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Long-Term Effects of COVID-19 in Children and Young People: A 24-Month National Cohort Study

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Supplementary Table 1: Characteristics (N(%)) at baseline of CYP by SARS-CoV-2 and vaccination status^a at 24 months

	Initial-negatives (NN) (N=4,531)				Negative & infected (NP) (N=2,402)				Initial-positives (PN) (N= 5,177)				Positive & reinfected (PP) (N= 519)			
	Vaccine dose				Vaccine dose				Vaccine dose				Vaccine dose			
	0 n (%)	1 n (%)	2 n (%)	3+ n (%)	0 n (%)	1 n (%)	2 n (%)	3+ n (%)	0 n (%)	1 n (%)	2 n (%)	3+ n (%)	0 n (%)	1 n (%)	2 n (%)	3+ n (%)
Prevalence	452 (10.0)	371 (8.2)	2,115 (46.7)	1,593 (35.1)	348 (14.5)	232 (9.7)	1,213 (50.5)	609 (25.3)	597 (11.5)	386 (7.5)	2,593 (50.1)	1,601 (30.9)	113 (21.8)	58 (11.2)	237 (45.7)	111 (21.4)
Sex																
Male	192 (12.3)	138 (8.9)	783 (50.3)	445 (28.5)	120 (14.6)	88 (10.7)	452 (55.0)	162 (19.7)	235 (12.8)	149 (8.1)	991 (53.9)	465 (25.3)	49 (27.2)	16 (8.9)	86 (47.8)	29 (16.1)
Female	260 (8.7)	233 (7.8)	1,332 (44.8)	1,148 (38.6)	228 (14.4)	144 (9.1)	761 (48.2)	447 (28.3)	362 (10.8)	237 (7.1)	1,602 (48.0)	1,136 (34.0)	64 (18.9)	42 (12.4)	151 (44.5)	82 (24.2)
Age at index test (years)																
11-14	289 (15.3)	196 (10.4)	1,232 (65.2)	173 (9.2)	233 (18.4)	151 (11.9)	776 (61.3)	106 (8.4)	360 (15.4)	195 (8.3)	1,577 (67.3)	210 (8.9)	82 (31.4)	30 (11.5)	136 (52.1)	13 (5.0)
15-17	163 (6.2)	175 (6.6)	883 (33.4)	1,420 (35.2)	115 (10.1)	81 (7.1)	437 (38.5)	503 (44.3)	237 (8.4)	191 (6.7)	1,016 (35.8)	1,391 (49.1)	31 (12.0)	28 (10.8)	101 (39.2)	98 (38.0)
Ethnicity																
White	280 (8.4)	228 (6.8)	1,547 (46.4)	1,277 (38.3)	258 (13.3)	183 (9.4)	982 (50.4)	524 (26.9)	363 (9.4)	249 (6.5)	1,960 (50.8)	1,284 (33.3)	80 (20.1)	43 (10.8)	182 (45.6)	94 (23.6)
Asian or Asian British	98 (13.6)	83 (11.6)	351 (48.9)	186 (25.9)	32 (13.5)	24 (10.1)	130 (54.6)	52 (21.9)	112 (14.2)	77 (9.8)	396 (50.2)	204 (25.8)	22 (28.9)	7 (9.2)	35 (46.1)	12 (15.8)
Mixed	25 (10.4)	20 (8.3)	113 (46.9)	83 (34.4)	27 (21.1)	14 (10.9)	65 (50.8)	22 (17.2)	45 (17.1)	22 (8.4)	122 (46.4)	74 (28.1)	7 (25.0)	4 (14.3)	12 (42.9)	5 (17.9)
Black, African or Caribbean	32 (20.3)	31 (19.6)	75 (47.5)	20 (12.6)	23 (40.4)	8 (14.0)	21 (36.8)	5 (8.8)	45 (29.8)	23 (15.2)	61 (40.4)	22 (14.6)	1 (11.1)	3 (33.3)	5 (55.6)	0 (0.0)
Other	9 (16.9)	4 (7.5)	20 (37.7)	20 (37.7)	7 (25.9)	2 (7.4)	13 (48.2)	5 (18.5)	21 (24.1)	12 (13.8)	38 (43.7)	16 (18.4)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)
Prefer not to say	8 (27.6)	5 (17.2)	9 (31.0)	7 (24.1)	1 (20.0)	1 (20.0)	2 (40.0)	1 (20.0)	11 (35.5)	3 (9.7)	16 (51.6)	1 (3.23)	2 (40.0)	0 (0.0)	3 (60.0)	0 (0.0)
Region																
East Midlands	19 (6.0)	21 (6.7)	143 (45.4)	132 (41.9)	29 (16.4)	18 (10.2)	80 (45.2)	50 (28.3)	45 (11.4)	23 (5.8)	190 (47.9)	138 (34.8)	7 (16.7)	7 (16.7)	19 (45.2)	9 (21.4)
East of England	84 (8.5)	84 (8.5)	459 (46.4)	362 (36.6)	78 (12.8)	55 (9.0)	339 (55.7)	137 (22.5)	104 (11.8)	61 (6.9)	442 (50.3)	271 (30.8)	12 (16.4)	7 (9.6)	42 (57.5)	12 (16.4)

