 (0.4)	3 (0.3)	3 (0.3)	3 (0.2)	4 (0.3)	5 (0.4)	4 (0.3)	3 (0.2)	1 (0.1)	2 (0.2)	1 (0.1)	1 (0.1)
No	199 (99.0)	372 (96.9)	523 (98.9)	646 (97.6)	886 (97.6)	1008 (97.9)	1066 (97.7)	1134 (98.3)	918 (97.5)	1222 (98.2)	1245 (97.6)	1231 (97.5)	1263 (98.0)	1211 (97.8)	1120 (98.4)	901 (98.3)	863 (98.0)	734 (98.9)
Yes	2 (1.0)	10 (2.6)	6 (1.1)	10 (1.5)	20 (2.2)	20 (1.9)	21 (1.9)	17 (1.5)	21 (2.2)	19 (1.5)	26 (2.0)	26 (2.1)	22 (1.7)	24 (1.9)	17 (1.5)	14 (1.5)	17 (1.9)	7 (0.9)

Supplementary Table 27: Cluster analysis for sexual behaviour after first dose of MVA-BN vaccination.

	Cluster A	Cluster B	Cluster C	Cluster D
n(%)	1224	837	384	190
# Sexual partner prior vaccination	0.52 (0.58)	2.64 (1.36)	4.28 (1.82)	9.65 (1.88)
# Sexual partner post vaccination	0.70 (0.78)	2.27 (1.14)	5.90 (1.88)	10.02 (1.68)
Age	41.90 (11.66)	41.02 (11.35)	42.36 (11.89)	43.53 (10.75)
HIV infection	436 (35.6)	213 (25.4)	125 (32.6)	64 (33.7)
PrEP users	419 (34.2)	410 (49.0)	186 (48.4)	103 (54.2)
Vaccination in high incidence month	398 (32.5)	266 (31.8)	103 (26.8)	39 (20.5)
# Sexual partners without using a condom prior vaccination	0.45 (0.68)	1.92 (1.59)	3.32 (2.22)	8.00 (3.53)
# Sexual partners without using a condom post vaccination	0.55 (0.80)	1.66 (1.32)	4.33 (2.71)	8.37 (3.67)
In the 3 months prior CED did you knowingly have sex with a person who you did not know before	472 (38.6)	611 (73.0)	325 (84.6)	178 (93.7)
Have you had an STI in the last 3 months prior CED?				
Not specified	7 (0.6)	3 (0.4)	3 (0.8)	0 (0.0)
No	1077 (88.0)	697 (83.3)	291 (75.8)	134 (70.5)
Yes, one	109 (8.9)	104 (12.4)	73 (19.0)	43 (22.6)

	Cluster A	Cluster B	Cluster C	Cluster D
Yes, several	10 (0.8)	12 (1.4)	11 (2.9)	9 (4.7)
Uncertain/Unclear (I had symptoms but did not get tested)	3 (0.2)	9 (1.1)	3 (0.8)	2 (1.1)
Missing	18 (1.5)	12 (1.4)	3 (0.8)	2 (1.1)
Have you had an STI in the last 3 months prior CED (yes/no)?				
No	1077 (88.0)	697 (83.3)	291 (75.8)	134 (70.5)
Yes	119 (9.7)	116 (13.9)	84 (21.9)	52 (27.4)
Missing	28 (2.3)	24 (2.9)	9 (2.3)	4 (2.1)

Supplementary Table 28: Cluster analysis for sexual behaviour after second dose of MVA-BN vaccination.

