

# CO-CIN update January 2022

ISARIC4C collaborative

12/01/2022

## Question

Is there evidence of a change in admission characteristics or management of those age < 18 years in hospital with SARS-CoV-2 diagnosis in recent weeks?

## Data

ISARIC4C/CO-CIN updated 12 January 2022, 14:12.

## Preliminary findings

These are early data which are not yet complete. There are proportionally more infants (<1 year) in data from the most recent 4 weeks (14th December 2021 to 12th January 2022) compared with prior epochs (n = 171 (42.2%) vs 30.8% previously;  $\chi^2 = 22.32, p < 0.001$ ). A numerically greater number of hospital admissions from the most deprived socioeconomic group was seen in the most recent 4 weeks (n = 150 (43.5%) vs 32.6% previously;  $\chi^2 = 3.15, p = 0.076$ ), with no strong difference in the distribution of socioeconomic status across age groups. No other strong signal of a change in patient characteristics, severity, or management is seen.

## Patient characteristics by epoch

n (%)

Dependent: epoch	Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 22	Total
Total N (%)	1121 (17.7)	2316 (36.6)	2492 (39.3)	405 (6.4)	6334
Age (years)					1998
<1 y	369 (32.9)	705 (30.4)	753 (30.2)	171 (42.2)	(31.5)
1 - 4 y	240 (21.4)	392 (16.9)	370 (14.8)	78 (19.3)	1080
5 - 11 y	239 (21.3)	494 (21.3)	534 (21.4)	78 (19.3)	(17.1)
12 - 17 y	273 (24.4)	725 (31.3)	835 (33.5)	78 (19.3)	1345
					(21.2)
					1911
					(30.2)
Sex at Birth					3329
Male	638 (56.9)	1218 (52.6)	1251 (50.2)	222 (54.8)	(52.6)
Female	483 (43.1)	1098 (47.4)	1241 (49.8)	183 (45.2)	3005
					(47.4)
Index multiple deprivation					2084
1 - most deprived	327 (31.2)	778 (36.4)	829 (35.7)	150 (43.5)	(35.6)
2	244 (23.3)	451 (21.1)	440 (18.9)	70 (20.3)	1205
					(20.6)
					942 (16.1)
					825 (14.1)
					797 (13.6)
					3350
					(62.6)
Ethnicity					829 (15.5)
White	588 (59.1)	1132 (57.5)	1417 (69.0)	213 (62.8)	42 (0.8)
South Asian	140 (14.1)	378 (19.2)	257 (12.5)	54 (15.9)	374 (7.0)
East Asian	18 (1.8)	17 (0.9)	6 (0.3)	1 (0.3)	760 (14.2)
Black	88 (8.8)	142 (7.2)	111 (5.4)	33 (9.7)	
Other Ethnic	161 (16.2)	298 (15.1)	263 (12.8)	38 (11.2)	
Minority					

## Age by socioeconomic status for 14th Dec 21 - 12th Jan 22

n (%)

Dependent: Index multiple deprivation		1 - most deprived	2	3	4	5 - least deprived	Total	p
Total N (%)		150 (43.5)	70 (20.3)	39 (11.3)	48 (13.9)	38 (11.0)	345	
Age (years)	<1 y	64 (42.7)	25 (35.7)	23 (59.0)	22 (45.8)	12 (31.6)	146	0.168
							(42.3)	
	1 - 4 y	27 (18.0)	20 (28.6)	4 (10.3)	10 (20.8)	11 (28.9)	72 (20.9)	
	5 - 11 y	31 (20.7)	9 (12.9)	8 (20.5)	10 (20.8)	10 (26.3)	68 (19.7)	
	12 - 17 y	28 (18.7)	16 (22.9)	4 (10.3)	6 (12.5)	5 (13.2)	59 (17.1)	

## Outcome by epoch

n (%)

