

Characteristics and outcomes by ceiling of care of subjects hospitalized with COVID-19 during four waves of the pandemic in a metropolitan area: a multi-center cohort study

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Table S1: Number of subjects included by centre and wave

CENTER	1 <sup>st</sup> wave	2 <sup>nd</sup> wave	3 <sup>rd</sup> wave	4 <sup>th</sup> wave
Hospital Universitari de Bellvitge	1133	323	395	579
Consorti Sanitari de l'Alt Penedès i Garraf	403	226	373	276
Consorti Sanitari Integral	923	177		
Hospital de Viladecans	406	60		
Hospital de Sant Boi de Llobregat	541			

TABLE S2: Previous treatments at hospital admission through waves by ceiling of care

	CEILING OF CARE					NO CEILING OF CARE				
	[ALL]	1	2	3	4	[ALL]	1	2	3	4
	<i>N=1827</i>	<i>N=1326</i>	<i>N=175</i>	<i>N=163</i>	<i>N=163</i>	<i>N=3974</i>	<i>N=2072</i>	<i>N=605</i>	<i>N=605</i>	<i>N=692</i>
<b>Statins, N (%)</b>	656 (40.5%)	443 (39.6%)	79 (45.1%)	73 (44.8%)	61 (37.4%)	838 (23.0%)	428 (24.5%)	149 (24.7%)	154 (25.5%)	107 (15.5%)
<b>Corticosteroids, N (%)</b>	147 (8.07%)	117 (8.86%)	12 (6.86%)	12 (7.36%)	6 (3.68%)	150 (3.78%)	89 (4.30%)	18 (2.99%)	34 (5.63%)	9 (1.30%)
<b>ACE inhibitors, N (%)</b>	504 (27.7%)	343 (25.9%)	54 (30.9%)	57 (35.2%)	50 (30.7%)	684 (17.2%)	358 (17.3%)	120 (19.8%)	118 (19.5%)	88 (12.7%)
<b>ARA II, N (%)</b>	358 (19.6%)	256 (19.3%)	41 (23.4%)	25 (15.3%)	36 (22.1%)	409 (10.3%)	216 (10.4%)	59 (9.77%)	80 (13.2%)	54 (7.80%)
<b>Systemic corticosteroids, N (%)</b>	121 (8.67%)	70 (7.83%)	19 (10.9%)	16 (9.82%)	16 (9.82%)	138 (3.59%)	58 (2.99%)	35 (5.79%)	24 (3.97%)	21 (3.03%)
<b>Inhaled corticosteroids, N (%)</b>	258 (14.4%)	190 (14.7%)	24 (13.7%)	18 (11.0%)	26 (16.0%)	243 (6.15%)	130 (6.35%)	34 (5.63%)	52 (8.60%)	27 (3.90%)
<b>Anticoagulants, N (%)</b>	363 (20.1%)	225 (17.3%)	57 (32.6%)	38 (23.3%)	43 (26.4%)	207 (5.24%)	101 (4.93%)	32 (5.31%)	42 (6.94%)	32 (4.62%)
<b>Immunosuppressants, N (%)</b>	39 (2.77%)	23 (2.54%)	5 (2.86%)	7 (4.29%)	4 (2.45%)	124 (3.14%)	63 (3.07%)	26 (4.30%)	14 (2.31%)	21 (3.03%)

TABLE S3: Clinical symptoms at hospital admission through waves by ceiling of care