	Cluster A	Cluster B	Cluster C	Cluster D
n	1092	610	308	144
# Sexual partner prior vaccination	0.65 (0.72)	2.54 (1.10)	4.84 (1.91)	9.46 (1.96)
# Sexual partner post vaccination	0.70 (0.71)	2.66 (1.13)	5.13 (2.06)	9.81 (1.70)
Age	40.79 (11.26)	39.96 (10.91)	40.96 (11.42)	42.11 (10.96)
HIV infection	337 (30.9)	158 (25.9)	93 (30.2)	39 (27.1)
PrEP users	436 (39.9)	295 (48.4)	166 (53.9)	85 (59.0)
Vaccination in high incidence month	856 (78.4)	456 (74.8)	224 (72.7)	84 (58.3)

	Cluster A	Cluster B	Cluster C	Cluster D
# Sexual partners without using a condom prior vaccination	0.54 (0.77)	1.91 (1.31)	3.82 (2.43)	7.62 (3.70)
# Sexual partners without using a condom post vaccination	0.55 (0.69)	1.87 (1.37)	3.91 (2.51)	8.25 (3.53)
In the 3 months prior CED did you knowingly have sex with a person who you did not know before	521 (47.7)	448 (73.4)	266 (86.4)	140 (97.2)
Have you had an STI in the last 3 months prior CED?				
Not specified	7 (0.6)	5 (0.8)	0 (0.0)	1 (0.7)
No	965 (88.4)	501 (82.1)	246 (79.9)	97 (67.4)
Yes, one	96 (8.8)	84 (13.8)	49 (15.9)	34 (23.6)
Yes, several	8 (0.7)	13 (2.1)	9 (2.9)	9 (6.2)
Uncertain/Unclear (I had symptoms but did not get tested)	5 (0.5)	5 (0.8)	1 (0.3)	3 (2.1)
Missing	11 (1.0)	2 (0.3)	3 (1.0)	0 (0.0)
Have you had an STI in the last 3 months prior CED (yes/no)?				
No	965 (88.4)	501 (82.1)	246 (79.9)	97 (67.4)
Yes	104 (9.5)	97 (15.9)	58 (18.8)	43 (29.9)
Missing	23 (2.1)	12 (2.0)	4 (1.3)	4 (2.8)

Supplementary Table 29: Incidence rate of mpox infections in sensitivity analysis of “fully vaccinated” vaccination status definitions in the PLWHIV, PreP users and HSMV subgroups.

	N of patients	Mpox cases	Mean follow-up time (days)	Total Person-time (days)	Total Person-time (years)	IR per 1000 Person-years	IR (95% CI)
PLWHIV subgroup							
Fully vaccinated	198	0	281.78	55793	152.86	0	-
PreP users subgroup							
Fully vaccinated	289	1	266.83	77114	211.27	4.73	4.73 (95% CI 0.27-20.82)
HSMV subgroup							
Fully vaccinated	172	0	278.42	47888	131.2	0	-

¹Includes all individuals with first vaccination at CED, irrespective of second vaccination during follow-up

Supplementary Table 30: Baseline characteristics of the PLWHIV subgroup and the VE cohort for matched vaccinated and comparator groups.

	Overall MSM cohort: PLWHIV (N=4802)	Vaccinated group (VE cohort: PLWHIV) (N=1417)	Comparator group (VE cohort: PLWHIV) (N=1417)
<i>Mean (SD) or n (%)</i>			
Age in years, mean (SD)	48.56 (10.85)	48.00 (10.22)	48.11 (10.78)
Age categories in years			
18-35	681 (14.2)	191 (13.5)	191 (13.5)
36-49	1665 (34.7)	547 (38.6)	547 (38.6)
≥50	2456 (51.1)	679 (47.9)	679 (47.9)
Height	179.46 (6.99)	179.62 (6.92)	179.61 (7.10)
Weight	81.79 (15.14)	81.98 (13.77)	83.93 (17.29)
BMI (in kg/m2)	25.24 (4.08)	24.88 (3.78)	25.38 (4.43)
Gender			
Male	4767 (99.3)	1405 (99.2)	1408 (99.4)
Trans persons (trans male, trans female)	35 (0.7)	12 (0.7)	9 (0.6)
Existing preconditions			
None	4802 (100.0)	0 (0.0)	0 (0.0)
Immunosuppression (non- HIV)	13 (0.3)	0 (0.0)	0 (0.0)
HIV infection	4802 (100.0)	1417 (100.0)	1417 (100.0)
History of STI infection	3558 (74.1)	1162 (82.0)	1030 (72.7)

