

Supplementary Table S1. Baseline characteristics of patients treated with or without anti-MRSA drug with respiratory failure group (a) and without respiratory failure group (b) before and after adjusting for confounders using the propensity score weighting method

(a)

Baseline characteristics						
Variables	Before adjustment			After adjustment		
	Anti-MRSA agents combination group <i>n</i> = 515	Non-anti-MRSA agents group <i>n</i> = 54583	p-value	Anti-MRSA agents combination group <i>n</i> = 515	Non-anti-MRSA agents group <i>n</i> = 54583	p-value
Age	83.21 (±8.18)	85.61 (±7.61)	<0.0001	85.23 (±0.35)	85.58 (±0.03)	0.31
Sex	66.41% (342/515)	54.35% (29666/54583)	<0.0001	58.20%	54.46%	0.07
Emergency admission	98.64% (7/515)	98.70% (53873/54583)	0.9073	98.29%	98.71%	0.641

Emergency	75.53%	64.00%	<0.0001	64.74%	64.01%	0.739
transport	(389/515)	(34874/54583)				
Respiratory	7.29%	7.77%	0.6761	5.87%	7.29%	0.089
medicine	(40/515)	(3977/54583)				
Advanced	5.24%	2.99%	0.0029	3.00%	3.01%	0.999
treatment	(27/515)	(1632/54583)				
hospital						
Dementia	75.15%	70.32%	<0.0001	66.11%	70.37%	0.046
	(128/515)	(16199/54583)				
Coma	18.64%	10.02%	0.0152	11.09%	10.10%	0.368
	(96/515)	(5469/54583)				
COPD	6.21%	8.85%	0.0359	10.33%	8.83%	0.472
	(32/515)	(4830/54583)				
Asthma	2.52%	4.61%	0.0243	5.38%	4.59%	0.57
	(13/515)	(2517/54583)				
NTM	0.19%	0.17%	0.4923	0.00%	0.37%	<0.0001
	(1/515)	(208/54583)				
IP	1.55%	1.59%	0.9964	1.71%	1.59%	0.732

	(8/515)	(867/54583)				
Parkinson	7.57%	6.21%				
			0.17	0.16%	0.17%	0.922
syndrome	(39/515)	(3338/54583)				
Sequelae of						
	20.39%	20.40%				
cerebrovascular			0.9964	20.66%	20.39%	0.876
	(105/515)	(11133/54583)				
disease						
Maintenance	2.91%	0.80%				
			<0.0001	0.98%	0.82%	0.541
dialysis	(15/515)	(436/54583)				
Emergency	0.19%	0.00%				
			<0.0001	0.00%	0.01%	0.441
dialysis	(1/515)	(2/54583)				
Abscess of lung						
	0.39%	0.18%				
and			0.2613	0.61%	0.18%	0.132
	(2/515)	(97/54583)				
mediastinum						
Pyothorax	0.19%	0.36%				
			0.5291	0.00%	0.36%	<0.0001
	(1/515)	(197/54583)				
Achalasia	0.19%	0.30%				
			0.6514	0.04%	0.30%	<0.0001
	(1/515)	(166/54583)				

Malignant neoplasms	9.71% (50/515)	11.22% (6124/54583)	0.0118	12.34%	11.21%	0.485
Malignant neoplasms in the oral cavity	0.97% (5/515)	0.33% (179/54583)	0.0304	0.11%	0.33%	<0.0001
Malignant neoplasm of the esophagus	0.58% (3/515)	0.74% (404/54583)	0.6776	0.31%	0.74%	<0.0001
Additional reimbursement for ICT	88.16% (454/515)	92.24% (50350/54583)	0.0006	93.70%	92.20%	0.039
Additional reimbursement for AST	55.73% (287/515)	50.76% (27706/54583)	0.0248	50.83%	50.80%	0.99
Surgery	9.13% (47/515)	2.25% (1229/54583)	<0.0001	2.04	2.32	0.454
IPPV	16.89% (87/515)	3.68% (2006/54583)	<0.0001	2.63%	3.79%	<0.0001