	CEILING OF CARE					NO CEILING OF CARE				
	[ALL]	1	2	3	4	[ALL]	1	2	3	4
	<i>N=1831</i>	<i>N=1330</i>	<i>N=175</i>	<i>N=163</i>	<i>N=163</i>	<i>N=3984</i>	<i>N=2076</i>	<i>N=611</i>	<i>N=605</i>	<i>N=692</i>
<b>Fever, N (%)</b>	1274 (69.6%)	986 (74.1%)	108 (61.7%)	86 (52.8%)	94 (57.7%)	3215 (80.7%)	1767 (85.1%)	462 (75.6%)	453 (74.9%)	533 (77.0%)
<b>Cough, N (%)</b>	1092 (59.6%)	821 (61.7%)	93 (53.1%)	90 (55.2%)	88 (54.0%)	2954 (74.1%)	1604 (77.3%)	427 (69.9%)	421 (69.6%)	502 (72.5%)
<b>Shortness of breath, N (%)</b>	855 (46.7%)	604 (45.4%)	86 (49.1%)	87 (53.4%)	78 (47.9%)	2102 (52.8%)	985 (47.4%)	367 (60.1%)	350 (57.9%)	400 (57.8%)
<b>Anosmia, N (%)</b>	77 (4.21%)	52 (3.91%)	9 (5.14%)	11 (6.75%)	5 (3.07%)	589 (14.8%)	245 (11.8%)	111 (18.2%)	85 (14.0%)	148 (21.4%)
<b>Ageusia, N (%)</b>	86 (4.70%)	61 (4.59%)	8 (4.57%)	14 (8.59%)	3 (1.84%)	631 (15.8%)	276 (13.3%)	109 (17.8%)	101 (16.7%)	145 (21.0%)
<b>Diarrhea, N (%)</b>	374 (20.4%)	266 (20.0%)	33 (18.9%)	40 (24.5%)	35 (21.5%)	1122 (28.2%)	623 (30.0%)	146 (23.9%)	165 (27.3%)	188 (27.2%)
<b>Arthromyalgia, N (%)</b>	360 (19.7%)	298 (22.4%)	27 (15.4%)	17 (10.4%)	18 (11.0%)	1274 (32.0%)	663 (31.9%)	199 (32.6%)	195 (32.2%)	217 (31.4%)

TABLE S4: Treatments received by subjects during hospital stay through waves by ceiling of care

	CEILING OF CARE					NO CEILING OF CARE				
	[ALL]	1	2	3	4	[ALL]	1	2	3	4
	<i>N=182</i> <i>8</i>	<i>N=132</i> <i>7</i>	<i>N=17</i> <i>5</i>	<i>N=16</i> <i>3</i>	<i>N=16</i> <i>3</i>	<i>N=398</i> <i>3</i>	<i>N=207</i> <i>5</i>	<i>N=61</i> <i>1</i>	<i>N=60</i> <i>5</i>	<i>N=69</i> <i>2</i>
<b>Antiviral use, N (%)</b>	1385 (75.8 %)	1163 (87.6 %)	57 (32.6 %)	74 (45.4 %)	91 (55.8 %)	2818 (70.8 %)	1947 (93.8 %)	214 (35.0 %)	248 (41.0 %)	409 (59.1 %)
<b>Lopinavir/Ritonavir, N (%)</b>	539 (32.4 %)	539 (46.3 %)	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)	1150 (29.8 %)	1150 (59.1 %)	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
<b>Hydroxychloroquine, N (%)</b>	1151 (69.2 %)	1150 (98.9 %)	1 (0.57 %)	0 (0.00 %)	0 (0.00 %)	1916 (49.7 %)	1914 (98.3 %)	1 (0.16 %)	0 (0.00 %)	1 (0.14 %)
<b>Interferon beta, N (%)</b>	118 (8.52 %)	118 (10.1 %)	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)	196 (6.96 %)	196 (10.1 %)	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)
<b>Tocilizumab, N (%)</b>	207 (14.9 %)	91 (7.82 %)	26 (45.6 %)	43 (58.1 %)	47 (51.6 %)	845 (30.0 %)	397 (20.4 %)	89 (41.6 %)	83 (33.5 %)	276 (67.5 %)
<b>Remdesivir, N (%)</b>	142 (10.3 %)	1 (0.09 %)	35 (61.4 %)	42 (56.8 %)	64 (70.3 %)	564 (20.0 %)	25 (1.28 %)	139 (65.0 %)	193 (77.8 %)	207 (50.6 %)
<b>Antibiotic use, N (%)</b>	1377 (75.3 %)	1124 (84.7 %)	91 (52.0 %)	81 (49.7 %)	81 (49.7 %)	2520 (63.3 %)	1854 (89.3 %)	263 (43.0 %)	207 (34.2 %)	196 (28.3 %)
<b>Amoxicillin, N (%)</b>	414 (31.2 %)	414 (31.2 %)	0 (.%)	0 (.%)	0 (.%)	695 (33.5 %)	695 (33.5 %)	0 (.%)	0 (.%)	0 (.%)
<b>Amoxicillin /Clavulanic acid, N (%)</b>	464 (25.4 %)	361 (27.2 %)	27 (15.4 %)	36 (22.1 %)	40 (24.5 %)	876 (22.0 %)	664 (32.0 %)	57 (9.33 %)	79 (13.1 %)	76 (11.0 %)
<b>Azithromycin, N (%)</b>	542 (29.6 %)	534 (40.2 %)	3 (1.71 %)	1 (0.61 %)	4 (2.45 %)	1194 (30.0 %)	1153 (55.6 %)	19 (3.11 %)	7 (1.16 %)	15 (2.17 %)

