

**Supplementary File 1: Distribution of Sociodemographic and Clinical Characteristics of the Study Population in Relation to COVID-19 Infection in Nigeria, 27 February—3 April, 2021**

Variable	First wave		Second wave		First and second waves		
	Negative [n=296,429 (%)]	Positive [n=66,121 (%)]	Negative [n=347,949 (%)]	Positive [n=91,644 (%)]	Negative [n=644,378 (%)]	Positive [n=157,765 (%)]	Total [n=802,143 (%)]
<b>Sociodemographic characteristics</b>							
<b>Mean (SD) age, year</b> [n=784,239]	34.73 (15.56)	37.57 (15.28)	34.15 (14.06)	37.67 (16.30)	34.42 (14.77)	37.63 (15.88)	35.04 (15.04)
<b>Age group, year</b>							
0-4	5,498 (1.85)	886 (1.34)	4,120 (1.18)	1,424 (1.55)	9,618 (1.49)	2,310 (1.46)	11,928 (1.49)
5-13	17,326 (5.84)	2,393 (3.62)	10,921 (3.14)	3,560 (3.88)	28,247 (4.38)	5,953 (3.77)	34,200 (4.26)
14-20	32,124 (10.84)	3,980 (6.02)	23,758 (6.83)	6,638 (7.24)	55,882 (8.67)	10,618 (6.73)	66,500 (8.29)
21-30	65,554 (22.11)	13,569 (20.52)	132,768 (38.16)	20,184 (22.02)	198,322 (30.78)	33,753 (21.39)	232,075 (28.93)
31-40	73,669 (24.85)	17,665 (26.72)	73,762 (21.20)	21,689 (23.67)	147,431 (22.88)	39,354 (24.94)	186,785 (23.29)
41-50	50,309 (16.97)	12,212 (18.47)	51,101 (14.69)	16,121 (17.59)	101,410 (15.74)	28,333 (17.96)	129,743 (16.17)
51-60	29,870 (10.08)	7,577 (11.46)	31,249 (8.98)	10,870 (11.86)	61,119 (9.48)	18,447 (11.69)	79,566 (9.92)

61-70	10,292 (3.47)	3,055 (4.62)	10,992 (3.16)	5,091 (5.56)	21,284 (3.30)	8,146 (5.16)	29,430 (3.67)
71-80	3,745 (1.26)	1,114 (1.68)	3,764 (1.08)	2,132 (2.33)	7,509 (1.17)	3,246 (2.06)	10,755 (1.34)
>80	1,052 (0.35)	351 (0.53)	1,128 (0.32)	726 (0.79)	2,180 (0.34)	1,077 (0.68)	3,257 (0.41)
Missing	6,990 (2.36)	3,319 (5.02)	4,386 (1.26)	3,209 (3.50)	11,376 (1.77)	6,528 (4.14)	17,904 (2.23)
<b>Sex</b>							
Female	114,645 (38.68)	23,558 (35.63)	143,508 (41.24)	38,403 (41.90)	258,153 (40.06)	61,961 (39.27)	320,114 (39.91)
Male	179,596 (60.59)	41,370 (62.57)	203,776 (58.56)	52,754 (57.56)	383,372 (59.49)	94,124 (59.66)	477,496 (59.53)
Missing	2,188 (0.74)	1,193 (1.80)	665 (0.19)	487 (0.53)	2,853 (0.44)	1,680 (1.06)	4,533 (0.57)
<b>Residential setting</b>							
Rural	27,893 (9.41)	3,822 (5.78)	20,970 (6.03)	5,192 (5.67)	48,863 (7.58)	9,014 (5.71)	57,877 (7.22)
Urban	99,596 (33.60)	25,738 (38.93)	64,113 (18.43)	26,510 (28.93)	163,709 (25.41)	52,248 (33.12)	215,957 (26.92)
Missing	168,940 (56.99)	36,561 (55.29)	262,866 (75.55)	59,942 (65.41)	431,806 (67.01)	96,503 (61.17)	528,309 (65.86)
<b>Formal education completed</b>							
None	6,287 (2.12)	949 (1.44)	3,615 (1.04)	911 (0.99)	9,902 (1.54)	1,860 (1.18)	11,762 (1.47)
Nursery	1,164 (0.39)	180 (0.27)	493 (0.14)	123 (0.13)	1,657 (0.26)	303 (0.19)	1,960 (0.24)
Primary	7,500 (2.53)	1,200 (1.81)	6,041 (1.74)	1,285 (1.40)	13,541 (2.10)	2,485 (1.58)	16,026 (2.00)
Secondary	28,249 (9.53)	5,670 (8.58)	18,987 (5.46)	4,814 (5.25)	47,236 (7.33)	10,484 (6.65)	57,720 (7.20)