NPPV	1.36% (7/515)	0.48% (262/54583)	0.0044	0.87%	0.50%	0.288
ICU admission	8.54% (44/515)	1.11% (607/54583)	<0.0001	1.08%	1.18%	0.787
Dopamine	5.24% (27/515)	1.36% (744/54583)	<0.0001	1.51%	1.40%	0.769
Noradrenaline	0.78% (4/515)	0.11% (59/54583)	<0.0001	0.21%	0.11%	0.507
Steroid	17.67% (91/515)	8.83% (4819/54583)	<0.0001	7.81%	8.91%	0.358
Insulin	13.20% (68/515)	7.17% (3916/54583)	<0.0001	6.85%	7.23%	0.689
Albumin	6.21% (32/515)	0.75% (409/54583)	<0.0001	0.99%	0.80%	0.098
Immunoglobulin	0.81% (4/515)	0.11% (88/54583)	0.0009	0.08%	0.12%	0.276
Anti-influenza virus drug	1.75% (9/515)	1.41% (770/54583)	0.5192	1.82%	1.41%	0.295

TPN	18.25%	2.94%	<0.0001	3.36%	3.08%	0.549
	(94/515)	(1604/54583)				
Nasal tube	12.82%	4.11%	<0.0001	4.72%	4.19%	0.455
feeding	(66/515)	(2243/54583)				
Gastrostomy	0.19%	0.01%	0.0015	0.02%	0.02%	0.687
nutrition	(1/515)	(8/54583)				
Dysphagia	10.49%	13.01%	0.0894	12.77%	12.99%	0.877
rehabilitation	(54/515)	(7103/54583)				
Penicillin	60.58%	77.04%	<0.0001	78.30	76.88	0.34
	(312/515)	(42050/54583)				
Macrolide	1.55%	0.61%	0.0068	0.42%	0.62%	0.26
	(8/515)	(334/54583)				
First-generation	1.17%	0.69%	0.2018	0.71%	0.70%	0.975
cephalosporin	(6/515)	(379/54583)				
Second-						
generation	2.52%	1.80%	0.2173	1.81%	1.80%	0.975
cephalosporin	(13/515)	(981/54583)				

Third-generation cephalosporin	14.37% (74/515)	18.07% (9862/54583)	0.0298	16.20%	18.03%	0.165
Fourth-generation cephalosporin	1.55% (8/515)	0.84% (459/54583)	0.0792	0.87%	0.85%	0.922
Carbapenem	35.73% (184/515)	5.83% (3181/54583)	<0.0001	6.32%	6.11%	0.63
Clindamycin	2.33% (12/515)	2.21% (1205/54583)	0.8507	2.72%	1.14%	0.095
New quinolone (IV)	2.33% (12/515)	1.43% (783/54583)	0.0898	2.72%	1.14%	0.095
New quinolone (PO)	0.78% (4/515)	0.98% (533/54583)	0.646	1.07%	0.97%	0.836
Minocycline	0.58% (3/515)	0.63% (346/54583)	0.8837	0.47%	0.63%	0.497
Metronidazole	0.19% (1/515)	0.14% (77/54583)	0.7497	0.22%	0.14%	0.528

(b)

Baseline characteristics						
Variables	Before adjustment			After adjustment		
	Anti-MRSA agents combination group	Non-anti-MRSA agents group	p-value	Anti-MRSA agents combination group	Non-anti-MRSA agents group	p-value
	<i>n</i> = 111	<i>n</i> = 26097		<i>n</i> = 111	<i>n</i> = 26097	
Age	82.17 (±7.41)	84.83 (±7.64)	0.003	84.11 (±0.83)	84.82 (±0.05)	0.391
Sex	76.58% (85/111)	57.94% (15121/26097)	<0.0001	60.38%	58.02%	0.701
Emergency admission	92.79% (103/111)	95.89% (25025/26097)	0.1011	96.08%	95.90%	0.927
Emergency transport	45.05% (50/111)	30.86% (8053/26097)	0.0012	70.31%	69.07%	0.789

