

THE LANCET

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

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Safety and immunogenicity of the ChAdOx1 nCoV-19 (AZD1222) vaccine in children aged 12-17 years: a preliminary report of a phase 2, single-blind, randomised controlled trial (COV006)

Supplementary Appendix

Contents

Appendix Table 1 Maximum severity of solicited AEs during days 0-7 post vaccination with ChAdOx1 nCoV-19, by group (SI: short interval [28-day]; LI: long interval [112-day]).....	1
Appendix Table 2 Summary of AEs within 28 days post vaccination, by vaccination received in participants receiving at least one vaccination during the study.....	3
Appendix Table 3 Listing of unsolicited AEs of severity grade ≥ 3 , within 28 days of vaccination.....	4
Appendix Table 4 MedDRA codes for unsolicited AEs after first dose of vaccine, by study arm (excluding SAEs and AESIs).....	5
Appendix Table 5 MedDRA codes for unsolicited AEs after second dose of vaccine, by study arm (excluding SAEs and AESIs).....	7
Appendix Table 6 Listing of AESIs.....	8
Appendix Table 7 Listing of SAEs.....	9
Appendix Table 8 Listing of COVID infections.....	10
Appendix Table 9 Immunogenicity kinetics in seronegative at baseline participants in the ChAdOx1 nCoV-19 arms.....	11
Appendix Table 10 Immunogenicity kinetics in the seronegative at baseline participants in the MenB arms.....	12
Appendix Table 11 Immunogenicity kinetics in the sensitivity analysis cohort, ChAdOx1 nCoV-19 arms only.....	13
Appendix Figure 1 Reactogenicity by days post first vaccination for A) Local and systemic ChAdOx1 nCoV-19, 12-17 short interval [28-day] group; B) Local and systemic MenB, 12-17 short interval [28-day] group; C) Local and systemic ChAdOx1 nCoV-19, 12-17 long interval [112-day] group; D) Local and systemic MenB, 12-17 long interval [112-day] group	14
Appendix Figure 2 Reactogenicity by days post second vaccination for A) Local and systemic ChAdOx1 nCoV-19, 12-17 short interval [28-day] group; B) Local and systemic MenB, 12-17 short interval [28-day] group; C) Local and systemic ChAdOx1 nCoV-19, 12-17 long interval [112-day] group; D) Local and systemic MenB, 12-17 long interval [112-day] group.....	15
Appendix Figure 3 Local and systemic reactogenicity in the 6-11 long interval [112-day] groups receiving A) ChAdOx1 nCoV-19 first dose; B) MenB first dose; C) ChAdOx1 nCoV-19 second dose; D) MenB second dose.....	16
Appendix Figure 4 Immunogenicity kinetics by serostatus at baseline among participants in the ChAdOx1 nCoV-19 arms for A) anti-spike in-house ELISA assay; B) anti-RBD multiplexed ECL assay by PPD.....	17
Appendix Figure 5 Immunogenicity kinetics among the seronegative at baseline participants in the MenB arms for A) anti-spike multiplexed ECL assay by PPD; B) anti-spike in-house ELISA assay; C) pseudoNA assay by Monogram; D) cellular response by ELISpot assay; E) anti-RBD multiplexed ECL assay by PPD	19

Appendix Table 1 Maximum severity of solicited AEs during days 0-7 post vaccination with ChAdOx1 nCoV-19, by group (SI: short interval [28-day]; LI: long interval [112-day])

Symptom	Group	None	Mild	Moderate	Severe	Potentially life-threatening	Any
Hardness	12-17 SI 1st dose	56 (97%, 88%-100%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)
	12-17 LI 1st dose	60 (97%, 89%-100%)	2 (3%, 0%-11%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-11%)
	6-11 1st dose	88 (98%, 92%-100%)	2 (2%, 0%-8%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	2 (2%, 0%-8%)
	12-17 SI 2nd dose	58 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	12-17 LI 2nd dose	55 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	6-11 2nd dose	80 (100%, 95%-100%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)
Itch	12-17 SI 1st dose	52 (90%, 79%-96%)	6 (10%, 4%-21%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	6 (10%, 4%-21%)
	12-17 LI 1st dose	56 (90%, 80%-96%)	5 (8%, 3%-18%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	6 (10%, 4%-20%)
	6-11 1st dose	84 (93%, 86%-98%)	6 (7%, 2%-14%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	6 (7%, 2%-14%)
	12-17 SI 2nd dose	55 (95%, 86%-99%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	3 (5%, 1%-14%)
	12-17 LI 2nd dose	54 (98%, 90%-100%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	1 (2%, 0%-10%)
	6-11 2nd dose	73 (91%, 83%-96%)	7 (9%, 4%-17%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	7 (9%, 4%-17%)
Pain	12-17 SI 1st dose	10 (17%, 9%-29%)	32 (55%, 42%-68%)	16 (28%, 17%-41%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	48 (83%, 71%-91%)
	12-17 LI 1st dose	20 (32%, 21%-45%)	28 (45%, 32%-58%)	14 (23%, 13%-35%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	42 (68%, 55%-79%)
	6-11 1st dose	31 (34%, 25%-45%)	37 (41%, 31%-52%)	21 (23%, 15%-33%)	1 (1%, 0%-6%)	0 (0%, 0%-4%)	59 (66%, 55%-75%)
	12-17 SI 2nd dose	24 (41%, 29%-55%)	31 (53%, 40%-67%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	34 (59%, 45%-71%)
	12-17 LI 2nd dose	22 (40%, 27%-54%)	26 (47%, 34%-61%)	6 (11%, 4%-22%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	33 (60%, 46%-73%)
	6-11 2nd dose	31 (39%, 28%-50%)	34 (42%, 32%-54%)	14 (18%, 10%-28%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	49 (61%, 50%-72%)
Redness	12-17 SI 1st dose	56 (97%, 88%-100%)	1 (2%, 0%-9%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)
	12-17 LI 1st dose	60 (97%, 89%-100%)	1 (2%, 0%-9%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-11%)
	6-11 1st dose	89 (99%, 94%-100%)	0 (0%, 0%-4%)	1 (1%, 0%-6%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	1 (1%, 0%-6%)
	12-17 SI 2nd dose	58 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	12-17 LI 2nd dose	54 (98%, 90%-100%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	1 (2%, 0%-10%)
	6-11 2nd dose	79 (99%, 93%-100%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	1 (1%, 0%-7%)
Swelling	12-17 SI 1st dose	56 (97%, 88%-100%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)
	12-17 LI 1st dose	60 (97%, 89%-100%)	2 (3%, 0%-11%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-11%)
	6-11 1st dose	89 (99%, 94%-100%)	0 (0%, 0%-4%)	1 (1%, 0%-6%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	1 (1%, 0%-6%)
	12-17 SI 2nd dose	58 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	12-17 LI 2nd dose	55 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	6-11 2nd dose	80 (100%, 95%-100%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)
Tenderness	12-17 SI 1st dose	9 (16%, 7%-27%)	34 (59%, 45%-71%)	15 (26%, 15%-39%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	49 (84%, 73%-93%)
	12-17 LI 1st dose	16 (26%, 16%-38%)	37 (60%, 46%-72%)	9 (15%, 7%-26%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	46 (74%, 62%-84%)
	6-11 1st dose	16 (18%, 11%-27%)	52 (58%, 47%-68%)	20 (22%, 14%-32%)	2 (2%, 0%-8%)	0 (0%, 0%-4%)	74 (82%, 73%-89%)
	12-17 SI 2nd dose	17 (29%, 18%-43%)	38 (66%, 52%-78%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	41 (71%, 57%-82%)
	12-17 LI 2nd dose	14 (25%, 15%-39%)	33 (60%, 46%-73%)	7 (13%, 5%-24%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	41 (75%, 61%-85%)
	6-11 2nd dose	16 (20%, 12%-30%)	49 (61%, 50%-72%)	14 (18%, 10%-28%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	64 (80%, 70%-88%)
Warmth	12-17 SI 1st dose	40 (69%, 55%-80%)	16 (28%, 17%-41%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	18 (31%, 20%-45%)
	12-17 LI 1st dose	48 (77%, 65%-87%)	12 (19%, 10%-31%)	2 (3%, 0%-11%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	14 (23%, 13%-35%)
	6-11 1st dose	72 (80%, 70%-88%)	16 (18%, 11%-27%)	2 (2%, 0%-8%)	0 (0%, 0%-4%)	0 (0%, 0%-4%)	18 (20%, 12%-30%)
	12-17 SI 2nd dose	51 (88%, 77%-95%)	6 (10%, 4%-21%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	7 (12%, 5%-23%)
	12-17 LI 2nd dose	47 (85%, 73%-94%)	8 (15%, 6%-27%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	8 (15%, 6%-27%)
	6-11 2nd dose	65 (81%, 71%-89%)	14 (18%, 10%-28%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	15 (19%, 11%-29%)
Chills	12-17 SI 1st dose	16 (28%, 17%-41%)	16 (28%, 17%-41%)	22 (38%, 26%-52%)	4 (7%, 2%-17%)	0 (0%, 0%-6%)	42 (72%, 59%-83%)
	12-17 LI 1st dose	26 (42%, 30%-55%)	11 (18%, 9%-30%)	20 (32%, 21%-45%)	5 (8%, 3%-18%)	0 (0%, 0%-6%)	36 (58%, 45%-70%)
	6-11 1st dose	35 (39%, 29%-50%)	23 (26%, 17%-36%)	21 (23%, 15%-33%)	11 (12%, 6%-21%)	0 (0%, 0%-4%)	55 (61%, 50%-71%)
	12-17 SI 2nd dose	43 (74%, 61%-85%)	10 (17%, 9%-29%)	4 (7%, 2%-17%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	15 (26%, 15%-39%)
	12-17 LI 2nd dose	47 (85%, 73%-94%)	4 (7%, 2%-18%)	4 (7%, 2%-18%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	8 (15%, 6%-27%)
	6-11 2nd dose	63 (79%, 68%-87%)	12 (15%, 8%-25%)	4 (5%, 1%-12%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	17 (21%, 13%-32%)
Fatigue	12-17 SI 1st dose	7 (12%, 5%-23%)	21 (36%, 24%-50%)	24 (41%, 29%-55%)	6 (10%, 4%-21%)	0 (0%, 0%-6%)	51 (88%, 77%-95%)
	12-17 LI 1st dose	15 (24%, 14%-37%)	22 (35%, 24%-49%)	19 (31%, 20%-44%)	6 (10%, 4%-20%)	0 (0%, 0%-6%)	47 (76%, 63%-86%)
	6-11 1st dose	17 (19%, 11%-29%)	28 (31%, 22%-42%)	34 (38%, 28%-49%)	11 (12%, 6%-21%)	0 (0%, 0%-4%)	73 (81%, 71%-89%)
	12-17 SI 2nd dose	21 (36%, 24%-50%)	18 (31%, 20%-45%)	18 (31%, 20%-45%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	37 (64%, 50%-76%)
	12-17 LI 2nd dose	31 (56%, 42%-70%)	8 (15%, 6%-27%)	14 (25%, 15%-39%)	2 (4%, 0%-13%)	0 (0%, 0%-6%)	24 (44%, 30%-58%)
	6-11 2nd dose	39 (49%, 37%-60%)	27 (34%, 24%-45%)	9 (11%, 5%-20%)	5 (6%, 2%-14%)	0 (0%, 0%-5%)	41 (51%, 40%-63%)
Fever ≥ 38°C	12-17 SI 1st dose	48 (83%, 71%-91%)	5 (9%, 3%-19%)	2 (3%, 0%-12%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	10 (17%, 9%-29%)
	12-17 LI 1st dose	53 (85%, 74%-93%)	1 (2%, 0%-9%)	7 (11%, 5%-22%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	9 (15%, 7%-26%)
	6-11 1st dose	48 (53%, 43%-64%)	14 (16%, 9%-25%)	12 (13%, 7%-22%)	15 (17%, 10%-26%)	1 (1%, 0%-6%)	42 (47%, 36%-57%)
	12-17 SI 2nd dose	58 (100%, 94%-100%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)
	12-17 LI 2nd dose	54 (98%, 90%-100%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	1 (2%, 0%-10%)
	6-11 2nd dose	68 (85%, 75%-92%)	10 (12%, 6%-22%)	2 (2%, 0%-9%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	12 (15%, 8%-25%)
Feverish	12-17 SI 1st dose	16 (28%, 17%-41%)	12 (21%, 11%-33%)	26 (45%, 32%-58%)	4 (7%, 2%-17%)	0 (0%, 0%-6%)	42 (72%, 59%-83%)
	12-17 LI 1st dose	30 (48%, 35%-61%)	9 (15%, 7%-26%)	16 (26%, 16%-38%)	7 (11%, 5%-22%)	0 (0%, 0%-6%)	32 (52%, 39%-65%)
	6-11 1st dose	19 (21%, 13%-31%)	18 (20%, 12%-30%)	30 (33%, 24%-44%)	23 (26%, 17%-36%)	0 (0%, 0%-4%)	71 (79%, 69%-87%)
	12-17 SI 2nd dose	42 (72%, 59%-83%)	7 (12%, 5%-23%)	8 (14%, 6%-25%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	16 (28%, 17%-41%)
	12-17 LI 2nd dose	45 (82%, 69%-91%)	6 (11%, 4%-22%)	4 (7%, 2%-18%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	10 (18%, 9%-31%)
	6-11 2nd dose	52 (65%, 54%-75%)	17 (21%, 13%-32%)	7 (9%, 4%-17%)	4 (5%, 1%-12%)	0 (0%, 0%-5%)	28 (35%, 25%-46%)