Tertiary	63,350 (21.37)	15,815 (23.92)	42,834 (12.31)	18,449 (20.13)	106,184 (16.48)	34,264 (21.72)	140,448 (17.51)
Alternative (e.g.Almajiranci)	9,179 (3.10)	3,102 (4.69)	4,635 (1.33)	1,948 (2.13)	13,814 (2.14)	5,050 (3.20)	18,864 (2.35)
Missing	180,700 (60.96)	39,205 (59.29)	271,344 (77.98)	64,114 (69.96)	452,044 (70.15)	103,319 (65.49)	55,363 (69.23)
<b>Current occupation</b>							
Pupil/student	27,696 (9.34)	4,419 (6.68)	19,922 (5.73)	4,829 (5.27)	47,618 (7.39)	9,248 (5.86)	56,866 (7.09)
Housewife/child	8,382 (2.83)	1,096 (1.66)	6,105 (1.75)	1,373 (1.50)	14,487 (2.25)	2,469 (1.56)	16,956 (2.11)
Trader/business	11,591 (3.91)	2,727 (4.12)	9,274 (2.67)	2,342 (2.56)	20,865 (3.24)	5,069 (3.21)	25,934 (3.23)
Farmer/miner	6,457 (2.18)	718 (1.09)	6,372 (1.83)	1,007 (1.10)	12,829 (1.99)	1,725 (1.09)	14,554 (1.81)
Healthcare worker	17,935 (6.05)	4,972 (7.52)	6,024 (1.73)	2,648 (2.89)	23,959 (3.72)	7,620 (4.83)	31,579 (3.94)
Animal-related work	425 (0.14)	70 (0.11)	398 (0.11)	57 (0.06)	823 (0.13)	127 (0.08)	950 (0.12)
Transporter	686 (0.23)	142 (0.21)	359 (0.10)	48 (0.05)	1,045 (0.16)	190 (0.12)	1,235 (0.15)
Religious leader	396 (0.13)	127 (0.19)	364 (0.10)	99 (0.11)	760 (0.12)	226 (0.14)	986 (0.12)
Traditional leader	84 (0.03)	22 (0.03)	46 (0.01)	36 (0.04)	130 (0.02)	58 (0.04)	188 (0.02)
Other	101,973 (34.40)	24,224 (36.64)	214,979 (61.78)	48,150 (52.54)	316,952 (49.19)	72,374 (45.87)	389,326 (48.54)
Missing	120,804 (40.75)	27,604	84,106 (24.17)	31,055 (33.89)	204,910 (31.80)	58,659 (37.18)	263,569 (32.86)
<b>Quarantine location</b>							
None	45,855 (15.47)	5,464 (8.26)	22,732 (6.53)	8,230 (8.98)	68,587 (10.64)	13,694 (8.68)	82,281 (10.26)

Formal institution	1,363 (0.46)	1,912 (2.89)	220 (0.06)	205 (0.22)	1,583 (0.25)	2,117 (1.34)	3,700 (0.46)
Home	21,954 (7.41)	6,116 (9.25)	7,539 (2.17)	3,757 (4.10)	29,493 (4.58)	9,873 (6.26)	39,366 (4.91)
Missing	227,257 (76.66)	52,629 (79.59)	317,458 (91.24)	79,452 (86.70)	544,715 (84.53)	132,081 (83.72)	676,796 (84.37)
<b>Travel history (last 14 days)</b>							
No	180,757 (60.98)	38,421 (58.11)	93,624 (26.91)	30,008 (32.74)	274,381 (42.58)	68,429 (43.37)	342,810 (42.74)
Yes	12,934 (4.36)	2,495 (3.77)	9,552 (2.75)	901 (0.98)	22,486 (3.49)	3,396 (2.15)	25,882 (3.23)
Missing	102,738 (34.66)	25,205 (38.12)	244,773 (70.35)	60,735 (66.27)	347,511 (53.93)	85,940 (54.47)	433,451 (54.04)
<b>Admission to treatment centre</b>							
No	164,799 (55.59)	31,127 (47.08)	169,034 (48.58)	49,589 (54.11)	333,833 (51.81)	80,716 (51.16)	414,549 (51.68)
Yes	8,022 (2.71)	6,885 (10.41)	1,382 (0.40)	1,250 (1.36)	9,404 (46.73)	8,135 (5.16)	17,539 (2.19)
Missing	123,608 (41.70)	28,109 (42.51)	177,533 (51.02)	40,805 (44.53)	301,141 (46.73)	68,914 (43.68)	370,055 (46.13)
<b>Mean (SD) temperature, °C</b>	36.45 (0.80)	36.68 (0.95)	36.40 (0.82)	36.44 (1.23)	36.43 (0.81)	36.58 (1.08)	36.46 (0.86)
<b>[n=132,268]</b>							
<b>Temperature source</b>							
Axillary	17,051 (5.75)	4,014 (6.07)	7,176 (2.06)	2,568 (2.80)	24,227 (3.76)	6,582 (4.17)	30,809 (3.84)
Non-contact	53,210 (17.95)	8,092 (12.24)	33,283 (9.57)	6,657 (7.26)	86,493 (13.42)	14,749 (9.35)	101,242 (12.62)

