

Supplemental Table 1. Univariate and Multivariate Models of Predictors for COVID-19 Skilled Nursing Facilities with Sample Sizes

	Total n=1,184	No COVID n=745	COVID n=439	Univariate		Multivariate Model 1, n=1,167		Multivariate Model 2**, n=894	
				Unadjusted OR (95% CI)	p- value	Adjusted OR (95% CI)	p- value	Adjusted OR (95% CI)	p- value
Provider Type									
Medicaid only	33	25(75.7%)	8(24.2%)	0.52(0.23-1.15)	0.11	0.56(0.23-1.39)	0.21	Not included	
Medicare only	53	43(81.1%)	10(18.9%)	0.37(0.19-0.75)	0.006	0.88(0.41-1.89)	0.75		
Medicare & Medicaid	1098	677(61.7%)	421(38.34%)	Ref		Ref			
Ownership Type									
Government	36	32(88.9%)	4(11.1%)	0.19(0.07-0.055)	0.002	0.26(0.07-0.92)	0.04	0.26(0.03-2.89)	0.23
Non-profit	155	112(72.3%)	43(27.7%)	0.59(0.41-0.86)	0.006	1.04(0.67-1.63)	0.87	1.00(0.55-1.84)	0.99
Profit	933	601(60.5%)	392(39.5%)	Ref		Ref		Ref	
Number of Certified Beds				1.01(1.01-1.01)	<.0001	1.01(1.00-1.01)	<.0001	1.01(1.00-1.01)	<.0001
Median (IQR)	95(59-120)	89(58-108)	99(80-139)						
Overall Star Rating									
★★★★★	233	72(52.9%)	64(47.1%)	3.03(2.00-4.60)	<.0001	Not included***		Not included***	
★★★★★	288	115(52.8%)	103(47.3%)	3.05(2.13-4.38)	<.0001				
★★★★★	267	113(54.3%)	95(45.7%)	2.87(1.99-4.14)	<.0001				
★★★★★	270	156(63.9%)	88(36.1%)	1.92(1.35-2.75)	0.0003				

★★★★★	114	283(77.3%)	83(22.7%)	Ref					
Missing	12	6	6						
Health Inspection Star Rating									
★★★★★	136	117 (50.2%)	116(49.8%)	6.54(3.59-11.93)	<.0001	3.85(2.02-7.34)	<.0001	5.62(2.03-15.59)	0.001
★★★★★	218	150(52.1%)	138(47.9%)	6.07(3.36-11.00)	<.0001	4.00(2.13-7.35)	<.0001	4.86(1.79-13.16)	0.002
★★★★★	208	180(67.4%)	87(32.6%)	3.19(1.75-5.81)	0.0002	2.33(1.25-4.34)	0.008	3.20(1.18-8.66)	0.022
★★★★★	244	193(71.5%)	77(28.5%)	2.63(1.44-4.81)	0.002	2.17(1.17-4.02)	0.014	2.78(1.01-7.61)	0.047
★★★★★	366	99(86.8%)	15(13.2%)	Ref		Ref		Ref	
Missing	12	6	6						
Staffing Star Rating									
★★★★★	103	79(76.7%)	24(23.3%)	1.13(0.58-2.19)	0.72	1.00(0.46-2.13)	0.99	1.04(0.35-3.07)	0.95
★★★★★	331	164(49.6%)	167(50.5%)	3.78(2.23-6.41)	<.0001	2.19(1.15-4.15)	0.017	1.67(0.68-4.11)	0.27
★★★★★	404	247(61.1%)	157(38.9%)	2.36(1.40-3.98)	0.001	1.41(0.75-2.65)	0.28	1.22(0.50-2.96)	0.66
★★★★★	231	169(73.2%)	62(26.8%)	1.36(0.78-2.39)	0.28	0.99(0.52-1.88)	0.97	1.09(0.44-2.70)	0.86
★★★★★	99	78(78.8%)	21(21.2%)	Ref		Ref		Ref	
Missing	16	8	8						
Quality Measure Rating									
★★★★★	13	11(84.6%)	2(15.4%)	0.33 (0.07-1.51)	0.15	0.31(0.06-1.52)	0.15	0.64(0.11-3.72)	0.62

★★★★★	47	31(66.0%)	16(34.0%)	0.94 (0.51-1.76)	0.85	0.79(0.40-1.56)	0.50	0.69(0.29-1.63)	0.40
★★★★★	130	85(65.4%)	45(34.6%)	0.97 (0.65-1.43)	0.87	0.76(0.49-1.16)	0.20	0.62(0.36-1.09)	0.10
★★★★★	246	136(55.3%)	110(44.7%)	1.48 (1.10-1.98)	0.009	1.18(0.86-1.62)	0.30	1.31(0.87-1.98)	0.20
★★★★★	735	475(64.6%)	260(35.4%)	Ref		Ref		Ref	
Missing	13	7	6						
Percentage of short-stay residents who were rehospitalized after a nursing home admission*				1.04(1.02-1.07)	0.0005			1.05(1.01-1.08)	0.006
Median (IQR)	22.2(18.6-25.4)	21.7(18.1-24.7)	23.0(19.4-26.0)						
Missing	172	132	40						
Percentage of short-stay residents who had an outpatient emergency department visit*				0.91(0.88-0.93)	<.0001			0.92(0.88-0.96)	0.0002
Median (IQR)	9.8(6.8-13.0)	10.7(7.7-14.0)	8.5(5.9-11.4)						
Missing	172	132	40						
Number of hospitalizations per 1000				2.29(1.93-2.71)	<.0001			2.09(1.67-2.60)	<.0001

long-stay resident days*									
Median (IQR)	1.8(1.3-2.5)	1.6(1.2-2.2)	2.2(1.6-2.9)						
Missing	218	155	63						
Number of outpatient emergency department visits per 1000 long-stay resident days*				0.66(0.51-0.86)	0.002			0.77(0.53-1.13)	0.179
Median (IQR)	0.7(0.5-1.1)	0.8(0.5-1.1)	0.7(0.5-1.0)						
Missing	218	155	63						

*Based on Medicare claims data.

**Limited to SNFs with Medicare claims.

*** Overall five-star rating includes components of the three domains of star ratings.