Symptom	Group	None	Mild	Moderate	Severe	Potentially life-threatening	Any
Headache	12-17 SI 1st dose	8 (14%, 6%-25%)	18 (31%, 20%-45%)	28 (48%, 35%-62%)	4 (7%, 2%-17%)	0 (0%, 0%-6%)	50 (86%, 75%-94%)
	12-17 LI 1st dose	13 (21%, 12%-33%)	21 (34%, 22%-47%)	24 (39%, 27%-52%)	4 (6%, 2%-16%)	0 (0%, 0%-6%)	49 (79%, 67%-88%)
	6-11 1st dose	18 (20%, 12%-30%)	35 (39%, 29%-50%)	28 (31%, 22%-42%)	9 (10%, 5%-18%)	0 (0%, 0%-4%)	72 (80%, 70%-88%)
	12-17 SI 2nd dose	26 (45%, 32%-58%)	14 (24%, 14%-37%)	16 (28%, 17%-41%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	32 (55%, 42%-68%)
	12-17 LI 2nd dose	20 (36%, 24%-50%)	24 (44%, 30%-58%)	10 (18%, 9%-31%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	35 (64%, 50%-76%)
6-11 2nd dose	39 (49%, 37%-60%)	26 (32%, 22%-44%)	12 (15%, 8%-25%)	3 (4%, 1%-11%)	0 (0%, 0%-5%)	41 (51%, 40%-63%)	
Joint pain	12-17 SI 1st dose	42 (72%, 59%-83%)	12 (21%, 11%-33%)	3 (5%, 1%-14%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	16 (28%, 17%-41%)
	12-17 LI 1st dose	42 (68%, 55%-79%)	14 (23%, 13%-35%)	6 (10%, 4%-20%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	20 (32%, 21%-45%)
	6-11 1st dose	73 (81%, 71%-89%)	13 (14%, 8%-23%)	2 (2%, 0%-8%)	2 (2%, 0%-8%)	0 (0%, 0%-4%)	17 (19%, 11%-29%)
	12-17 SI 2nd dose	50 (86%, 75%-94%)	6 (10%, 4%-21%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	8 (14%, 6%-25%)
	12-17 LI 2nd dose	46 (84%, 71%-92%)	9 (16%, 8%-29%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	9 (16%, 8%-29%)
6-11 2nd dose	69 (86%, 77%-93%)	8 (10%, 4%-19%)	3 (4%, 1%-11%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	11 (14%, 7%-23%)	
Malaise	12-17 SI 1st dose	15 (26%, 15%-39%)	15 (26%, 15%-39%)	25 (43%, 30%-57%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	43 (74%, 61%-85%)
	12-17 LI 1st dose	17 (27%, 17%-40%)	21 (34%, 22%-47%)	19 (31%, 20%-44%)	5 (8%, 3%-18%)	0 (0%, 0%-6%)	45 (73%, 60%-83%)
	6-11 1st dose	27 (30%, 21%-41%)	24 (27%, 18%-37%)	24 (27%, 18%-37%)	15 (17%, 10%-26%)	0 (0%, 0%-4%)	63 (70%, 59%-79%)
	12-17 SI 2nd dose	32 (55%, 42%-68%)	16 (28%, 17%-41%)	10 (17%, 9%-29%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	26 (45%, 32%-58%)
	12-17 LI 2nd dose	41 (75%, 61%-85%)	8 (15%, 6%-27%)	4 (7%, 2%-18%)	2 (4%, 0%-13%)	0 (0%, 0%-6%)	14 (25%, 15%-39%)
6-11 2nd dose	46 (57%, 46%-68%)	21 (26%, 17%-37%)	6 (8%, 3%-16%)	7 (9%, 4%-17%)	0 (0%, 0%-5%)	34 (42%, 32%-54%)	
Muscle ache	12-17 SI 1st dose	22 (38%, 26%-52%)	25 (43%, 30%-57%)	9 (16%, 7%-27%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	36 (62%, 48%-74%)
	12-17 LI 1st dose	22 (35%, 24%-49%)	26 (42%, 30%-55%)	13 (21%, 12%-33%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	40 (65%, 51%-76%)
	6-11 1st dose	54 (60%, 49%-70%)	25 (28%, 19%-38%)	9 (10%, 5%-18%)	2 (2%, 0%-8%)	0 (0%, 0%-4%)	36 (40%, 30%-51%)
	12-17 SI 2nd dose	42 (72%, 59%-83%)	13 (22%, 13%-35%)	3 (5%, 1%-14%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	16 (28%, 17%-41%)
	12-17 LI 2nd dose	32 (58%, 44%-71%)	21 (38%, 25%-52%)	2 (4%, 0%-13%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	23 (42%, 29%-56%)
6-11 2nd dose	59 (74%, 63%-83%)	13 (16%, 9%-26%)	7 (9%, 4%-17%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	21 (26%, 17%-37%)	
Nausea	12-17 SI 1st dose	32 (55%, 42%-68%)	18 (31%, 20%-45%)	6 (10%, 4%-21%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	26 (45%, 32%-58%)
	12-17 LI 1st dose	41 (66%, 53%-78%)	11 (18%, 9%-30%)	7 (11%, 5%-22%)	3 (5%, 1%-13%)	0 (0%, 0%-6%)	21 (34%, 22%-47%)
	6-11 1st dose	56 (62%, 51%-72%)	19 (21%, 13%-31%)	9 (10%, 5%-18%)	6 (7%, 2%-14%)	0 (0%, 0%-4%)	34 (38%, 28%-49%)
	12-17 SI 2nd dose	40 (69%, 55%-80%)	10 (17%, 9%-29%)	7 (12%, 5%-23%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	18 (31%, 20%-45%)
	12-17 LI 2nd dose	46 (84%, 71%-92%)	6 (11%, 4%-22%)	3 (5%, 1%-15%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	9 (16%, 8%-29%)
6-11 2nd dose	64 (80%, 70%-88%)	13 (16%, 9%-26%)	2 (2%, 0%-9%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	16 (20%, 12%-30%)	
Vomiting	12-17 SI 1st dose	52 (90%, 79%-96%)	3 (5%, 1%-14%)	1 (2%, 0%-9%)	2 (3%, 0%-12%)	0 (0%, 0%-6%)	6 (10%, 4%-21%)
	12-17 LI 1st dose	57 (92%, 82%-97%)	2 (3%, 0%-11%)	3 (5%, 1%-13%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	5 (8%, 3%-18%)
	6-11 1st dose	71 (79%, 69%-87%)	7 (8%, 3%-15%)	7 (8%, 3%-15%)	5 (6%, 2%-12%)	0 (0%, 0%-4%)	19 (21%, 13%-31%)
	12-17 SI 2nd dose	56 (97%, 88%-100%)	1 (2%, 0%-9%)	1 (2%, 0%-9%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	2 (3%, 0%-12%)
	12-17 LI 2nd dose	54 (98%, 90%-100%)	1 (2%, 0%-10%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	0 (0%, 0%-6%)	1 (2%, 0%-10%)
6-11 2nd dose	77 (96%, 89%-99%)	2 (2%, 0%-9%)	1 (1%, 0%-7%)	0 (0%, 0%-5%)	0 (0%, 0%-5%)	3 (4%, 1%-11%)	