Oral	132 (0.04)	26 (0.04)	142 (0.040)	33 (0.04)	274 (0.04)	59 (0.04)	333 (0.04)
Rectal	15 (0.01)	4 (0.01)	34 (0.01)	16 (0.02)	49 (0.01)	20 (0.01)	69 (0.01)
Unknown	226,021 (76.25)	53,985 (81.65)	307,314 (88.32)	82,370 (89.88)	533,335 (82.77)	136,355 (86.43)	669,690 (83.49)
<b>Symptomatic status</b>							
Asymptomatic	243,665 (82.20)	49,542 (74.93)	294,411 (84.61)	73,038 (79.70)	538,076 (83.50)	122,580 (77.70)	660,656 (82.36)
Symptomatic	52,764 (17.80)	16,579 (25.07)	53,538 (15.39)	18,606 (20.30)	106,302 (16.50)	35,185 (22.30)	141,487 (17.64)
<b>Clinical characteristics</b>							
	<i>n=52,764</i>	<i>n= 16,579</i>	<i>n= 53,538</i>	<i>n=18,606</i>	<i>n=106,302</i>	<i>n=35,185</i>	<i>N=141,487</i>
<b>Abdominal pain</b>							
No	47,460 (89.950)	16,222 (97.85)	36,763 (68.67)	14,445 (77.64)	84,223 (79.23)	30,667 (87.16)	114,890 (81.20)
Yes	693 (1.310)	137 (0.83)	714 (1.33)	320 (1.72)	1,407 91.320	457 (1.300)	1,864 (1.32)
Missing	4,611 (8.74)	220 (1.33)	16,061 (30.00)	3,841 (20.64)	20,672 (19.450)	4,061 (11.54)	24,733 (17.48)
<b>Chest pain</b>							
No	46,866 (88.82)	15,793 (95.26)	44,193 (82.55)	16,874 (90.69)	91,059 (85.66)	32,667 (92.84)	123,726 (87.45)
Yes	1,286 (2.44)	575 (3.470)	2,815 (5.26)	856 (4.60)	4,101 (3.86)	1,431 (4.07)	5,532 (3.91)
Missing	4,612 (8.74)	211 (1.27)	6,530 (12.20)	876 (4.710)	11,142 (10.48)	1,087 (3.09)	12,229 (8.64)
<b>Chills/sweat</b>							

No	47,555 (90.13)	16,137 (97.33)	37,331 (69.73)	14,306 (76.89)	84,886 (79.85)	30,443 (86.52)	115,329 (81.510)
Yes	578 (1.10)	227 (1.37)	454 (0.85)	166 (0.89)	1,032 (0.97)	393 (1.120)	1,425 (1.010)
Missing	4,631 (8.78)	215 (1.30)	15,753 (29.42)	4,134 (22.220)	20,384 (19.18)	4,349 (12.36)	24,733 (17.480)
<b>Cough</b>							
No	34,215 (64.85)	8,086 (48.77)	39,484 (73.75)	10,403 (55.91)	73,699 (69.33)	18,489 (52.55)	92,188 (65.16)
Yes	18,203 (34.50)	8,420 (50.790)	13,733 (25.65)	8,044 (43.23)	31,936 (30.04)	16,464 (46.79)	48,400 (34.21)
Missing	346 (0.66)	73 (0.44)	321 (0.60)	159 (0.85)	667 (0.63)	232 (0.66)	899 (0.64)
<b>Diarrhoea</b>							
No	49,625 (94.05)	15,400 (92.89)	50,672 (94.65)	17,369 (93.35)	100,297 (94.35)	32,769 (93.13)	133,066 (94.05)
Yes	2,642 (5.01)	1,024 (6.18)	2,121 (3.96)	815 (4.38)	4,763 (4.48)	1,839 (5.23)	6,602 (4.67)
Missing	497 (0.94)	155 (0.93)	745 (1.39)	422 (2.27)	1,242 (1.17)	577 (1.64)	1,819 (1.29)
<b>Difficulty in breathing</b>							
No	46,968 (89.02)	13,969 (84.26)	41,511 (77.54)	14,431 (77.56)	88,479 (83.23)	28,400 (80.72)	116,879 (82.61)
Yes	5,281 (10.01)	2,454 (14.80)	2,632 (4.92)	3,024 (16.25)	7,913 (7.44)	5,478 (15.57)	13,391 (9.46)
Missing	515 (0.98)	156 (0.94)	9,395 (17.55)	1,151 (6.19)	9,910 (9.32)	1,307 (3.71)	11,217 (7.93)
<b>Fatigue</b>							
No	45,252 (85.76)	15,332 (92.48)	41,489 (77.49)	13,763 (73.97)	86,741 (81.60)	29,095 (82.69)	115,836 (81.87)