London	97 (10.1)	92 (9.6)	482 (50.2)	289 (30.1)	81 (19.4)	42 (10.1)	204 (48.9)	90 (21.6)	143 (14.5)	88 (8.9)	484 (49.0)	273 (27.6)	26 (27.9)	12 (12.9)	40 (43.0)	15 (16.1)	
North East	13 (8.1)	15 (9.4)	76 (47.5)	56 (35.0)	10 (14.9)	7 (10.5)	30 (44.8)	20 (29.9)	17 (8.1)	16 (7.6)	112 (53.3)	65 (30.9)	2 (11.1)	4 (22.2)	6 (33.3)	6 (33.3)	
North West	78 (15.8)	39 (7.9)	216 (43.7)	161 (32.6)	45 (20.5)	22 (10.0)	94 (42.7)	59 (26.8)	74 (12.3)	52 (8.7)	300 (50.0)	174 (29.0)	13 (19.4)	4 (6.0)	33 (49.2)	17 (25.4)	
South East	58 (7.9)	36 (4.9)	329 (44.8)	311 (42.3)	41 (9.6)	34 (8.0)	233 (54.6)	119 (27.9)	80 (9.1)	49 (5.6)	433 (49.0)	321 (36.4)	16 (19.3)	12 (14.5)	35 (42.2)	20 (24.1)	
South West	13 (6.7)	12 (6.2)	93 (48.4)	74 (38.5)	15 (11.8)	11 (8.7)	55 (43.3)	46 (36.2)	22 (7.8)	20 (7.0)	145 (51.10)	97 (34.2)	9 (20.5)	2 (4.6)	18 (40.9)	15 (34.1)	
West Midlands	58 (7.9)	43 (10.7)	183 (45.4)	119 (29.5)	28 (14.1)	25 (12.6)	98 (49.3)	48 (24.1)	67 (12.9)	44 (8.5)	265 (51.1)	143 (27.6)	15 (30.0)	7 (14.0)	22 (44.0)	6 (12.0)	
Yorkshire and the Humber	32 (11.3)	29 (10.2)	134 (47.2)	89 (31.3)	21 (13.2)	18 (11.3)	80 (50.3)	40 (25.2)	45 (10.7)	33 (7.9)	222 (53.0)	119 (28.4)	13 (26.5)	3 (6.1)	22 (44.9)	11 (22.4)	
IMD quintile																	
1 (most deprived)	142 (18.8)	110 (14.5)	337 (44.6)	167 (22.1)	94 (28.1)	45 (13.4)	131 (39.1)	65 (19.4)	172 (20.8)	98 (11.9)	387 (46.9)	168 (20.4)	33 (30.6)	19 (17.6)	39 (36.1)	17 (15.7)	
2	102 (12.5)	82 (10.1)	394 (48.3)	237 (29.1)	72 (18.8)	48 (12.5)	201 (52.5)	62 (16.2)	136 (14.7)	109 (11.7)	455 (49.0)	228 (24.6)	25 (27.5)	13 (14.3)	37 (40.7)	16 (17.6)	
3	73 (8.5)	71 (8.3)	413 (48.1)	302 (35.2)	72 (15.6)	42 (9.1)	238 (51.7)	108 (23.5)	112 (11.9)	71 (7.8)	475 (50.5)	283 (30.1)	29 (29.6)	7 (7.1)	42 (42.9)	20 (20.4)	
4	78 (8.1)	45 (4.7)	454 (47.5)	387 (40.2)	51 (9.7)	49 (9.3)	282 (53.6)	144 (27.4)	79 (7.1)	64 (5.8)	570 (51.4)	395 (35.6)	14 (13.3)	15 (14.3)	51 (48.6)	25 (23.8)	
5 (least deprived)	57 (5.0)	63 (5.5)	517 (45.5)	500 (43.9)	59 (8.5)	48 (6.9)	361 (51.7)	230 (32.9)	98 (7.1)	44 (3.2)	706 (51.3)	527 (38.3)	12 (10.3)	4 (3.4)	68 (58.1)	33 (28.2)	