Appendix Table 2 Summary of AEs within 28 days post vaccination, by vaccination received in participants receiving at least one vaccination during the study

	Aged 12-17 years, 28-day interval		Aged 12-17 years, 112-day interval		Aged 6-11 years, 112-day interval	
	ChAdOx1 nCoV-19 n=58	MenB n=16	ChAdOx1 nCoV-19 n=62	MenB n=14	ChAdOx1 nCoV-19 n=90	MenB n=21
N AE*	35	11	26	7	67	11
N participants	22 (37.9%)	5 (31.2%)	19 (30.6%)	5 (35.7%)	42 (46.7%)	6 (28.6%)
N AEs Severity >=3	4 (11.4%)	0 (0.0%)	2 (7.7%)	0 (0.0%)	2 (3.0%)	0 (0.0%)
N AEs post first dose [N participants]	15 (42.9%) [n=12]	8 (72.7%) [n=4]	15 (57.7%) [n=13]	2 (28.6%) [n=2]	40 (59.7%) [n=31]	7 (63.6%) [n=5]
N AEs post second dose [N participants]	20 (57.1%) [n=13]	3 (27.3%) [n=3]	11 (42.3%) [n=9]	5 (71.4%) [n=3]	27 (40.3%) [n=21]	4 (36.4%) [n=2]
Relatedness:						
<i>No relationship</i>	4 (11.4%)	1 (9.1%)	2 (7.7%)	3 (42.9%)	13 (19.4%)	4 (36.4%)
<i>Unlikely</i>	21 (60.0%)	5 (45.5%)	8 (30.8%)	3 (42.9%)	31 (46.3%)	5 (45.5%)
<i>Possible</i>	8 (22.9%)	4 (36.4%)	10 (38.5%)	1 (14.3%)	14 (20.9%)	2 (18.2%)
<i>Probable</i>	2 (5.7%)	1 (9.1%)	6 (23.1%)	0 (0.0%)	9 (13.4%)	0 (0.0%)
<i>Definite</i>	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
N AESI [pts]	0 [n=0]	0 [n=0]	1 [n=1]	0 [n=0]	3 [n=3]	0 [n=0]
N SAE [pts]	1 [n=1]	0 [n=0]	3 [n=3]	0 [n=0]	0 [n=0]	0 [n=0]

*All AEs reported here are those occurring within 28 days of either first or second dose of vaccine, after excluding SAE and AESIs due to the different windows of collection. Counts of SAEs and AESIs are shown separately in the last two rows of the table, with further details listed in Appendix Tables 6-7.

Appendix Table 3 Listing of unsolicited AEs of severity grade ≥ 3 , within 28 days of vaccination

ID	Age group	Arm	Duration of AE (days)	Days since 1st dose	Days since 2nd dose	Severity	Causality	SOC	PT	LLT
1	12-17 years	ChAdOx1 nCoV-19 LI	<1	1	-	3	Possible	Skin and subcutaneous tissue disorders	Sensitive skin	Hypersensitive skin
2	6-11 years	ChAdOx1 nCoV-19 LI	<1	1		3	Probable	Psychiatric disorders	Insomnia	Difficulty sleeping
3	12-17 years	ChAdOx1 nCoV-19 SI	<1	14	-	3	Unlikely	Gastrointestinal disorders	Vomiting	Vomiting
3	12-17 years	ChAdOx1 nCoV-19 SI	<1	14	-	3	Unlikely	General disorders and administration site conditions	Fatigue	Fatigue
3	12-17 years	ChAdOx1 nCoV-19 SI	<1	14	-	3	Unlikely	General disorders and administration site conditions	Pyrexia	Fever
4	6-11 years	ChAdOx1 nCoV-19 LI	<1	1		3	Possible	Psychiatric disorders	Sleep terror	Sleep terror
5	12-17 years	ChAdOx1 nCoV-19 LI	3	145	13	3	Unlikely	Infections and infestations	Suspected COVID-19	Suspected COVID-19
6	12-17 years	ChAdOx1 nCoV-19 SI	6	1	-	3	Probable	Nervous system disorders	Dizziness	Dizziness
										Woozy
								Gastrointestinal disorders	Nausea	Nausea
									Abdominal pain	Abdominal pain

SI: short interval (28-day); LI: long interval (112-day); SOC: System Organ Class; PT: Preferred Term; LLT: Lowest Level Term

Appendix Table 4 MedDRA codes for unsolicited AEs after first dose of vaccine, by study arm (excluding SAEs and AESIs)