Yes	2,602 (4.93)	1,024 (6.18)	5,107 (9.54)	2,891 (15.54)	7,709 (7.25)	3,915 (11.13)	11,624 (8.22)
Missing	4,910 (9.31)	223 (1.35)	6,942 (12.97)	1,952 (10.49)	11,852 (11.15)	2,175 (6.18)	14,027 (9.91)
<b>Fever</b>							
No	30,194 (57.22)	8,776 (52.93)	34,215 (63.91)	10,905 (58.61)	64,409 (60.59)	19,681 (55.94)	84,090 (59.43)
Yes	22,345 (42.35)	7,736 (46.66)	18,789 (35.09)	7,497 (40.29)	41,134 (38.70)	15,233 (43.29)	56,367 (39.840)
Missing	225 (0.43)	67 (0.40)	534 (1.00)	204 (1.10)	759 (0.71)	271 (0.77)	1,030 (0.73)
<b>Headache</b>							
No	41,274 (78.22)	13,946 (84.12)	34,452 (64.35)	12,992 (69.83)	75,726 (71.24)	26,938 (76.56)	102,664 (72.56)
Yes	7,107 (13.47)	2,473 (14.92)	12,675 (23.67)	4,838 (26.00)	19,782 (18.61)	7,311 (20.78)	27,093 (19.15)
Missing	4,383 (8.31)	160 (0.97)	6,411 (11.97)	776 (4.17)	10,794 (10.15)	936 (2.66)	11,730 (8.29)
<b>Joint pain</b>							
No	47,391 (89.82)	16,168 (97.52)	37,663 (70.35)	16,504 (88.70)	85,054 (80.01)	32,672 (92.86)	117,726 (83.21)
Yes	433 (0.82)	182 (1.10)	626 (1.17)	455 (2.45)	1,059 (1.00)	637 (1.81)	1,696 (1.20)
Missing	4,940 (9.36)	229 (1.38)	15,249 (28.48)	1,647 (8.85)	20,189 (18.99)	1,876 (5.33)	22,065 (15.60)
<b>Malaise</b>							
No	7,464 (14.15)	2,123 (12.81)	2,095 (3.91)	5,229 (28.10)	9,559 (8.99)	7,352 (20.90)	16,911 (11.95)
Yes	134 (0.25)	96 (0.58)	36 (0.07)	126 (0.68)	170 (0.16)	222 (0.63)	392 (0.28)

Missing	45,166 (85.60)	14,360 (86.62)	51,407 (96.02)	13,251 (71.22)	96,573 (90.85)	27,611 (78.47)	124,184 (87.77)
<b>Muscle pain</b>							
No	46,835 (88.76)	16,035 (96.72)	37,304 (69.68)	16,441 (88.36)	84,139 (79.15)	32,476 (92.30)	116,615 (82.42)
Yes	991 (1.88)	316 (1.91)	1,022 (1.91)	560 (3.01)	2,013 (1.89)	876 (2.49)	2,889 (2.04)
Missing	4,938 (9.36)	228 (1.38)	15,212 (28.41)	1,605 (8.63)	20,150 (18.89)	1,833 (5.21)	21,983 (15.54)
<b>Nausea</b>							
No	49,062 (92.980)	15,185 (91.590)	49,164 (91.830)	17,015 (91.45)	98,226 (92.40)	32,200 (91.52)	130,426 (92.18)
Yes	3,163 (5.99)	1,220 (7.360)	3,811 (7.120)	1,278 (6.87)	6,974 (6.560)	2,498 (7.100)	9,472 (6.69)
Missing	539 (1.020)	174 (1.050)	563 (1.050)	313 (1.68)	1,102 (1.040)	487 (1.38)	1,589 (1.12)
<b>Rapid breathing</b>							
No	45,544 (86.32)	15,028 (90.64)	37,248 (69.570)	13,889 (74.650)	82,792 (77.88)	28,917 (82.19)	111,709 (97.95)
Yes	491 (0.93)	264 (1.59)	196 (0.370)	143 (0.770)	687 (0.65)	407 (1.160)	1,094 (0.770)
Missing	6,729 (12.75)	1,287 (7.76)	16,094 (30.060)	4,574 (24.58)	22,823 (21.47)	5,861 (16.660)	28,684 (20.270)
<b>Runny nose</b>							
No	41,975 (79.55)	11,922 (71.91)	38,622 (72.140)	11,263 (60.530)	80,597 (75.820)	23,185 (65.89)	103,782 (73.35)
Yes	10,330 (19.580)	4,495 (27.11)	14,491 (27.07)	7,113 (38.230)	24,821 (23.350)	11,608 (32.99)	36,429 (25.75)
Missing	459 (0.870)	162 (0.980)	425 (0.79)	230 (1.240)	884 (0.83)	392 (1.11)	1,276 (0.90)



