

Supplementary File 2: Distribution of sociodemographic and clinical characteristics of the study population in relation to deaths from COVID-19 infection in Nigeria, 27 February—3 April, 2021

Variable	First wave		Second wave		First and second waves		
	Survivor [n=61,092 (%)]	Dead [n=1,221 (%)	Survivor [n=85,649 (%)]	Dead [n=611 (%)	Survivor [n=146,741 (%)]	Dead [n=1,832 (%)	Total [n=148,573 (%)]
Sociodemographic characteristics							
Mean (SD) age, year [n=784,239]	37.28 (15.05)	56.93 (16.27)	37.53 (16.22)	60.72 (17.42)	37.43 (15.75)	58.20 (16.75)	37.63 (15.88)
Age group, year							
0-4	845 (1.38)	2 (0.16)	1,348 (1.57)	5 (0.82)	2,193 (1.49)	7 (0.38)	2,200 (1.48)
5-13	2,274 (3.72)	9 (0.74)	3,388 (3.96)	4 (0.65)	5,662 (3.86)	13 (0.71)	5,675 (3.82)
14-20	3,732 (6.11)	17 (1.39)	6,229 (7.27)	11 (1.80)	9,961 (6.79)	28 (1.53)	9,989 (6.72)
21-30	12,722 (20.82)	56 (4.59)	19,133 (22.34)	13 (2.13)	31,855 (21.71)	69 (3.77)	31,924 (21.49)
31-40	16,717 (27.36)	106 (8.68)	20,404 (23.82)	42 (6.87)	37,121 (25.30)	148 (8.08)	37,269 (25.08)
41-50	11,547 (18.90)	167 (13.68)	15,135 (17.67)	59 (9.66)	26,682 (18.18)	226 (12.34)	26,908 (18.11)
51-60	6,964 (11.40)	276 (22.60)	10,084 (11.77)	127 (20.79)	17,048 (11.62)	403 (22.00)	17,451 (11.75)

61-70	2,632 (4.31)	298 (24.41)	4,723 (5.51)	142 (23.24)	7,355 (5.01)	440 (24.02)	7,795 (5.25)
71-80	923 (1.51)	161 (13.19)	1,928 (2.25)	123 (20.13)	2,851 (1.94)	284 (15.50)	3,135 (2.11)
>80	285 (0.47)	57 (4.67)	649 (0.76)	52 (8.51)	934 (0.64)	109 (5.95)	1,043 (0.70)
Missing	2,451 (4.01)	72 (5.90)	2,628 (3.07)	33 (5.40)	5,079 (3.46)	105 (5.73)	5,184 (3.49)
Sex							
Female	22,077 (36.14)	301 (24.65)	36,066 (42.11)	204 (33.39)	58,143 (39.62)	505 (27.57)	58,648 (39.47)
Male	38,277 (62.65)	911 (74.61)	49,150 (57.39)	407 (66.61)	87,427 (59.58)	1,318 (71.94)	88,745 (59.73)
Missing	738 (1.21)	9 (0.74)	433 (0.51)	0 (0.00)	1,171 (0.80)	9 (0.49)	1,180 (0.79)
Residential setting							
Rural	3,697 (6.05)	78 (6.39)	5,086 (5.94)	28 (4.58)	8,783 (5.99)	106 (5.79)	8,889 (5.98)
Urban	24,695 (40.42)	556 (45.54)	25,934 (30.28)	314 (51.39)	50,629 (34.50)	870 (47.49)	51,499 (34.66)
Missing	32,700 (53.53)	587 (48.08)	54,629 (63.78)	269 (44.03)	87,329 (59.51)	856 (46.72)	88,185 (59.35)
Formal education completed							
None	894 (1.46)	20 (1.64)	893 (1.04)	7 (1.15)	1,787 (1.22)	27 (1.47)	1,814 (1.22)
Nursery	176 (0.29)	0 (0.00)	118 (0.14)	0 (0.00)	294 (0.20)	0 (0.00)	294 (0.20)
Primary	1,149 (1.88)	22 (1.80)	1,252 (1.46)	2 (0.33)	2,401 (1.64)	24 (1.31)	2,425 (1.63)
Secondary	5,442 (8.91)	142 (11.63)	4,678 (5.46)	44 (7.20)	10,120 (6.90)	186 (10.15)	10,306 (6.94)