	Overall MSM cohort: PLWHIV (N=4802)	Vaccinated group (VE cohort: PLWHIV) (N=1417)	Comparator group (VE cohort: PLWHIV) (N=1417)
<i>Rheumatological disease</i>	112 (2.3)	38 (2.7)	37 (2.6)
<i>Tumor/malignancy</i>	431 (9.0)	127 (9.0)	131 (9.2)
<i>Hematological disease</i>	161 (3.4)	48 (3.4)	60 (4.2)
<i>Chronic Cardiovascular disease</i>	1190 (24.8)	323 (22.8)	367 (25.9)
<i>Chronic lung disease</i>	458 (9.5)	135 (9.5)	161 (11.4)
<i>Chronic kidney disease</i>	161 (3.4)	48 (3.4)	49 (3.5)
<i>Chronic liver disease</i>	203 (4.2)	62 (4.4)	49 (3.5)
<i>Diabetes mellitus</i>	231 (4.8)	47 (3.3)	63 (4.4)
Antiretroviral therapy (ART)	4690 (98.3)	1390 (98.6)	1389 (98.7)
CD4 count cells per microliter			
<i>0</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>< 200</i>	56 (1.2)	11 (0.8)	12 (0.8)
<i>(≥200 and <500)</i>	649 (13.6)	176 (12.5)	218 (15.4)
<i>≥500</i>	4068 (85.2)	1222 (86.7)	1182 (83.7)
HIV viral copies per mL			
<i>< 50</i>	4605 (96.5)	1378 (97.8)	1373 (97.4)
<i>50-199</i>	105 (2.2)	24 (1.7)	22 (1.6)
<i>200-1000</i>	19 (0.4)	5 (0.4)	6 (0.4)
<i>>1000</i>	42 (0.9)	2 (0.1)	9 (0.6)

	Overall MSM cohort: PLWHIV (N=4802)	Vaccinated group (VE cohort: PLWHIV) (N=1417)	Comparator group (VE cohort: PLWHIV) (N=1417)
Systemic immunosuppressive therapy (e.g. systemic glucocorticoids)	0 (0.0)	0 (0.0)	0 (0.0)
PrEP users	4802 (100.0)	0 (0.0)	0 (0.0)
History of acute/chronic viral hepatitis	1329 (27.7)	439 (31.0)	385 (27.2)
History of STI (until 30/06/2022)			
<i>Syphilis</i>	2782 (57.9)	931 (65.7)	789 (55.7)
<i>Gonorrhea, Chlamydia, or Mycoplasma infection</i>	1795 (37.4)	652 (46.0)	517 (36.5)
<i>Other infection (e.g., sexually transmitted hepatitis A or Shigella, condylomas)</i>	1135 (23.6)	406 (28.7)	349 (24.6)
Number of STI tests during baseline period (01/01/22-30/06/22)			
0	3729 (77.7)	1030 (72.7)	1135 (80.1)
1	640 (13.3)	250 (17.6)	178 (12.6)
≥2	433 (9.0)	137 (9.7)	104 (7.3)
Number of STI diagnoses during baseline period (01/01/22-30/06/22)			
0	4256 (88.6)	1207 (85.2)	1207 (85.2)
1	546 (11.4)	210 (14.8)	210 (14.8)
Smallpox vaccination			
<i>None</i>	1425 (29.7)	466 (32.9)	449 (31.7)

	Overall MSM cohort: PLWHIV (N=4802)	Vaccinated group (VE cohort: PLWHIV) (N=1417)	Comparator group (VE cohort: PLWHIV) (N=1417)
<i>One smallpox vaccination (anamnestic, scar or vaccination certificate)</i>	551 (11.5)	248 (17.5)	142 (10.0)
<i>Two smallpox vaccinations (anamnestic, scar or vaccination certificate)</i>	339 (7.1)	126 (8.9)	110 (7.8)
<i>Unknown</i>	2487 (51.8)	577 (40.7)	716 (50.5)
Vaccinated with ACAM2000 before 2022	72 (1.5)	38 (2.7)	19 (1.3)
Region			
<i>Berlin</i>	1357 (28.3)	475 (33.5)	475 (33.5)
<i>Frankfurt</i>	1042 (21.7)	111 (7.8)	111 (7.8)
<i>Hamburg</i>	1110 (23.1)	405 (28.6)	405 (28.6)
<i>Cologne</i>	1190 (24.8)	381 (26.9)	381 (26.9)
<i>Munich</i>	103 (2.1)	45 (3.2)	45 (3.2)

Supplementary Table 31: Baseline characteristics of the PrEP subgroup and the VE cohort for matched vaccinated and comparator groups.