System Organ Class, Preferred Term	ChAdOx1 nCoV-19				MenB		
	Overall	12-17 SI	12-17 LI	6-11 LI	12-17 SI	12-17 LI	6-11 LI
Ear and labyrinth disorders	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Vertigo	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Eye disorders	3 (n=2)	0 (n=0)	1 (n=1)	0 (n=0)	2 (n=1)	0 (n=0)	0 (n=0)
Eye pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Eyelid pain	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)
Swelling of eyelid	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)
Gastrointestinal disorders	28 (n=18)	3 (n=2)	1 (n=1)	17 (n=11)	5 (n=2)	0 (n=0)	2 (n=2)
Abdominal pain	11 (n=11)	1 (n=1)	0 (n=0)	8 (n=8)	1 (n=1)	0 (n=0)	1 (n=1)
Abdominal pain upper	3 (n=3)	0 (n=0)	1 (n=1)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)
Diarrhoea	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Irritable bowel syndrome	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Mouth ulceration	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Nausea	3 (n=3)	1 (n=1)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)
Tongue discolouration	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Tongue disorder	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Vomiting	6 (n=6)	1 (n=1)	0 (n=0)	4 (n=4)	1 (n=1)	0 (n=0)	0 (n=0)
General disorders and administration site conditions	13 (n=12)	2 (n=1)	2 (n=2)	9 (n=9)	0 (n=0)	0 (n=0)	0 (n=0)
Axillary pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Chest pain	2 (n=2)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Fatigue	3 (n=3)	1 (n=1)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Pyrexia	3 (n=3)	1 (n=1)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Unevaluable event	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Vaccination site bruising	2 (n=2)	0 (n=0)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Vaccination site inflammation	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Infections and infestations	2 (n=2)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Gastritis viral	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Hordeolum	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Investigations	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Heart rate increased	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Metabolism and nutrition disorders	7 (n=6)	4 (n=4)	1 (n=1)	0 (n=0)	2 (n=1)	0 (n=0)	0 (n=0)
Decreased appetite	7 (n=6)	4 (n=4)	1 (n=1)	0 (n=0)	2 (n=1)	0 (n=0)	0 (n=0)
Musculoskeletal and connective tissue disorders	4 (n=4)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	1 (n=1)	1 (n=1)
Musculoskeletal pain	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Musculoskeletal stiffness	2 (n=2)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)
Myalgia	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Nervous system disorders	14 (n=12)	6 (n=4)	1 (n=1)	6 (n=6)	0 (n=0)	0 (n=0)	1 (n=1)
Dizziness	4 (n=2)	4 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Dysaesthesia	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Dysgeusia	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Headache	5 (n=5)	2 (n=2)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	1 (n=1)
Hypoaesthesia	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Loss of consciousness	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Syncope	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Psychiatric disorders	6 (n=6)	1 (n=1)	1 (n=1)	4 (n=4)	0 (n=0)	0 (n=0)	0 (n=0)
Confusional state	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Insomnia	2 (n=2)	0 (n=0)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Mood altered	2 (n=2)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Sleep terror	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Reproductive system and breast disorders	2 (n=2)	0 (n=0)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Menstruation delayed	2 (n=2)	0 (n=0)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Respiratory, thoracic and mediastinal disorders	12 (n=10)	1 (n=1)	3 (n=3)	4 (n=4)	3 (n=1)	1 (n=1)	0 (n=0)
Epistaxis	6 (n=5)	0 (n=0)	1 (n=1)	3 (n=3)	2 (n=1)	0 (n=0)	0 (n=0)
Nasal congestion	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)

System Organ Class, Preferred Term	ChAdOx1 nCoV-19				MenB		
	Overall	12-17 SI	12-17 LI	6-11 LI	12-17 SI	12-17 LI	6-11 LI
Oropharyngeal pain	4 (n=4)	0 (n=0)	2 (n=2)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)
Rhinorrhoea	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
<i>Skin and subcutaneous tissue disorders</i>	<i>10 (n=10)</i>	<i>0 (n=0)</i>	<i>1 (n=1)</i>	<i>5 (n=5)</i>	<i>1 (n=1)</i>	<i>0 (n=0)</i>	<i>3 (n=3)</i>
Eczema	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Macule	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Pruritus	2 (n=2)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)
Rash	2 (n=2)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Rash pruritic	2 (n=2)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Sensitive skin	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Urticaria	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)

SI: short interval (28-day); LI: long interval (112-day)

Appendix Table 5 MedDRA codes for unsolicited AEs after second dose of vaccine, by study arm (excluding SAEs and AESIs)

System Organ Class, Preferred Term	ChAdOx1 nCoV-19				MenB		
	Overall	12-17 SI	12-17 LI	6-11 LI	12-17 SI	12-17 LI	6-11 LI
Blood and lymphatic system disorders	2 (n=2)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Anaemia	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Lymphadenopathy	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Ear and labyrinth disorders	3 (n=3)	0 (n=0)	1 (n=1)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Vertigo	3 (n=3)	0 (n=0)	1 (n=1)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Eye disorders	4 (n=3)	2 (n=1)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Eye pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Eye swelling	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Photophobia	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Vision blurred	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Gastrointestinal disorders	8 (n=8)	3 (n=3)	2 (n=2)	2 (n=2)	0 (n=0)	1 (n=1)	0 (n=0)
Abdominal pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Abdominal pain upper	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Diarrhoea	3 (n=3)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)
Dry mouth	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Nausea	2 (n=2)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
General disorders and administration site conditions	9 (n=9)	1 (n=1)	2 (n=2)	1 (n=1)	2 (n=2)	2 (n=2)	1 (n=1)
Axillary pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Fatigue	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)
Peripheral swelling	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)
Ulcer	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)
Vaccination site bruising	2 (n=2)	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Vaccination site discomfort	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)
Vaccination site pain	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Vessel puncture site erythema	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Immune system disorders	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Hypersensitivity	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Infections and infestations	7 (n=7)	0 (n=0)	1 (n=1)	4 (n=4)	0 (n=0)	1 (n=1)	1 (n=1)
Ear infection	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Gastritis viral	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Gastroenteritis	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Gastroenteritis viral	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Nasopharyngitis	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)
Suspected COVID-19	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Upper respiratory tract infection	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Injury, poisoning and procedural complications	5 (n=5)	2 (n=2)	0 (n=0)	2 (n=2)	0 (n=0)	1 (n=1)	0 (n=0)
Arthropod bite	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Limb injury	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)
Post procedural complication	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Procedural complication	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Road traffic accident	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Metabolism and nutrition disorders	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Decreased appetite	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Musculoskeletal and connective tissue disorders	2 (n=2)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Musculoskeletal chest pain	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Musculoskeletal pain	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Nervous system disorders	10 (n=9)	6 (n=6)	1 (n=1)	3 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Dizziness	4 (n=4)	2 (n=2)	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Headache	5 (n=5)	4 (n=4)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Taste disorder	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Psychiatric disorders	2 (n=2)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Anxiety	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Insomnia	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Renal and urinary disorders	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Pollakiuria	1 (n=1)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Respiratory, thoracic and mediastinal disorders	17 (n=12)	6 (n=4)	2 (n=2)	8 (n=5)	1 (n=1)	0 (n=0)	0 (n=0)
Cough	4 (n=4)	2 (n=2)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	0 (n=0)
Epistaxis	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)
Nasal congestion	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Oropharyngeal pain	6 (n=6)	2 (n=2)	1 (n=1)	3 (n=3)	0 (n=0)	0 (n=0)	0 (n=0)
Rhinorrhoea	4 (n=4)	0 (n=0)	1 (n=1)	3 (n=3)	0 (n=0)	0 (n=0)	0 (n=0)
Sinus congestion	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Skin and subcutaneous tissue disorders	3 (n=3)	0 (n=0)	0 (n=0)	2 (n=2)	0 (n=0)	0 (n=0)	1 (n=1)
Acne	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Drug eruption	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	1 (n=1)
Rash	1 (n=1)	0 (n=0)	0 (n=0)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)
Vascular disorders	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)
Hot flush	1 (n=1)	1 (n=1)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)	0 (n=0)

SI: short interval (28-day); LI: long interval (112-day)

Appendix Table 6 Listing of AESIs

ID	Age group	Arm	Duration of AESI (days)	Days since 1st dose	Days since 2nd dose	Severity	Causality	SAE?	SOC	PT
7	6-11 years	ChAdOx1 nCoV-19 LI		120	1	1	Probable	No	Blood and lymphatic system disorders	Lymphadenopathy
8	6-11 years	ChAdOx1 nCoV-19 LI	1	0	-	2	Unlikely	No	Psychiatric disorders	Mood altered
9	12-17 years	ChAdOx1 nCoV-19 LI	4	48	-	4	Unlikely	Yes (hospitalisation)	Infections and infestations	Appendicitis
10	6-11 years	ChAdOx1 nCoV-19 LI	1	40	-	1	No relationship	No	Respiratory, thoracic and mediastinal disorders	Cough

LI: long interval (112-day); SOC: System Organ Class; PT: Preferred Term

Appendix Table 7 Listing of SAEs

ID	Age group	Arm	Duration of SAE (days)	Outcome	Days since 1st dose	Days since 2nd dose	Severity	Causality	SAE type	AESI?	SOC	PT
11	12-17 years	ChAdOx1 nCoV-19 LI	-	Ongoing	174		3	Unlikely	Important medical event	No	Reproductive system and breast disorders	Ovarian mass
9	12-17 years	ChAdOx1 nCoV-19 LI	4	Recovered	48	-	4	Unlikely	Hospitalisation	Yes	Infections and infestations	Appendicitis
12	12-17 years	ChAdOx1 nCoV-19 SI	3	Recovered	153	123	3	Unlikely	Hospitalisation	No	Infections and infestations	Tonsillitis
13	12-17 years	ChAdOx1 nCoV-19 LI	-	Ongoing	183	50	3	Unlikely	Important medical event	No	Neoplasms benign, malignant and unspecified (incl cysts and polyps)	Pituitary tumour benign