Tertiary	15,229 (24.93)	299 (24.49)	17,743 (20.72)	194 (31.75)	32,972 (22.47)	493 (26.91)	33,465 (22.52)
Alternative (e.g. Almajiranci)	3,001 (4.91)	41 (3.36)	1,790 (2.09)	8 (1.31)	4,791 (3.26)	49 (2.67)	4,840 (3.26)
Missing	35,201 (57.62)	697 (57.08)	59,175 (69.09)	356 (58.27)	94,376 (64.31)	1,053 (57.48)	95,429 (64.23)
Current occupation							
Pupil/student	4,325 (7.08)	12 (0.98)	4,725 (5.52)	1 (0.16)	9,050 (6.17)	13 (0.71)	9,063 (6.10)
Housewife/child	1,052 (1.72)	23 (1.88)	1,350 (1.58)	6 (0.98)	2,402 (1.64)	29 (1.58)	2,431 (1.64)
Trader/business	2,586 (4.23)	103 (8.44)	2,271 (2.65)	30 (4.91)	4,857 (3.31)	133 (7.26)	4,990 (3.36)
Farmer/miner	660 (1.08)	52 (4.26)	977 (1.14)	18 (2.95)	1,637 (1.12)	70 (3.82)	1,707 (1.15)
Healthcare worker	4,823 (7.89)	50 (4.10)	2,585 (3.02)	15 (2.45)	7,408 (5.05)	65 (3.55)	7,473 (5.03)
Animal-related work	66 (0.11)	3 (0.25)	54 (0.06)	1 (0.16)	120 (0.08)	4 (0.22)	124 (0.08)
Transporter	133 (0.22)	6 (0.49)	48 (0.06)	0 (0.00)	181 (0.12)	6 (0.33)	187 (0.13)
Religious leader	119 (0.19)	7 (0.57)	94 (0.11)	1 (0.16)	213 (0.15)	8 (0.44)	221 (0.15)
Traditional leader	19 (0.03)	3 (0.25)	35 (0.04)	1 (0.16)	54 (0.04)	4 (0.22)	58 (0.04)
Other	23,301 (38.14)	451 (36.94)	47,052 (54.94)	237 (38.79)	70,353 (47.94)	688 (37.55)	71,041 (47.82)
Missing	24,008 (39.30)	511 (41.85)	26,458 (30.89)	301 (49.26)	50,466 (34.39)	812 (44.32)	51,278 (34.51)
Admission to treatment centre							
No	29,696 (48.61)	504 (41.28)	48,435 (56.55)	194 (31.75)	78,131 (53.24)	698 (38.10)	78,829 (53.06)

Yes	6,436 (10.53)	352 (28.83)	1,109 (1.29)	115 (18.82)	7,545 (5.14)	467 (25.49)	8,012 (5.39)
Missing	24,960 (40.86)	365 (29.89)	36,42.15)	302 (49.43)	61,065 (41.61)	667 (36.41)	61,732 (41.55)
Mean (SD) temperature, °C	36.64 (0.93)	37.14 (1.13)	36.44 (1.23)	37.03 (1.32)	36.55 (1.08)	37.11 (1.18)	36.58 (1.08)
[n=21,567]							
Symptomatic status							
Asymptomatic	45,852 (75.05)	482 (39.48)	68,279 (79.72)	274 (44.84)	114,131 (77.78)	756 (41.27)	114,887 (77.33)
Symptomatic	15,240 (24.95)	739 (60.52)	17,370 (20.28)	337 (55.16)	32,610 (22.22)	1,076 (58.73)	33,686 (22.67)
Clinical characteristics‡							
	<i>n=15,240</i>	<i>n=739</i>	<i>n=17,370</i>	<i>n=337</i>	<i>n=32,478</i>	<i>n=1,076</i>	<i>N=33,686</i>
Abdominal pain							
No	14,917 (97.88)	710 (96.08)	13,787 (79.37)	326 (96.74)	28,704 (88.02)	1,036 (96.28)	29,740 (88.29)
Yes	119 (0.78)	16 (2.17)	309 (1.78)	0 (0.00)	428 (1.31)	16 (1.49)	444 (1.32)
Missing	204 (1.34)	13 (1.76)	3,274 (18.85)	11 (3.26)	3,478 (10.67)	24 (2.23)	3,502 (10.40)
Chest pain							
No	14,550 (95.47)	681 (92.15)	16,240 (93.49)	306 (90.80)	30,790 (94.42)	987 (91.73)	31,777 (94.33)
Yes	494 (1.29)	46 (6.22)	815 (4.69)	25 (7.42)	1,309 (4.01)	71 96.60)	1,380 (4.10)
Missing	196 (1.29)	12 (1.62)	315 (1.81)	6 (1.780)	511 (1.57)	18 (1.67)	529 (1.57)