*Those who did not respond to the vaccine question (n=3) were excluded.

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Total Difficulties	12.2 (6.6)	12.6 (6.6)	11.9 (6.5)	12.9 (6.3)	12.9 (6.9)	13.1 (6.90)	11.9 (6.5)	12.4 (6.2)	12.3 (6.5)	13.0 (6.8)	11.8 (6.4)	12.1 (6.3)	12.5 (7.4)	14.4 (7.2)	12.2 (6.9)	12.3 (6.3)
Emotional symptoms	3.7 (2.7)	4.0 (2.8)	3.7 (2.6)	4.4 (2.6)	4.1 (2.7)	4.0 (2.7)	3.8 (2.6)	4.2 (2.7)	3.8 (2.6)	4.0 (2.7)	3.7 (2.6)	4.1 (2.6)	3.7 (2.8)	4.7 (3.0)	4.1 (2.8)	4.4 (2.4)
Conduct problems	1.9 (1.6)	1.8 (1.5)	1.7 (1.6)	1.5 (1.5)	2.0 (1.7)	2.0 (1.8)	1.7 (1.6)	1.4 (1.4)	1.9 (1.7)	1.9 (1.7)	1.6 (1.6)	1.4 (1.5)	2.0 (1.8)	2.3 (1.8)	1.6 (1.7)	1.6 (1.6)
Hyperactivity /inattention	4.2 (2.5)	4.3 (2.6)	4.2 (2.6)	4.4 (2.6)	4.4 (2.8)	4.7(2.7)	4.2 (2.6)	4.4 (2.5)	4.2 (2.6)	4.4 (2.6)	4.2 (2.6)	4.2 (2.6)	4.3 (2.7)	4.6 (2.6)	4.2 (2.7)	4.2 (2.7)
Peer relationship problem	2.5 (1.9)	2.5 (1.9)	2.3 (1.9)	2.6 (1.9)	2.5 (1.9)	2.4 (1.9)	2.1 (1.9)	2.3 (1.9)	2.4 (1.8)	2.6 (1.9)	2.2 (1.8)	2.4 (1.9)	2.4 (2.0)	2.8 (2.4)	2.3 (2.0)	2.2 (1.7)
SWEMBS	20.9 (4.3)	21.0 (4.3)	21.4 (4.2)	20.8 (3.9)	20.5 (3.9)	21.1 (4.2)	21.3 (4.2)	21.1 (4.1)	21.1 (4.3)	20.7 (4.3)	21.4 (4.0)	21.2 (3.8)	21.6 (5.5)	20.3 (3.7)	21.2 (4.1)	21.0 (3.8)
Chalder fatigue scale	13.3 (5.7)	14.4 (5.6)	13.8 (5.1)	14.5 (5.2)	14.5 (6.2)	14.4 (5.5)	13.9 (5.0)	14.9 (5.5)	14.5 (5.9)	14.2 (5.7)	14.0 (5.1)	14.6 (5.1)	14.4 (6.2)	16.3 (6.40)	14.2 (5.4)	15.9 (5.7)
Self-rated health^a	85 (73, 95)	80 (70, 95)	85 (75, 95)	80 (70, 90)	85 (70, 95)	85 (70, 90)	85 (70, 95)	80 (70, 90)	85 (70, 95)	80 (70, 90)	85 (75, 95)	80 (70, 90)	85 (70, 95)	83 (70, 90)	85 (70, 90)	80 (70, 90)
Symptom severity^{a,b}	50 (30, 70)	50 (30, 70)	50 (30, 70)	50 (30, 60)	60 (40, 70)	50 (30, 60)	50 (30, 60)	50 (30, 60)	50 (30, 70)	50 (30, 70)	50 (30, 60)	50 (30, 70)	50 (30, 70)	60 (35, 60)	45 (20, 60)	55 (40, 70)
Symptom impact^{a,c}	50 (20, 70)	40 (20, 70)	40 (10, 70)	40 (20, 70)	50 (30, 70)	50 (30, 70)	40 (20, 70)	50 (20, 70)	50 (20, 70)	45 (20, 70)	40 (20, 70)	40 (10, 70)	50 (20, 80)	40 (20, 60)	40 (10, 70)	40 (20, 60)