SI: short interval (28-day); LI: long interval (112-day); SOC: System Organ Class; PT: Preferred Term

Appendix Table 8 Listing of COVID infections

ID	Age group	Arm	Days since 1st dose	Days since 2nd dose	Type of test	Reason for test	Symptomatic at time of test?	Symptoms
14	12-17 years	ChAdOx1 nCoV-19 LI	212	96	PCR	Symptomatic family member	Yes	Other: Headache, runny nose
15	12-17 years	ChAdOx1 nCoV-19 LI	214	98	Lateral Flow Assay	Other: Symptoms and close contact	Yes	Other: Sore throat and mild cold symptoms
16	12-17 years	ChAdOx1 nCoV-19 SI	195	164	PCR	Other: had a cough and fatigue and a sore throat after attending a festival	Yes	Cough
17	12-17 years	ChAdOx1 nCoV-19 SI	241	211	Lateral Flow Assay	Other: Mild symptoms	Yes	Cough, Abdominal pain
18	6-11 years	ChAdOx1 nCoV-19 LI	222	102	PCR	Other: Close contact	No	
19	6-11 years	MenB	204	85	PCR	Other: symptomatic	Yes	Fever, Other: headache and lethargy
20	6-11 years	ChAdOx1 nCoV-19 LI	182	67	PCR	Symptomatic family member	Yes	Other: sore throat
21	12-17 years	ChAdOx1 nCoV-19 SI	177	146	PCR	Other: Positive contact and symptoms	Yes	Cough, Shortness of breath, Other: sore throat
22	12-17 years	ChAdOx1 nCoV-19 LI	235	123	Lateral Flow Assay	Symptomatic family member	Yes	Anosmia/change of taste, Fever, Cough
23	12-17 years	MenB SI	212	182	PCR	Other: Participant was symptomatic	Yes	Anosmia/change of taste, Other: "bunged up", achy, fatigue, headache
24	12-17 years	ChAdOx1 nCoV-19 SI	230	202	PCR	Other: Symptomatic participant	Yes	Other: Sneezing, cold and shivery
25	12-17 years	ChAdOx1 nCoV-19 SI	213	185	PCR	Other: Close contact	Yes	Anosmia/change of taste, Fever, Cough, Other: headache, fatigue
26	6-11 years	ChAdOx1 nCoV-19 LI	204	89	Lateral Flow Assay	Surveillance screening	No	
27	6-11 years	ChAdOx1 nCoV-19 LI	208	53	PCR	Symptomatic family member	Yes	Other: chills, headache, sneezing, runny eyes
28	6-11 years	MenB	113		PCR	Other: feeling unwell / symptomatic	Yes	Fever, Diarrhoea, Other: headache, dizziness
29	12-17 years	ChAdOx1 nCoV-19 LI	216		Lateral Flow Assay	Symptomatic family member	Yes	Cough, Other: Sore throat, achey, tiredness, headache
12	12-17 years	ChAdOx1 nCoV-19 SI	140	110	PCR	Other: Participant was symptomatic	Yes	Cough
31	12-17 years	MenB SI	136	104	PCR	Symptomatic family member	Yes	Cough
31	12-17 years	ChAdOx1 nCoV-19 SI	173	143	PCR	Other: Symptomatic	Yes	Cough
32	12-17 years	MenB SI	235	207	PCR	Routine screening through school	Yes	Cough, Diarrhoea, Other: Headache, nausea, runny nose
33	12-17 years	ChAdOx1 nCoV-19 SI	204	176	PCR	Other: Participant was symptomatic	Yes	Other: Sore throat and runny nose.

SI: short interval (28-day); LI: long interval (112-day)

Appendix Table 9 Immunogenicity kinetics in seronegative at baseline participants in the ChAdOx1 nCoV-19 arms

Group	Days since first dose	Anti-S multiplexed ECL by PPD			Anti-S in-house ELISA			PseudoNA by Monogram			In-house ELISpot		Anti-RBD multiplexed ECL by PPD			
		n	Median [IQR]	GMC (95% CI)	n	Median [IQR]	GMC (95% CI)	n	Median [IQR]	GMT (95% CI)	n	Median [IQR]	GM (95% CI)	n	Median [IQR]	GMC (95% CI)
12-17 SI	0	47	56 [16, 153]	63 (45, 88)	47	1 [1, 3]	2 (1, 2)	47	20 [20, 20]	20 (20, 20)	42	28 [16, 51]	35 (27, 46)	47	102 [102, 102]	127 (105, 153)
	28	46	25068 [15428, 35629]	24816 (20225, 30451)	45	605 [380, 947]	629 (493, 804)	45	53 [20, 104]	56 (38, 81)	44	295 [187, 495]	302 (233, 391)	46	22610 [15009, 34827]	22953 (18536, 28421)
	56*	45	42203 [28888, 60603]	43280 (35852, 52246)	45	1086 [625, 1888]	1194 (908, 1568)	45	136 [92, 216]	150 (116, 194)	39	216 [141, 536]	270 (196, 372)	45	51247 [33244, 75301]	49764 (41278, 59995)
12-17 LI	0	51	46 [16, 69]	50 (36, 71)	51	1 [1, 2]	2 (1, 2)	51	20 [20, 20]	20 (20, 21)	47	35 [18, 72]	42 (32, 54)	51	102 [102, 102]	136 (109, 170)
	84	49	17214 [12508, 23139]	15821 (10830, 23113)	49	562 [296, 1021]	566 (379, 845)	49	41 [20, 70]	47 (35, 64)	0	-	-	49	17697 [12438, 27221]	17040 (12144, 23911)
	112	49	10463 [7214, 17859]	13791 (9939, 19135)	50	269 [167, 546]	338 (239, 480)	49	20 [20, 56]	42 (29, 62)	43	240 [123, 427]	243 (188, 314)	49	11399 [7687, 18219]	14505 (10296, 20434)
	140*	45	72225 [50967, 115313]	73371 (58685, 91733)	45	1756 [1274, 2953]	1963 (1575, 2448)	44	290 [209, 526]	299 (230, 390)	36	150 [70, 234]	135 (96, 190)	45	96180 [57304, 165671]	92520 (73068, 117151)
6-11 LI	0	78	34 [16, 60]	36 (29, 45)	78	2 [1, 6]	3 (2, 3)	78	20 [20, 20]	20 (20, 21)	71	17 [16, 36]	25 (21, 29)	78	102 [102, 102]	113 (101, 127)
	28	34	38549 [19343, 49728]	32709 (24381, 43882)	35	854 [398, 1316]	819 (579, 1158)	34	82 [54, 187]	105 (66, 169)	32	251 [131, 432]	267 (189, 377)	34	37482 [18502, 49633]	32307 (23542, 44336)
	84	70	18716 [12712, 27652]	19840 (16098, 24452)	72	421 [270, 595]	428 (349, 525)	69	63 [41, 99]	64 (51, 80)	0	-	-	70	20169 [13030, 33343]	21776 (17591, 26958)
	112	69	14973 [8398, 20017]	16555 (12883, 21273)	69	359 [209, 548]	405 (311, 528)	68	46 [20, 84]	58 (42, 82)	59	122 [80, 229]	128 (101, 162)	69	15882 [10016, 25209]	18366 (14187, 23777)
	140*	48	86222 [61686, 203116]	108924 (84852, 139823)	48	2162 [1328, 5448]	2377 (1773, 3185)	48	730 [358, 1703]	885 (614, 1275)	39	126 [72, 179]	104 (79, 137)	48	119834 [71514, 259563]	140413 (108182, 182247)

*28 days post-second dose timepoint. SI: short interval (28-day); LI: long interval (112-day)

Appendix Table 10 Immunogenicity kinetics in the seronegative at baseline participants in the MenB arms