Chills/sweat							
No	14,835 (97.34)	710 (96.08)	13,648 (78.57)	326 (96.74)	28,483 (87.34)	1,036 (96.28)	29,519 (87.63)
Yes	205 (1.35)	17 (2.30)	164 (0.94)	2 (0.59)	369 (1.13)	19 (1.77)	388 (1.15)
Missing	200 (1.31)	12 (1.62)	3,558 (20.48)	9 (2.67)	3,758 (11.52)	21 (1.95)	3,779 (11.22)
Cough							
No	7,530 (49.41)	243 (32.88)	9,485 (54.61)	146 (43.32)	17,015 (52.18)	389 (36.15)	17,404 (51.67)
Yes	7,645 (50.16)	488 (66.04)	7,729 (44.50)	189 (56.08)	15,374 (47.15)	677 (62.92)	16,051 (47.65)
Missing	65 (0.43)	8 (1.08)	156 (0.90)	2 (0.59)	221 (0.680)	10 (0.93)	231 (0.69)
Diarrhoea							
No	14,162 (92.93)	667 (90.26)	16,179 (93.14)	313 (92.88)	30,341 (93.04)	980 (91.08)	31,321 (92.98)
Yes	935 (6.14)	60 (8.12)	788 (4.54)	16 (4.75)	1,723 (5.28)	76 (7.06)	1,799 (5.34)
Missing	143 (0.94)	12 (1.62)	403 (2.32)	8 (2.37)	546 (1.67)	20 (1.86)	566 (1.68)
Difficulty in breathing							
No	13,030 (85.50)	370 (50.07)	13,376 (77.01)	190 (56.38)	26,406 (80.98)	560 (52.04)	26,966 (80.05)
Yes	2,063 (13.54)	360 (48.71)	2,858 (16.45)	142 (42.14)	4,921 (15.09)	502 (46.65)	5,423 (16.10)
Missing	147 (0.96)	9 (1.220)	1,136 (6.54)	5 (1.48)	1,283 (3.93)	14 (1.30)	1,297 (3.85)
Fatigue							

No	14,117 (92.63)	653 (88.36)	13,151 (75.71)	298 (88.43)	27,268 (83.62)	951 (88.38)	28,219 (83.77)
Yes	914 (6.00)	75 (10.15)	2,837 (16.33)	33 (9.79)	3,751 (11.50)	108 (10.04)	3,859 (11.46)
Missing	209 (1.37)	11 (1.49)	1,382 (7.96)	6 (1.78)	1,591 (4.880)	17 (1.58)	1,608 (4.770)
Fever							
No	8,128 (53.33)	294 (39.78)	10,476 (60.31)	182 (54.01)	18,604 (57.05)	476 (44.24)	19,080 (56.64)
Yes	7,054 (46.29)	436 (59.000)	6,698 (38.56)	154 (45.70)	13,752 (42.17)	590 (54.83)	14,342 (42.58)
Missing	58 (0.38)	9 (1.22)	196 (1.13)	1 (0.30)	254 (0.78)	10 (0.93)	264 (0.78)
Headache							
No	12,945 (84.94)	644 (87.14)	12,489 (71.90)	294 (87.24)	25,434 (77.99)	938 (87.17)	26,372 (78.29)
Yes	2,153 (14.13)	80 (10.83)	4,660 (26.83)	41 (12.17)	6,813 (20.89)	121 (11.25)	6,934 (20.58)
Missing	142 (0.93)	15 (2.03)	221 (1.27)	2 (0.59)	363 (1.11)	17 (1.58)	380 (1.13)
Joint pain							
No	14,864 (97.53)	714 (96.62)	15,844 (91.21)	326 (96.74)	30,708 (94.17)	1,040 (96.65)	31,748 (94.25)
Yes	164 (1.080)	11 (1.49)	446 (2.57)	2 (0.59)	610 (1.87)	13 (1.21)	623 (1.85)
Missing	212 (1.39)	14 (1.89)	1,080 (6.22)	9 (2.67)	1,292 (3.96)	23 (2.14)	1,315 (3.90)
Malaise							
No	1,972 (12.94)	114 (15.43)	5,163 (29.72)	42 (12.46)	7,135 (21.88)	156 (14.50)	7,291 (21.64)