Note: Those who did not respond to the vaccine question (n=3) were excluded.

Note. SDQ = Strengths and Difficulties Questionnaire; SWEMBS = Short Warwick-Edinburgh Mental Wellbeing Scale.

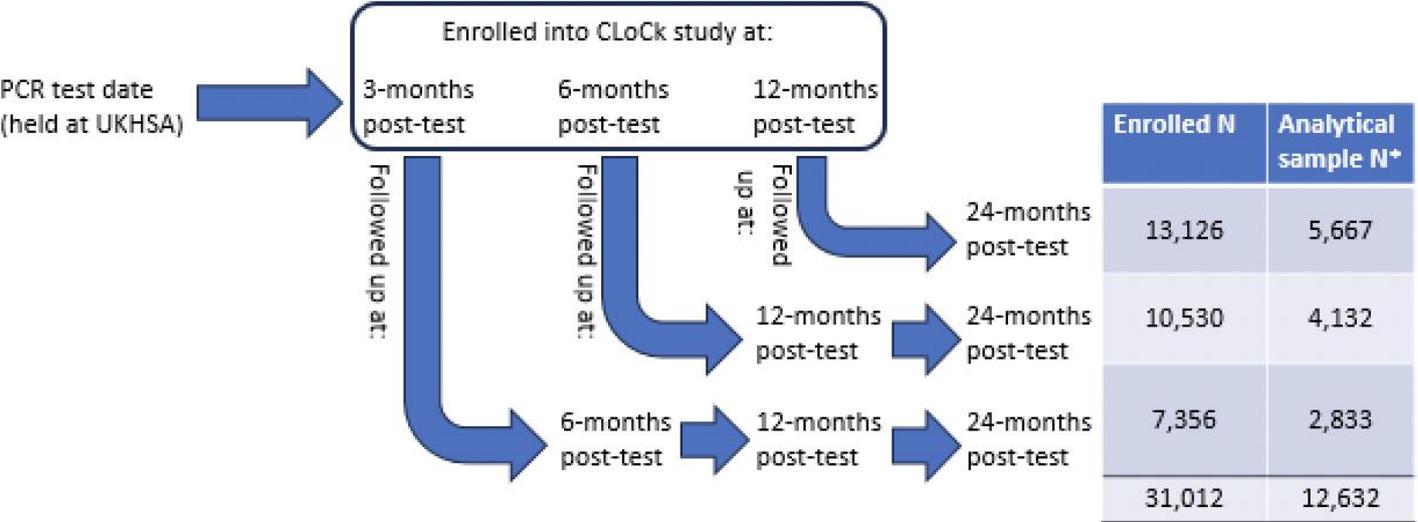
A higher SDQ score indicates more problems; a higher SWEMWBS score indicates better mental well-being; a higher fatigue score is more severe.

^aReported as median(IQR), scored on a scale of 0 (worst) to 100 (best) for self-rated health; 0 (not severe at all) to 100 (extremely severe) for symptom severity; 0 (no impact) to 100 (extreme impact) for symptom impact; ^bbased on sub-sample N=4,977; ^cbased on sub-sample N=4,972.

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Supplemental Figure 1: Timeline of enrolment into the CLoCk study for the analytical sample



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*The analytical sample includes children and young people who enrolled (at 3-, 6- or 12-months post-PCR-testing) AND filled in the 24-month questionnaire.