Group	Days since first dose	Anti-S multiplexed ECL by PPD		Anti-S in-house ELISA		PseudoNA by Monogram		In-house ELISpot		Anti-RBD multiplexed ECL by PPD	
		n	Median [IQR]	n	Median [IQR]	n	Median [IQR]	n	Median [IQR]	n	Median [IQR]
12-17 SI	0	14	94 [22, 306]	14	1 [1, 5]	14	20 [20, 20]	14	24 [16, 48]	14	102 [102, 226]
	28	14	100 [21, 230]	14	1 [1, 3]	14	20 [20, 20]	14	16 [16, 26]	14	102 [102, 202]
	56*	13	57 [16, 184]	13	2 [1, 14]	13	20 [20, 20]	10	18 [16, 22]	13	102 [102, 214]
12-17 LI	0	12	50 [37, 90]	12	1 [1, 1]	12	20 [20, 20]	11	44 [26, 57]	12	102 [102, 102]
	84	12	70 [51, 224]	12	1 [1, 95]	12	20 [20, 20]	0	-	12	102 [102, 265]
	112	12	58 [42, 148]	12	1 [1, 3]	12	20 [20, 20]	9	26 [16, 91]	12	102 [102, 133]
	140*	10	54 [39, 142]	10	4 [1, 8]	10	20 [20, 20]	8	20 [16, 28]	10	102 [102, 102]
6-11 LI	0	18	46 [21, 73]	18	2 [1, 4]	18	20 [20, 20]	16	16 [16, 25]	18	102 [102, 102]
	28	8	42 [32, 102]	8	1 [1, 2]	8	20 [20, 20]	7	16 [16, 30]	8	102 [102, 160]
	84	17	72 [34, 109]	17	1 [1, 2]	17	20 [20, 20]	0	-	17	102 [102, 102]
	112	15	61 [25, 92]	16	1 [1, 3]	16	20 [20, 20]	13	16 [16, 19]	15	102 [102, 102]
	140*	9	16 [16, 54]	9	1 [1, 2]	9	20 [20, 20]	6	16 [16, 16]	9	102 [102, 102]

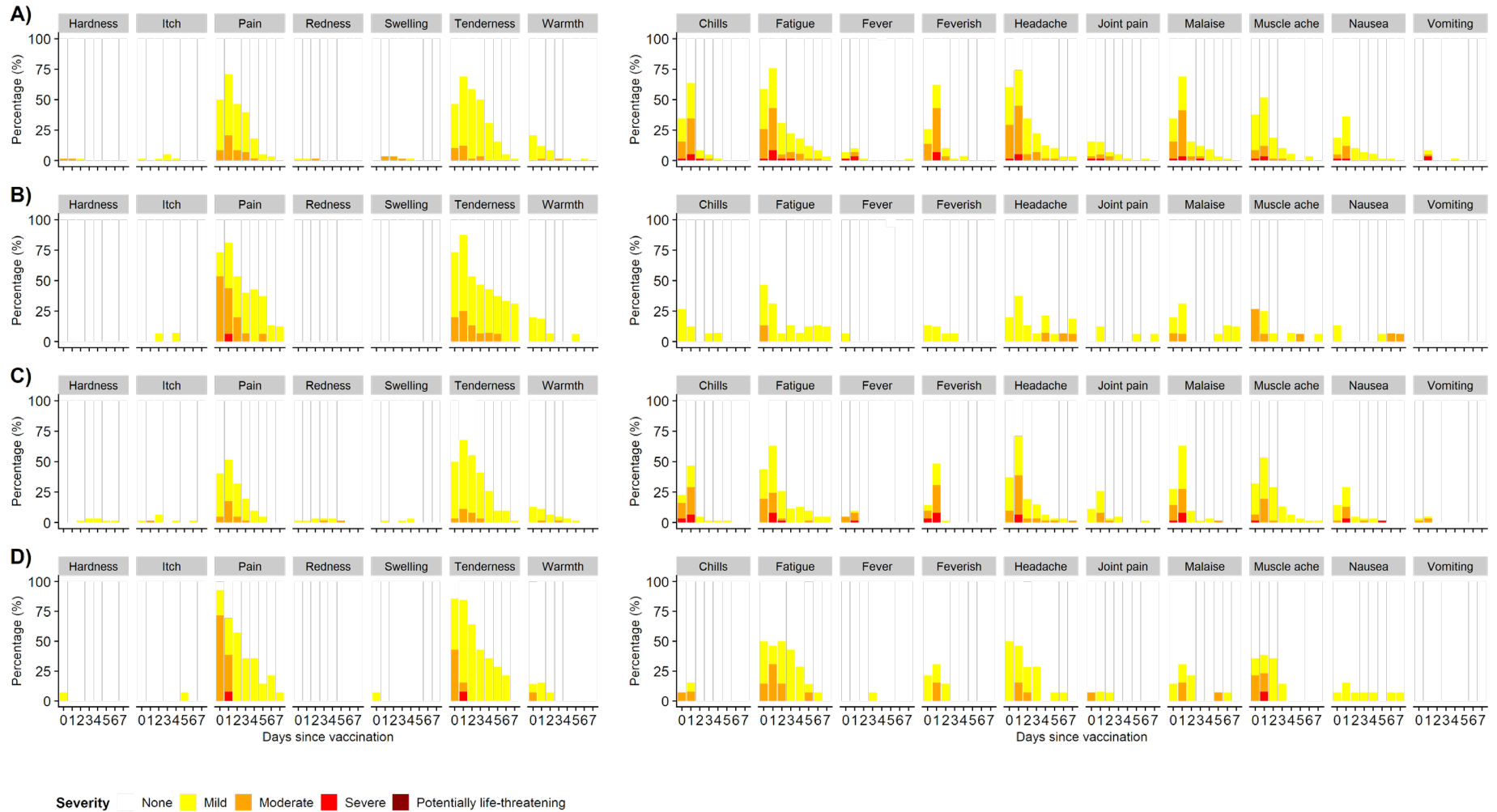
*28 days post-second dose timepoint. SI: short interval (28-day); LI: long interval (112-day)

Appendix Table 11 Immunogenicity kinetics in the sensitivity analysis cohort, ChAdOx1 nCoV-19 arms only