	Overall MSM cohort: PrEP (N=3455)	Vaccinated group (VE cohort: PrEP) (N=1312)	Comparator group (VE cohort: PrEP) (N=1312)
<i>Mean (SD) or n (%)</i>			
Age in years, mean (SD)	39.21 (10.42)	40.11 (10.01)	39.91 (10.40)
Age categories in years			

	Overall MSM cohort: PrEP (N=3455)	Vaccinated group (VE cohort: PrEP) (N=1312)	Comparator group (VE cohort: PrEP) (N=1312)
18-35	1484 (43.0)	494 (37.7)	494 (37.7)
36-49	1324 (38.3)	563 (42.9)	563 (42.9)
≥50	647 (18.7)	255 (19.4)	255 (19.4)
Height	179.89 (6.62)	179.85 (6.20)	180.26 (6.35)
Weight	83.45 (18.05)	83.55 (19.24)	85.22 (19.17)
BMI (in kg/m2)	24.71 (4.21)	24.70 (4.49)	25.06 (4.36)
Gender			
Male	3438 (99.5)	1307 (99.6)	1306 (99.5)
Trans persons (trans male, trans female)	17 (0.5)	5 (0.3)	6 (0.5)
Existing preconditions			
None	1031 (29.8)	383 (29.2)	435 (33.2)
Immunosuppression (non-HIV)	5 (0.1)	0 (0.0)	0 (0.0)
HIV infection	0 (0.0)	0 (0.0)	0 (0.0)
History of STI infection	2159 (62.5)	815 (62.1)	752 (57.3)
Rheumatological disease	36 (1.0)	21 (1.6)	14 (1.1)
Tumor/malignancy	40 (1.2)	16 (1.2)	19 (1.4)
Hematological disease	30 (0.9)	12 (0.9)	16 (1.2)
Chronic Cardiovascular disease	307 (8.9)	146 (11.1)	119 (9.1)
Chronic lung disease	179 (5.2)	86 (6.6)	69 (5.3)

	Overall MSM cohort: PrEP (N=3455)	Vaccinated group (VE cohort: PrEP) (N=1312)	Comparator group (VE cohort: PrEP) (N=1312)
<i>Chronic kidney disease</i>	26 (0.8)	12 (0.9)	11 (0.8)
<i>Chronic liver disease</i>	52 (1.5)	25 (1.9)	22 (1.7)
<i>Diabetes mellitus</i>	66 (1.9)	29 (2.2)	33 (2.5)
Antiretroviral therapy (ART)	0 (0.0)	0 (0.0)	0 (0.0)
CD4 count cells per microliter			
<i>0</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>< 200</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>(≥200 and <500)</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>≥500</i>	0 (0.0)	0 (0.0)	0 (0.0)
HIV viral copies per mL			
<i>< 50</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>50-199</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>200-1000</i>	0 (0.0)	0 (0.0)	0 (0.0)
<i>>1000</i>	0 (0.0)	0 (0.0)	0 (0.0)
Systemic immunosuppressive therapy (e.g. systemic glucocorticoids)	0 (0.0)	0 (0.0)	0 (0.0)
PrEP users	3455 (100.0)	1312 (100.0)	1312 (100.0)
History of acute/chronic viral hepatitis	177 (5.1)	70 (5.3)	77 (5.9)
History of STI (until 30/06/2022)			