	CEILING OF CARE					NO CEILING OF CARE				
	[ALL]	1	2	3	4	[ALL]	1	2	3	4
<b>Ceftriaxone, N (%)</b>	606 (33.2 %)	530 (39.9 %)	41 (23.4 %)	19 (11.7 %)	16 (9.82 %)	1053 (26.4 %)	795 (38.3 %)	132 (21.6 %)	72 (11.9 %)	54 (7.80 %)
<b>Levofloxacin, N (%)</b>	136 (7.44 %)	95 (7.16 %)	15 (8.57 %)	16 (9.82 %)	10 (6.13 %)	226 (5.67 %)	122 (5.88 %)	35 (5.73 %)	35 (5.79 %)	34 (4.91 %)
<b>Piperacillin, N (%)</b>	99 (7.46 %)	99 (7.46 %)	0 (.%)	0 (.%)	0 (.%)	184 (8.87 %)	184 (8.87 %)	0 (.%)	0 (.%)	0 (.%)
<b>Corticosteroid, N (%)</b>	852 (61.5 %)	399 (44.3 %)	152 (88.4 %)	150 (96.8 %)	151 (95.6 %)	2456 (63.1 %)	698 (34.2 %)	552 (92.5 %)	566 (96.6 %)	640 (95.7 %)
<b>Type of corticosteroid, N (%):</b>										
Dexamethasone	483 (50.2 %)	81 (15.8 %)	126 (82.9 %)	141 (94.6 %)	135 (90.0 %)	1751 (72.4 %)	66 (9.97 %)	514 (93.5 %)	550 (97.3 %)	621 (97.0 %)
Hydrocortisone	35 (3.63 %)	27 (5.27 %)	4 (2.63 %)	1 (0.67 %)	3 (2.00 %)	30 (1.24 %)	21 (3.17 %)	5 (0.91 %)	2 (0.35 %)	2 (0.31 %)
Methylprednisolone	379 (39.4 %)	357 (69.7 %)	10 (6.58 %)	3 (2.01 %)	9 (6.00 %)	553 (22.9 %)	521 (78.7 %)	15 (2.73 %)	9 (1.59 %)	8 (1.25 %)
Prednisolone	7 (0.73 %)	7 (1.37 %)	0 (0.00 %)	0 (0.00 %)	0 (0.00 %)	17 (0.70 %)	16 (2.42 %)	1 (0.18 %)	0 (0.00 %)	0 (0.00 %)
Prednisone	59 (6.13 %)	40 (7.81 %)	12 (7.89 %)	4 (2.68 %)	3 (2.00 %)	66 (2.73 %)	38 (5.74 %)	15 (2.73 %)	4 (0.71 %)	9 (1.41 %)