Respiratory	4.50%	5.41%				
medicine	(5/111)	(1411/26097)	0.6748	6.12%	5.40%	0.751
Advanced						
treatment	13.51%	2.64%				
hospital	(15/111)	(690/26097)	<0.0001	2.61%	2.69%	0.898
Dementia	64.86%	70.35%				
	(72/111)	(18359/26097)	0.2069	73.66%	70.32%	0.224
Coma	10.81%	6.28%				
	(12/111)	(1640/26097)	0.0502	5.02%	6.31%	0.479
COPD	5.41%	6.53%				
	(6/111)	(1704/26097)	0.6323	15.61%	6.52%	0.141
Diabetes	0.90%	0.56%				
	(1/111)	(146/26097)	0.6308	0.07%	0.56%	<0.0001
CKD	18.02%	16.44%				
	(20/111)	(4291/26097)	0.6550	18.17%	16.45%	0.721
NTM	0.90%	0.54%				
	(1/111)	(140/26097)	0.6004	0.20%	0.54%	0.01
IP	0.90%	1.05%				
			0.8807	0.19%	1.05%	<0.0001

	(1/111)	(273/26097)				
Parkinson	8.11%	7.25%				
syndrome	(9/111)	(1893/26097)	0.7292	8.26%	7.25%	0.705
Sequelae of						
cerebrovascular	20.72%	21.92%				
disease	(23/111)	(5721/26097)	0.7601	20.72%	21.92%	0.744
Maintenance	2.70%	0.75%				
dialysis	(3/111)	(197/26097)	0.0186	0.15%	0.76%	<0.0001
Pyothorax	1.80%	0.24%				
	(2/111)	(63/26097)	0.001	0.08%	0.25%	<0.0001
Malignant	9.01%	12.68%				
neoplasms	(10/111)	(3310/26097)	0.2455	5.30%	12.67%	0.01
Malignant						
neoplasms in the	1.55%	0.52%				
oral cavity	(1/111)	(137/26097)	0.5850	0.49%	0.53%	0.885
Additional						
reimbursement	90.09%	90.49%				
for ICT	(100/111)	(23617/26097)	0.8840	94.83%	90.49%	0.045

Additional reimbursement for AST	51.35% (57/111)	46.67% (12180/26097)	0.3241	53.97%	46.69%	0.25
Surgery	5.41% (6/111)	2.25% (588/26097)	0.0260	2.16%	2.27%	0.948
ICU admission	0.90% (1/111)	0.01% (25/26097)	0.0072	0.13%	0.10%	0.652
Steroid	9.01% (10/111)	5.03% (25/26097)	0.0561	4.92%	5.05%	0.940
Insulin	11.71% (13/111)	5.67% (1480/26097)	0.0061	6.86%	7.23%	0.689
Albumin	0.90% (1/111)	1.95% (51/26097)	0.0956	0.01%	0.20%	<0.0001
Immunoglobulin	0.90% (1/111)	0.03% (7/26097)	<0.0001	0.01%	0.03%	0.033
Anti-influenza virus drug	1.80% (2/111)	0.61% (160/26097)	0.1108	0.97%	0.62%	0.262
TPN	6.31%	1.29%	<0.0001	1.37%	1.31%	0.924

	(7/111)	(336/26097)				
Nasal tube	11.71%	3.54%	<0.0001	3.31%	3.57%	0.813
feeding	(13/111)	(925/26097)				
Dysphagia	13.51%	14.40%	0.7897	14.23%	14.40%	0.959
rehabilitation	(15/111)	(3759/26097)				
Penicillin	56.76%	71.65%	0.0005	76.46%	71.58%	0.237
	(63/111)	(18698/26097)				
Macrolide	0.90%	0.31%	0.2663	0.68%	0.31%	0.430
	(1/111)	(81/26097)				
First-generation	1.80%	1.57%	0.8427	3.32%	1.57%	0.372
cephalosporin	(2/111)	(409/26097)				
Second-generation	2.70%	2.66%	0.9794	1.19%	2.66%	0.045
cephalosporin	(3/111)	(695/26097)				
Third-generation	16.22%	22.22%	0.1285	18.73%	22.20%	0.353
cephalosporin	(18/111)	(5800/26097)				

Fourth-generation cephalosporin	1.80% (2/111)	0.92% (240/26097)	0.3322	0.28%	0.92%	<0.0001
Carbapenem	32.43% (36/111)	2.92% (762/26097)	<0.0001	3.51%	3.05%	0.51
New quinolone (IV)	0.90% (1/111)	1.24% (323/26097)	0.7486	0.26%	1.24%	<0.0001
Minocycline	1.80% (2/111)	0.59% (154/26097)	0.0977	0.89%	0.60%	0.502