	Overall MSM cohort: PrEP (N=3455)	Vaccinated group (VE cohort: PrEP) (N=1312)	Comparator group (VE cohort: PrEP) (N=1312)
<i>Syphilis</i>	924 (26.7)	363 (27.7)	338 (25.8)
<i>Gonorrhea, Chlamydia, or Mycoplasma infection</i>	1724 (49.9)	622 (47.4)	567 (43.2)
<i>Other infection (e.g., sexually transmitted hepatitis A or Shigella, condylomas)</i>	320 (9.3)	157 (12.0)	124 (9.5)
Number of STI tests during baseline period (01/01/22-30/06/22)			
0	1070 (31.0)	411 (31.3)	490 (37.3)
1	973 (28.2)	352 (26.8)	357 (27.2)
≥2	1412 (40.9)	549 (41.8)	465 (35.4)
Number of STI diagnoses during baseline period (01/01/22-30/06/22)			
0	2765 (80.0)	1064 (81.1)	1064 (81.1)
1	690 (20.0)	248 (18.9)	248 (18.9)
Smallpox vaccination			
<i>None</i>	1835 (53.1)	736 (56.1)	701 (53.4)
<i>One smallpox vaccination (anamnestic, scar or vaccination certificate)</i>	208 (6.0)	100 (7.6)	66 (5.0)
<i>Two smallpox vaccinations (anamnestic, scar or vaccination certificate)</i>	62 (1.8)	23 (1.8)	25 (1.9)
<i>Unknown</i>	1350 (39.1)	453 (34.5)	520 (39.6)
Vaccinated with ACAM2000 before 2022	28 (0.8)	11 (0.8)	12 (0.9)

	Overall MSM cohort: PrEP (N=3455)	Vaccinated group (VE cohort: PrEP) (N=1312)	Comparator group (VE cohort: PrEP) (N=1312)
Region			
<i>Berlin</i>	663 (19.2)	288 (22.0)	288 (22.0)
<i>Frankfurt</i>	823 (23.8)	153 (11.7)	153 (11.7)
<i>Hamburg</i>	824 (23.8)	376 (28.7)	376 (28.7)
<i>Cologne</i>	1057 (30.6)	441 (33.6)	441 (33.6)
<i>Munich</i>	88 (2.5)	54 (4.1)	54 (4.1)

Supplementary Table 32: Baseline characteristics of the HSMV subgroup and the VE cohort for matched vaccinated and comparator groups.

	Overall MSM cohort: HSMV (N=3706)	Vaccinated group (VE cohort: HSMV) (N=1178)	Comparator group (VE cohort: HSMV) (N=1178)
<i>Mean (SD) or n (%)</i>			
Age in years, mean (SD)	55.04 (6.93)	54.18 (6.74)	54.57 (6.96)
Age categories in years			
<i>18-35</i>	45 (1.2)	16 (1.4)	16 (1.4)
<i>36-49</i>	602 (16.2)	230 (19.5)	230 (19.5)
<i>≥50</i>	3059 (82.5)	932 (79.1)	932 (79.1)
Height	180.29 (6.93)	180.40 (6.58)	180.80 (6.83)
Weight	84.02 (14.93)	83.30 (13.45)	86.24 (16.22)
BMI (in kg/m²)	25.50 (4.13)	25.07 (3.76)	25.59 (4.61)

	Overall MSM cohort: HSMV (N=3706)	Vaccinated group (VE cohort: HSMV) (N=1178)	Comparator group (VE cohort: HSMV) (N=1178)
Gender			
<i>Male</i>	3686 (99.5)	1172 (99.5)	1173 (99.6)
<i>Trans persons (trans male, trans female)</i>	20 (0.6)	6 (0.6)	5 (0.4)
Existing preconditions			
<i>None</i>	250 (6.7)	99 (8.4)	98 (8.3)
<i>Immunosuppression (non-HIV)</i>	10 (0.3)	0 (0.0)	0 (0.0)
<i>HIV infection</i>	2650 (71.5)	766 (65.0)	766 (65.0)
<i>History of STI infection</i>	2555 (68.9)	877 (74.4)	775 (65.8)
<i>Rheumatological disease</i>	109 (2.9)	43 (3.7)	36 (3.1)
<i>Tumor/malignancy</i>	360 (9.7)	119 (10.1)	107 (9.1)
<i>Hematological disease</i>	134 (3.6)	44 (3.7)	53 (4.5)
<i>Chronic Cardiovascular disease</i>	1195 (32.2)	360 (30.6)	393 (33.4)
<i>Chronic lung disease</i>	392 (10.6)	126 (10.7)	135 (11.5)
<i>Chronic kidney disease</i>	131 (3.5)	38 (3.2)	42 (3.6)
<i>Chronic liver disease</i>	184 (5.0)	61 (5.2)	56 (4.8)
<i>Diabetes mellitus</i>	231 (6.2)	55 (4.7)	62 (5.3)
Antiretroviral therapy (ART)	2599 (98.6)	755 (98.8)	755 (99.0)
CD4 count cells per microliter			
<i>0</i>	1056 (28.6)	412 (35.1)	412 (35.0)
<i>< 200</i>	27 (0.7)	2 (0.2)	7 (0.6)