Dependent: epoch		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 22	Total
Total N (%)		1121 (17.7)	2316 (36.6)	2492 (39.3)	405 (6.4)	6334
Oxygen use	Yes	305 (28.1)	471 (21.3)	506 (21.9)	49 (14.0)	1331 (22.3)
ICU/HDU admission	Yes	217 (19.7)	429 (19.1)	328 (14.0)	50 (14.8)	1024 (17.0)
Invasive ventilation	Yes	86 (7.9)	116 (5.3)	90 (3.9)	7 (2.0)	299 (5.0)
Noninvasive ventilation	Yes	80 (7.4)	104 (4.7)	104 (4.5)	7 (2.0)	295 (5.0)
Length of stay (days)	Mean (SD)	8.1 (24.6)	5.9 (14.4)	3.7 (6.5)	1.9 (1.9)	5.2 (14.5)

## Oxygen use by age and epoch

n (%)

Dependent: Oxygen use		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 22
Age (years)	<1 y	81 (22.5)	113 (16.9)	147 (20.7)	18 (12.0)
	1 - 4 y	66 (29.1)	81 (21.5)	89 (25.1)	9 (13.2)
	5 - 11 y	75 (32.5)	123 (25.9)	102 (21.1)	11 (17.7)
	12 - 17 y	83 (31.0)	154 (22.2)	168 (21.9)	11 (15.7)

## ICU/HDU admission by age and epoch

n (%)

Dependent: ICU/HDU admission		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 22
Age (years)	<1 y	51 (14.0)	86 (12.7)	90 (12.6)	14 (9.9)
	1 - 4 y	39 (16.7)	74 (19.4)	41 (11.5)	5 (8.1)
	5 - 11 y	61 (26.2)	131 (27.2)	81 (16.3)	11 (16.7)
	12 - 17 y	66 (24.4)	138 (19.5)	116 (14.8)	20 (29.4)

## Invasive mechanical ventilation by by age and epoch

n (%)

Dependent: Invasive ventilation		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 22
Age (years)	<1 y	21 (5.8)	31 (4.7)	22 (3.1)	3 (2.0)
	1 - 4 y	13 (5.7)	20 (5.3)	15 (4.3)	0 (0.0)
	5 - 11 y	29 (12.6)	33 (7.0)	21 (4.3)	3 (4.7)
	12 - 17 y	23 (8.6)	32 (4.6)	32 (4.2)	1 (1.4)

## Noninvasive mechanical ventilation by by age and epoch

n (%)

Dependent: Noninvasive ventilation		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 2
Age (years)	<1 y	26 (7.2)	40 (6.0)	34 (4.8)	3 (2.0)
	1 - 4 y	9 (3.9)	10 (2.7)	10 (2.9)	0 (0.0)
	5 - 11 y	19 (8.3)	27 (5.7)	25 (5.2)	1 (1.6)
	12 - 17 y	26 (9.7)	27 (3.9)	35 (4.6)	3 (4.3)

## Mortality by age and epoch

n (%)

Dependent: status		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 2
Age (years)	<1 y	7 (1.9)	8 (1.2)	6 (0.8)	0 (0.0)
	1 - 4 y	3 (1.3)	0 (0.0)	4 (1.1)	0 (0.0)
	5 - 11 y	0 (0.0)	1 (0.2)	1 (0.2)	1 (1.4)
	12 - 17 y	3 (1.1)	2 (0.3)	3 (0.4)	0 (0.0)

## Length of stay by age and epoch

mean (sd)

Dependent: Length of stay (days)		Jan - Aug 2020	Sept 20 - April 21	May - 13 Dec 21	14 Dec 21 - 12 Jan 2
Age (years)	<1 y	6.6 (15.8)	5.0 (12.0)	3.2 (6.0)	1.7 (1.6)
	1 - 4 y	6.6 (18.3)	4.2 (11.3)	3.4 (6.9)	1.6 (1.5)
	5 - 11 y	7.9 (26.6)	5.3 (7.2)	3.9 (5.5)	2.0 (2.1)
	12 - 17 y	11.5 (35.3)	8.1 (20.4)	4.2 (7.2)	2.5 (2.6)