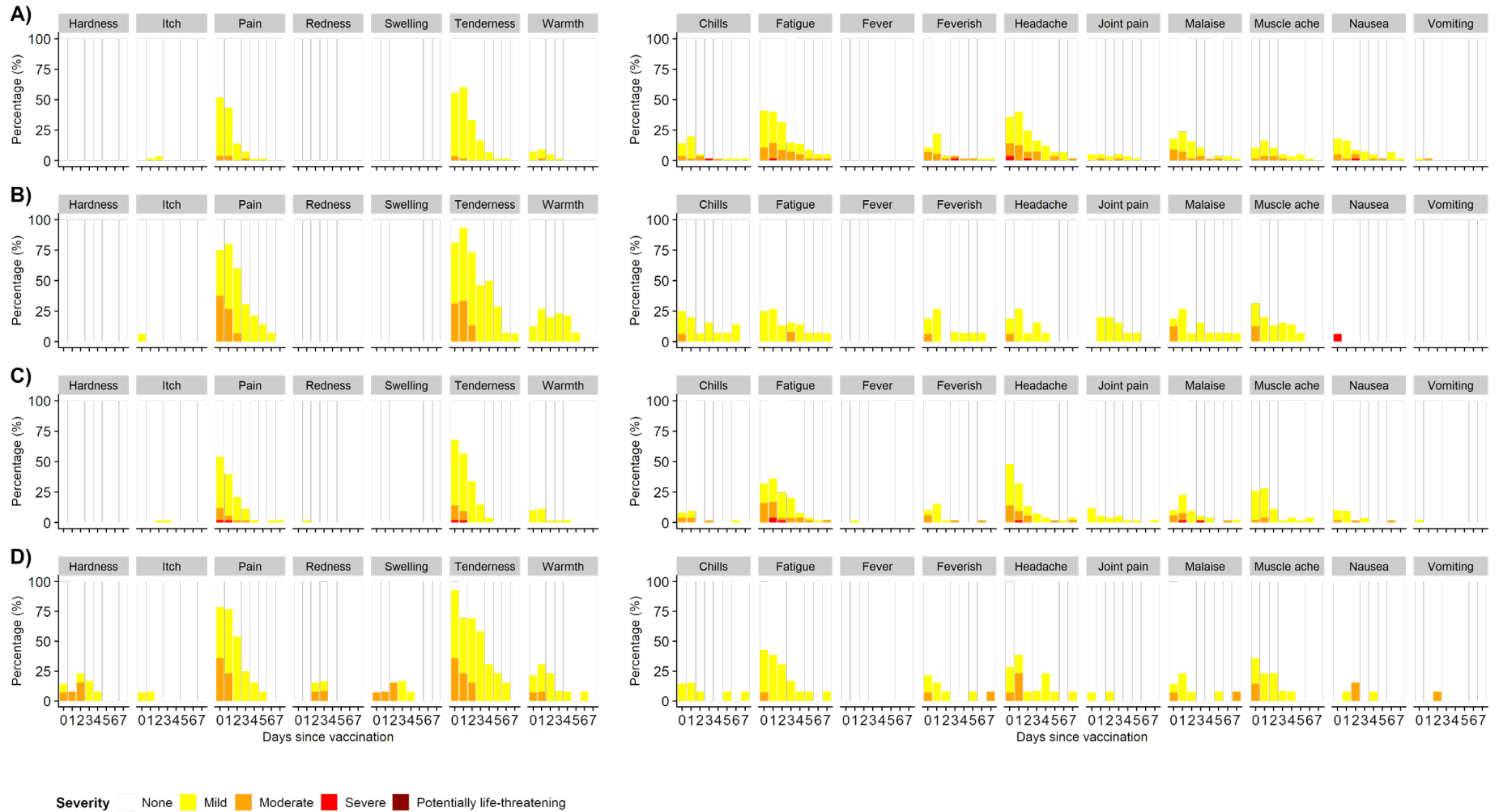
Group	Days since first dose	Anti-S multiplexed ECL by PPD			Anti-S in-house ELISA			PseudoNA by Monogram			In-house ELISpot		Anti-RBD multiplexed ECL by PPD			
		n	Median [IQR]	GMC (95% CI)	n	Median [IQR]	GMC (95% CI)	n	Median [IQR]	GMT (95% CI)	n	Median [IQR]	GM (95% CI)	n	Median [IQR]	GMC (95% CI)
12-17 SI	0	44	58 [30, 166]	67 (47, 95)	44	1 [1, 3]	2 (1, 2)	44	20 [20, 20]	20 (20, 20)	39	28 [16, 44]	32 (25, 42)	44	102 [102, 102]	128 (105, 158)
	28	43	25451 [15468, 36601]	25322 (20383, 31457)	42	615 [382, 1024]	647 (500, 838)	42	50 [20, 106]	57 (38, 84)	41	294 [180, 470]	289 (223, 376)	43	22904 [15246, 35033]	23132 (18428, 29037)
	56*	44	41543 [28474, 60750]	43304 (35713, 52508)	44	1123 [623, 1944]	1204 (911, 1591)	44	130 [92, 218]	150 (116, 195)	38	213 [138, 523]	262 (190, 362)	44	50566 [32462, 75424]	49680 (41027, 60157)
12-17 LI	0	39	48 [16, 78]	58 (37, 90)	39	2 [1, 3]	2 (1, 3)	39	20 [20, 20]	21 (19, 22)	35	35 [18, 70]	40 (30, 54)	39	102 [102, 102]	133 (102, 175)
	84	39	15806 [12580, 20980]	18258 (13850, 24069)	39	549 [338, 881]	630 (445, 892)	39	45 [20, 89]	52 (36, 74)	0	-	-	39	17103 [12596, 25819]	19234 (14226, 26004)
	112	38	10398 [7567, 16955]	13009 (9691, 17464)	39	279 [169, 475]	316 (223, 448)	38	20 [20, 49]	38 (27, 55)	34	230 [115, 410]	236 (176, 316)	38	10993 [7985, 18008]	13822 (10037, 19035)
	140*	39	66328 [38965, 102550]	63548 (47706, 84650)	39	1737 [1161, 2913]	1616 (1169, 2232)	39	285 [194, 532]	270 (194, 375)	29	150 [70, 220]	136 (93, 197)	39	90165 [48586, 137150]	79345 (58219, 108137)
6-11 LI	0	36	38 [16, 64]	41 (28, 60)	36	3 [1, 7]	3 (2, 5)	36	20 [20, 20]	21 (19, 22)	33	16 [16, 36]	25 (19, 31)	36	102 [102, 102]	126 (99, 160)
	28	10	32678 [23834, 44452]	32029 (13369, 76733)	10	553 [366, 917]	588 (223, 1555)	10	82 [59, 188]	116 (33, 404)	9	250 [170, 294]	198 (124, 317)	10	35628 [19026, 50494]	32018 (11879, 86304)
	84	35	16202 [11212, 22292]	18286 (12698, 26332)	35	391 [250, 557]	410 (302, 558)	34	52 [20, 94]	58 (39, 87)	0	-	-	35	17279 [11302, 28633]	20349 (13966, 29648)
	112	36	15864 [10265, 20128]	14801 (11144, 19658)	36	303 [203, 482]	340 (252, 458)	35	47 [20, 67]	50 (35, 71)	34	114 [83, 172]	113 (89, 143)	36	17586 [10906, 23030]	17427 (12542, 24216)
	140*	36	79912 [56783, 192978]	99518 (76735, 129065)	36	2139 [1191, 4575]	2160 (1577, 2959)	36	695 [358, 1660]	772 (534, 1117)	30	122 [74, 153]	98 (73, 132)	36	103751 [65568, 245303]	127465 (97087, 167348)

*28 days post-second dose timepoint. SI: short interval (28-day); LI: long interval (112-day)

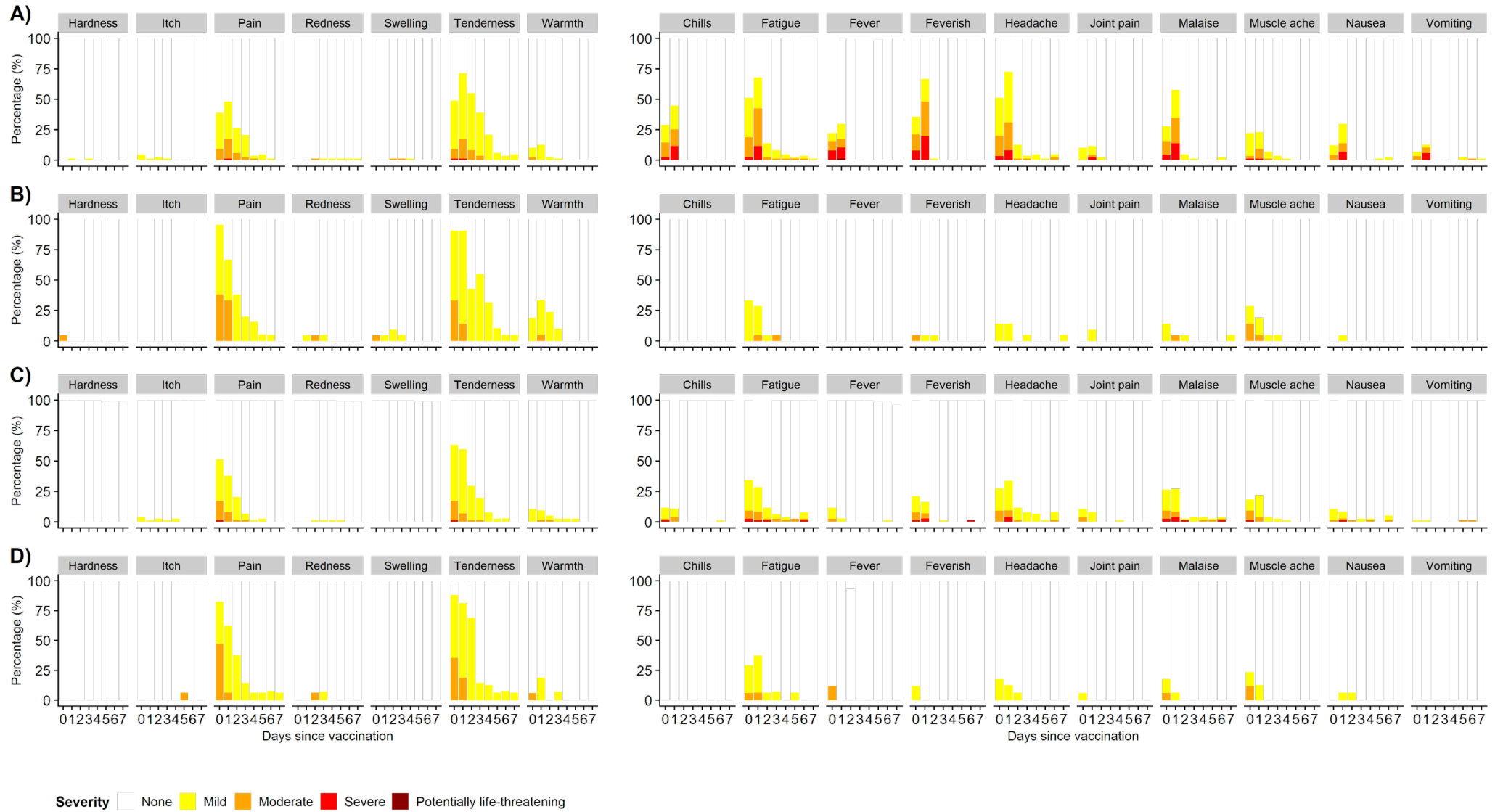
Appendix Figure 1 Reactogenicity by days post first vaccination for A) Local and systemic ChAdOx1 nCoV-19, 12-17 short interval [28-day] group; B) Local and systemic MenB, 12-17 short interval [28-day] group; C) Local and systemic ChAdOx1 nCoV-19, 12-17 long interval [112-day] group; D) Local and systemic MenB, 12-17 long interval [112-day] group