	Overall MSM cohort: HSMV (N=3706)	Vaccinated group (VE cohort: HSMV) (N=1178)	Comparator group (VE cohort: HSMV) (N=1178)
<i>(≥200 and <500)</i>	417 (11.3)	107 (9.1)	144 (12.2)
<i>≥500</i>	2195 (59.4)	654 (55.7)	613 (52.1)
HIV viral copies per mL			
<i>< 50</i>	2552 (96.8)	746 (97.8)	742 (97.4)
<i>50-199</i>	63 (2.4)	16 (2.1)	12 (1.6)
<i>200-1000</i>	11 (0.4)	0 (0.0)	4 (0.5)
<i>>1000</i>	11 (0.4)	1 (0.1)	4 (0.5)
Systemic immunosuppressive therapy (e.g. systemic glucocorticoids)	0 (0.0)	0 (0.0)	0 (0.0)
PrEP users	804 (21.7)	320 (27.2)	320 (27.2)
History of acute/chronic viral hepatitis	1024 (27.6)	347 (29.5)	306 (26.0)
History of STI (until 30/06/2022)			
<i>Syphilis</i>	1923 (51.9)	664 (56.4)	571 (48.5)
<i>Gonorrhea, Chlamydia, or Mycoplasma infection</i>	1315 (35.5)	474 (40.2)	412 (35.0)
<i>Other infection (e.g., sexually transmitted hepatitis A or Shigella, condylomas)</i>	768 (20.7)	300 (25.5)	248 (21.1)
Number of STI tests during baseline period (01/01/22-30/06/22)			
<i>0</i>	2636 (71.1)	767 (65.1)	838 (71.1)
<i>1</i>	561 (15.1)	220 (18.7)	192 (16.3)
<i>≥2</i>	509 (13.7)	191 (16.2)	148 (12.6)
Number of STI diagnoses during baseline period (01/01/22-30/06/22)			

	Overall MSM cohort: HSMV (N=3706)	Vaccinated group (VE cohort: HSMV) (N=1178)	Comparator group (VE cohort: HSMV) (N=1178)
0	3336 (90.0)	1035 (87.9)	1035 (87.9)
1	370 (10.0)	143 (12.1)	143 (12.1)
Smallpox vaccination			
None	0 (0.0)	0 (0.0)	0 (0.0)
One smallpox vaccination (anamnestic, scar or vaccination certificate)	815 (22.0)	375 (31.8)	226 (19.2)
Two smallpox vaccinations (anamnestic, scar or vaccination certificate)	437 (11.8)	162 (13.8)	153 (13.0)
Unknown	2454 (66.2)	641 (54.4)	799 (67.8)
Vaccinated with ACAM2000 before 2022	108 (2.9)	52 (4.4)	33 (2.8)
Region			
Berlin	1008 (27.2)	352 (29.9)	352 (29.9)
Frankfurt	839 (22.6)	80 (6.8)	80 (6.8)
Hamburg	909 (24.5)	386 (32.8)	386 (32.8)
Cologne	903 (24.4)	341 (28.9)	341 (28.9)
Munich	47 (1.3)	19 (1.6)	19 (1.6)