

Table S1: Characteristics and outcomes of community-onset and hospital-onset laboratory-confirmed COVID-19 cases in NHS Mental Health & Learning Disability Trusts (March to August 2020)

		Hospital patients positive for SARS- CoV-2	Community-onset community-acquired	Hospital-onset indefinite healthcare- associated	Hospital-onset probable healthcare- associated	Hospital-onset definite healthcare- associated	Community-onset possible healthcare- associated
		N=2,310	n=539	n=199	n=320	n=933	n=219
<b>Age (years)</b>	0-39 years	229 (9.9%)	73 (13.5%)	21 (7.0%)	21 (6.6%)	99 (10.6%)	15 (6.9%)
	40-49 years	119 (5.2%)	48 (8.9%)	10 (3.3%)	14 (4.4%)	41 (4.4%)	6 (2.7%)
	50-59 years	193 (8.4%)	67 (12.4%)	20 (6.7%)	23 (7.2%)	66 (7.1%)	17 (7.8%)
	60-69 years	269 (11.7%)	69 (12.8%)	32 (10.7%)	31 (9.7%)	111 (11.9%)	26 (11.9%)
	70-79 years	530 (22.9%)	111 (20.6%)	63 (21.1%)	67 (20.9%)	244 (26.2%)	45 (20.6%)
	80+ years	970 (42.0%)	171 (31.7%)	153 (51.2%)	164 (51.3%)	372 (39.9%)	110 (50.2%)
<b>Sex</b>	Female	1,094 (47.4%)	255 (47.3%)	152 (50.8%)	146 (45.6%)	440 (47.2%)	101 (46.1%)
	Male	1,216 (52.6%)	284 (52.7%)	147 (49.2%)	174 (54.4%)	493 (52.8%)	118 (53.9%)
<b>Ethnicity</b>	White	2,121 (92.6%)	506 (96.0%)	276 (92.3%)	292 (91.8%)	835 (89.9%)	212 (97.3%)
	Black & ethnic minority	170 (7.4%)	21 (4.0%)	23 (7.7%)	26 (8.2%)	94 (10.1%)	6 (2.8%)
<b>Charlson score (range 0-16)</b>	0	918 (41.2%)	165 (35.6%)	146 (49.2%)	130 (40.6%)	409 (44.0%)	68 (31.1%)
	1	508 (22.8%)	121 (26.1%)	64 (21.6%)	67 (20.9%)	219 (23.6%)	37 (16.9%)
	2+	803 (36.0%)	177 (38.2%)	87 (29.3%)	123 (38.4%)	302 (32.5%)	114 (52.0%)
<b>Length of stay (hospital spell)</b>	median (IQR) days	-	5 (1-12)	18 (10-34)	27 (17-47)	83 (44-231)	9 (4-21)
<b>Length of stay (post-test)</b>	median (IQR) days	-	5 (1-12)	13 (5-28)	16 (6-34)	29 (12-79)	9 (4-21)
<b>Mortality (28 days post-test)</b>		518 (22.4%)	120 (22.4%)	75 (25.1%)	81 (25.3%)	193 (20.7%)	49 (22.4%)

Table S2: Mortality at 28 days (after first positive SARS-CoV-2 PCR test) by community- or hospital-onset COVID-19 case classification in patients admitted to NHS Acute Trust hospitals (March to August 2020)

CO.CA	age (years)	total	died (28d)	(%)
community-onset	0-39	3,858	42	1.1%
	40-49	6,415	276	4.3%
community-acquired	50-59	9,316	946	10.2%
	60-64	4,635	886	19.1%
	65-69	4,140	1,103	26.6%
	70-74	4,818	1,641	34.1%
	75-79	5,552	2,281	41.1%
	80-84	6,504	2,999	46.1%
	85-89	5,732	2,802	48.9%
90+	4,668	2,565	54.9%	
Total		60,227	15,620	25.9%

CO.pHA	age (years)	total	died (28d)	(%)
community-onset	0-39	1,412	41	2.9%
	40-49	935	66	7.1%
possible healthcare-associated	50-59	1,548	246	15.9%
	60-64	934	210	22.5%
	65-69	1,078	320	29.7%
	70-74	1,607	543	33.8%
	75-79	1,876	767	40.9%
	80-84	2,063	954	46.2%
	85-89	1,878	932	49.6%
90+	1,252	645	51.5%	
Total		14,583	4,724	32.4%

HO.iHA	age (years)	total	died (28d)	(%)
hospital-onset	0-39	517	23	4.4%
	40-49	496	65	13.1%
indeterminate healthcare-associated	50-59	975	180	18.5%
	60-64	611	145	23.7%
	65-69	683	207	30.3%
	70-74	894	308	34.5%
	75-79	1,070	454	42.4%
	80-84	1,263	526	41.6%
	85-89	1,222	598	48.9%
90+	948	497	52.4%	
Total		8,679	3,003	34.6%

HO.pHA	age (years)	total	died (28d)	(%)
hospital-onset	0-39	144	12	8.3%
	40-49	179	28	15.6%
probable healthcare-associated	50-59	398	96	24.1%
	60-64	294	103	35.0%
	65-69	437	148	33.9%
	70-74	708	320	45.2%
	75-79	829	375	45.2%
	80-84	1,148	551	48.0%
	85-89	1,256	643	51.2%
90+	1,042	564	54.1%	
Total		6,435	2,840	44.1%

HO.HA	age (years)	total	died (28d)	(%)
hospital-onset	0-39	268	12	4.5%
	40-49	238	31	13.0%
definite healthcare-associated	50-59	542	118	21.8%
	60-64	396	114	28.8%
	65-69	529	180	34.0%
	70-74	798	306	38.3%
	75-79	999	417	41.7%
	80-84	1,357	594	43.8%
	85-89	1,346	637	47.3%
90+	967	477	49.3%	
Total		7,440	2,886	38.8%

HO.pHA and HO.HA	age (years)	total	died (28d)	(%)
hospital-onset	0-39	412	24	5.8%
	40-49	417	59	14.1%
definite healthcare-associated	50-59	940	214	22.8%
	60-64	690	217	31.4%
	65-69	966	328	34.0%
	70-74	1,506	626	41.6%
	75-79	1,828	792	43.3%
	80-84	2,505	1,145	45.7%
	85-89	2,602	1,280	49.2%
90+	2,009	1,041	51.8%	
Total		13,875	5,726	41.3%