Yes	84 (0.55)	11 (1.49)	124 (0.71)	0 (0.00)	208 (0.64)	11 (1.02)	219 (0.65)
Missing	13,184 (86.51)	614 (83.09)	12,083 (69.56)	295 (87.54)	25,267 (77.48)	909 (84.48)	26,176 (77.71)
Muscle pain							
No	14,742 (96.73)	704 (95.26)	15,799 (90.96)	315 (93.47)	30,541 (93.66)	1,019 (94.70)	31,560 (93.69)
Yes	287 (1.88)	21 (2.84)	532 (3.06)	14 (4.15)	819 (2.51)	35 (3.25)	854 (2.54)
Missing	211 (1.38)	14 (1.89)	1,039 (5.98)	8 (2.37)	1,250 (3.83)	22 (2.04)	1,272 (3.78)
Nausea							
No	13,927 (91.38)	678 (91.75)	15,847 (91.23)	314 (93.18)	29,774 (91.30)	992 (92.19)	30,766 (91.33)
Yes	1,152 (7.56)	48 (6.50)	1,228 (7.07)	15 (4.45)	2,380 (7.30)	63 (5.86)	2,443 (7.25)
Missing	161 (1.06)	13 (1.76)	295 (1.70)	8 (2.37)	456 (1.40)	21 (1.95)	477 (1.42)
Rapid breathing							
No	13,879 (91.07)	600 (81.19)	13,245 (76.25)	315 (93.47)	27,124 (83.18)	915 (85.04)	28,039 (83.24)
Yes	203 (1.33)	57 (7.71)	124 (0.71)	16 (4.75)	327 (1.00)	73 (6.78)	400 (1.19)
Missing	1,158 (7.60)	82 (11.10)	4,001 (23.03)	6 (1.78)	5,159 (15.82)	88 (8.18)	5,247 (15.58)
Runny nose							
No	10,843 (71.15)	615 (83.22)	10,208 (58.77)	252 (74.78)	21,051 (64.55)	867 (80.58)	21,918 (65.07)
Yes	4,247 (27.87)	112 (15.16)	6,945 (39.98)	80 (23.74)	11,192 (34.32)	192 (17.84)	11,384 (33.79)

Missing	150 (0.98)	12 (1.62)	217 (1.25)	5 (1.48)	367 (1.13)	17 (1.580)	384 (1.14)
Sore throat							
No	11,517 (75.57)	611 (82.68)	14,697 (84.61)	281 (83.38)	26,214 (80.39)	892 (82.90)	27,106 (80.47)
Yes	3,608 (23.67)	120 (16.24)	2,424 (13.96)	50 (14.84)	6,032 (18.50)	170 (15.80)	6,202 (18.41)
Missing	115 (0.75)	8 (1.08)	249 (1.43)	6 (1.78)	364 (1.12)	14 (1.30)	378 (1.12)
Vomiting							
No	14,366 (94.27)	659 (89.17)	14,682 (84.53)	314 (93.18)	29,048 (89.08)	973 (90.43)	30,021 (89.12)
Yes	721 (4.73)	69 (9.34)	656 (3.78)	16 (4.75)	1,377 (4.22)	85 (7.90)	1,462 (4.34)
Missing	153 (1.00)	11 (1.49)	2,032 (11.70)	7 (2.08)	2,185 (6.70)	18 (1.67)	2,203 (6.54)
Loss of smell							
No	12,491 (81.96)	627 (84.84)	13,958 (80.36)	309 (91.69)	26,449 (81.11)	936 (86.99)	27,385 (81.29)
Yes	1,775 (11.65)	29 (3.92)	3,129 (18.01)	19 (5.64)	4,904 (15.04)	48 (4.46)	4,952 (14.70)
Missing	974 (6.39)	83 (11.23)	283 (1.63)	9 (2.67)	1,257 (3.85)	92 (8.55)	1,349 (4.00)
Loss of taste							
No	12,736 (83.57)	620 (83.90)	15,553 (89.54)	310 (91.99)	28,289 (86.75)	930 (86.43)	29,219 (86.74)
Yes	1,528 (10.03)	38 (5.14)	1,536 (8.84)	18 (5.34)	3,064 (9.40)	56 (5.20)	3,120 (9.26)
Missing	976 (6.40)	81 (10.96)	281 (1.62)	9 (2.67)	1,257 (3.85)	90 (8.36)	1,347 (4.00)

ARDS							
No	14,935 (98.00)	680 (92.02)	13,328 (76.73)	313 (92.88)	28,263 (86.67)	993 (92.29)	29,256 (86.85)
Yes	99 (0.65)	48 (6.50)	48 (0.28)	16 (4.75)	147 (0.45)	64 (5.95)	211 (0.63)
Missing	206 (1.35)	11 (1.49)	3,994 (22.99)	8 (2.37)	4,200 (12.88)	19 (1.77)	4,219 (12.52)
Pneumonia							
No	14,973 (98.25)	710 (96.08)	13,264 (76.36)	308 (91.64)	28,237 (86.59)	1,018 (94.61)	29,255 (86.85)
Yes	28 (0.18)	17 (2.30)	11 (0.06)	19 (5.64)	39 (0.12)	36 (3.35)	75 (0.22)
Missing	239 (1.57)	12 (1.62)	4,095 (23.58)	10 (2.97)	4,334 (13.29)	22 (2.04)	4,356 (12.93)
‡: 35,185 symptomatic cases only							