<b>Sore throat</b>							
No	41,451 (78.56)	12,660 (76.36)	44,270 (82.69)	15,800 (84.92)	85,721 (80.64)	28,460 (80.89)	114,181 (80.70)
Yes	10,862 (20.59)	3,796 (22.90)	8,788 (16.41)	2,542 (13.66)	19,650 (18.49)	6,338 (18.01)	25,988 (18.37)
Missing	451 (0.85)	123 (0.74)	480 (0.90)	264 (1.420)	931 (0.88)	387 (1.10)	1,318 (0.93)
<b>Vomiting</b>							
No	50,126 (95.00)	15,606 (94.13)	51,026 (95.31)	15,877 (85.33)	101,152 (95.16)	31,483 (89.48)	132,635 (93.740)
Yes	2,110 (4.00)	809 (4.88)	1,687 (3.15)	680 (3.650)	3,797 (3.570)	1,489 (4.23)	5,286 (3.74)
Missing	528 (1.00)	164 (0.99)	825 (1.540)	2,049 (11.01)	1,353 (1.27)	2,213 (6.29)	3,566 (2.52)
<b>Loss of smell</b>							
No	46,597 (88.31)	13,661 (82.40)	50,979 (95.22)	15,123 (81.28)	97,576 (91.79)	28,784 (81.81)	126,360 (89.31)
Yes	1,233 (2.34)	1,839 (11.09)	2,041 (3.81)	3,180 (1.63)	3,274 (3.08)	5,019 (14.26)	8,293 (5.86)
Missing	4,934 (9.35)	1,079 (6.51)	518 (0.97)	303 (1.630)	5,452 (5.13)	1,382 (3.93)	6,834 (4.83)
<b>Loss of taste</b>							
No	46,455 (88.04)	13,907 (83.88)	50,904 (95.08)	16,729 (89.91)	97,359 (91.59)	30,636 (87.07)	127,995 (90.46)
Yes	1,372 (2.60)	1,593 (9.61)	2,118 (3.96)	1,576 (8.47)	3,490 (3.28)	3,169 (9.01)	6,659 (4.71)
Missing	4,937 (9.36)	1,079 (6.51)	516 (0.96)	301 (1.62)	5,453 (5.13)	1,380 (3.92)	6,833 (4.83)
<b>ARDS</b>							

No	47,529 (90.08)	16,207 (97.76)	37,378 (69.82)	13,973 (75.10)	84,907 (79.87)	30,180 (85.78)	115,087 (81.34)
Yes	299 (0.57)	152 (0.92)	91 (0.17)	65 (0.35)	390 (0.37)	217 (0.62)	607 (0.43)
Missing	4,936 (9.35)	220 (1.33)	16,069 (30.01)	4,568 (24.55)	21,005 (19.76)	4,788 (13.61)	25,793 (18.23)
<b>Pneumonia</b>							
No	47,653 (90.31)	16,279 (98.19)	37,216 (69.51)	13,903 (74.72)	84,869 (79.84)	30,182 (85.78)	115,051 (81.32)
Yes	99 (0.19)	46 (0.28)	25 (0.05)	30 (0.16)	124 (0.12)	76 (0.22)	200 (0.14)
Missing	5,012 (9.50)	254 (1.53)	16,297 (30.44)	4,673 (25.12)	21,309 (20.05)	4,927 (14.00)	26,236 (18.54)

\*: 343,563 records; \*\*: 88,435 records;