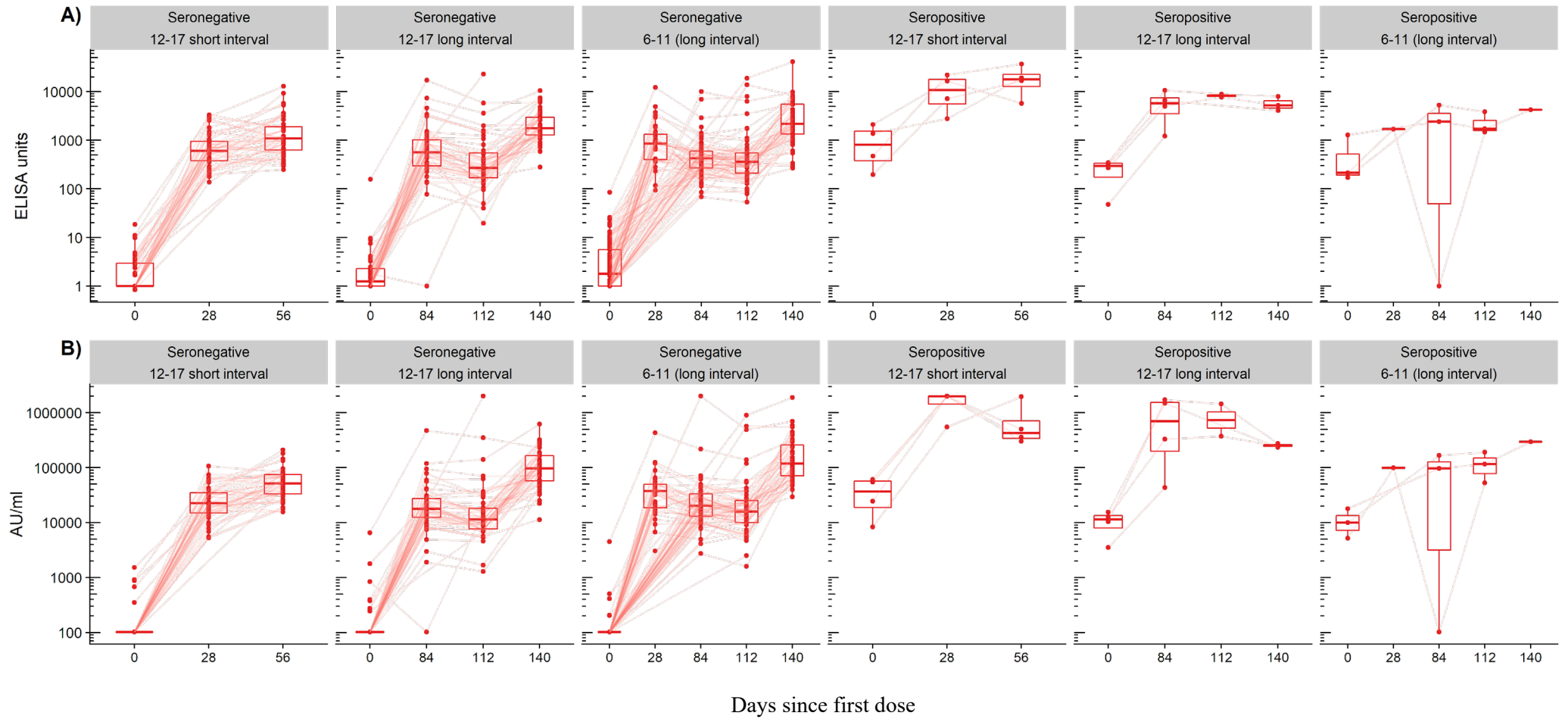
Appendix Figure 2 Reactogenicity by days post second vaccination for A) Local and systemic ChAdOx1 nCoV-19, 12-17 short interval [28-day] group; B) Local and systemic MenB, 12-17 short interval [28-day] group; C) Local and systemic ChAdOx1 nCoV-19, 12-17 long interval [112-day] group; D) Local and systemic MenB, 12-17 long interval [112-day] group



Appendix Figure 3 Local and systemic reactogenicity in the 6-11 long interval [112-day] groups receiving A) ChAdOx1 nCoV-19 first dose; B) MenB first dose; C) ChAdOx1 nCoV-19 second dose; D) MenB second dose

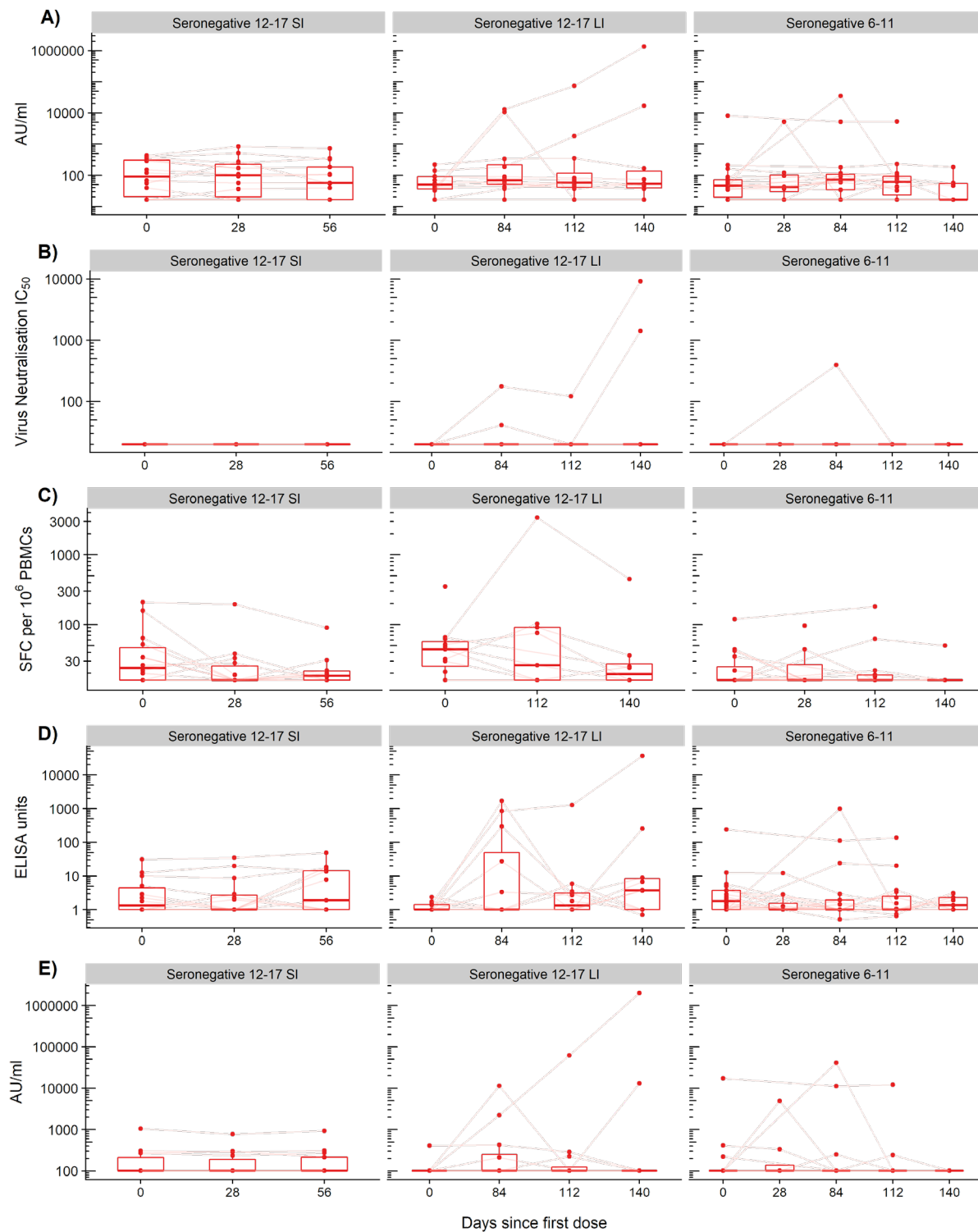


Appendix Figure 4 Immunogenicity kinetics by serostatus at baseline among participants in the ChAdOx1 nCoV-19 arms for A) anti-spike in-house ELISA assay; B) anti-RBD multiplexed ECL assay by PPD



Boxplots represent the median and 25th and 75th percentiles; each data point is one participant; solid lines connect samples from the same participant at multiple time points.
AU: arbitrary units; short interval = 28-day; long interval = 112-day.

Appendix Figure 5 Immunogenicity kinetics among the seronegative at baseline participants in the MenB arms for A) anti-spike multiplexed ECL assay by PPD; B) anti-spike in-house ELISA assay; C) pseudoNA assay by Monogram; D) cellular response by ELISpot assay; E) anti-RBD multiplexed ECL assay by PPD



Boxplots represent the median and 25th and 75th percentiles; each data point is one participant; solid lines connect samples from the same participant at multiple time points; long interval [112-day] in the 6-11 years group. AU: arbitrary units; IC₅₀: half-maximal inhibitory concentration; SFC: spot forming cell; PBMCs: peripheral blood mononuclear cells; SI: short interval (28-day); LI: long interval (112-day).