

Supplementary Table 1. Participants characteristics of included patients of training set and development set

Characteristics	Total (N=1780)	Training set (N=1246)	Development set (N=534)	P-Value
Gender				0.804
Female	644 (36.2)	448 (36.0)	196 (36.7)	
Male	1136 (63.8)	798 (64.0)	338 (63.3)	
Age (years)	68 [52.00, 80.00]	68.00 [52.00, 79.00]	68.00 [53.00, 80.00]	0.311
Race				0.619
White	1171 (65.8)	825 (66.2)	346 (64.8)	
Black	115 (6.5)	76 (6.1)	39 (7.3)	
Other race	494 (27.8)	345 (27.7)	149 (27.9)	
Marital status				0.074
Married	725 (40.7)	490 (39.3)	235 (44.0)	
Unmarried	1055 (59.3)	756 (60.7)	299 (56.0)	
LOS	2.80 [1.70, 5.53]	2.83 [1.72, 5.50]	2.75 [1.66, 5.63]	0.626
Hospital mortality	106 (6.0)	79 (6.3)	27 (5.1)	0.347
Vital signs				
Heart rate (times/min)	81.14 [70.85, 92.74]	80.92 [70.67, 92.20]	82.02 [72.13, 93.81]	0.193
MBP (mmHg)	80.55 [74.27, 88.04]	80.47 [74.28, 87.66]	80.78 [73.70, 88.61]	0.191
Breath rate(times/min)	17.93 [16.21, 20.12]	17.95 [16.15, 20.18]	17.87 [16.36, 19.88]	0.653
Temperature (°C)	36.95 [36.72, 37.28]	36.94 [36.72, 37.25]	36.95 [36.72, 37.32]	0.329
SpO2	97.55 [96.19, 98.75]	97.56 [96.18, 98.76]	97.52 [96.20, 98.73]	0.855
Glucose (mg/dL)	127.00 [107.24, 150.43]	126.90 [107.71, 150.63]	127.37 [106.50, 149.38]	0.809
Severity score				
GCS				0.923
≥13	1391 (78.1)	975 (78.3)	416 (77.9)	

9-12	259 (14.6)	182 (14.6)	77 (14.4)	
<9	130 (7.3)	89 (7.1)	41 (7.6)	
SOFA	3.00 [2.00, 5.00]	3.00 [2.00, 5.00]	3.00 [2.00, 5.00]	0.834
Laboratory tests				
Anion gap (mmol/L)	16.00 [14.00, 18.00]	16.00 [14.00, 18.00]	16.00 [14.00, 18.00]	0.862
Bicarbonate (mmol/L)	22.00 [20.00, 25.00]	22.00 [20.00, 25.00]	22.00 [20.00, 24.00]	0.123
Chloride (mmol/L)	106.00 [102.00, 109.00]	106.00 [102.00, 109.00]	106.00 [102.00, 109.00]	0.645
Hematocrit (μmol/L)	32.50 [28.00, 36.60]	32.70 [28.00, 36.77]	32.35 [27.92, 36.48]	0.349
Hemoglobin (g/dL)	10.90 [9.40, 12.40]	11.00 [9.40, 12.40]	10.80 [9.40, 12.20]	0.304
Platelet (K/μL)	172.50 [131.00, 221.00]	171.00 [130.00, 220.00]	179.00 [135.25, 225.00]	0.240
Potassium (K/μL)	4.30 [3.90, 4.70]	4.30 [3.90, 4.70]	4.30 [4.00, 4.70]	0.608
PTT (s)	28.80 [26.40, 32.42]	28.70 [26.40, 32.40]	28.90 [26.22, 32.48]	0.917
INR	1.20 [1.10, 1.40]	1.20 [1.10, 1.40]	1.20 [1.10, 1.40]	0.660
PT (s)	13.1 [11.90, 14.90]	13.10 [11.90, 14.88]	13.00 [11.90, 14.97]	0.510
Sodium (mEq/L)	138 [135.00, 140.00]	138.00 [136.00, 140.00]	138.00 [135.00, 141.00]	0.982
BUN (mg/dL)	17 [12.00, 24.00]	17.00 [13.00, 24.00]	17.00 [12.00, 25.00]	0.458
WBC (K/μL)	11.9 [8.60, 15.80]	11.90 [8.60, 15.78]	12.20 [8.60, 16.10]	0.369
MCH (pg)	30.4 [29.10, 31.80]	30.50 [29.10, 31.80]	30.40 [28.90, 31.80]	0.533
MCHC (g/L)	33.1 [32.10, 33.90]	33.10 [32.10, 33.90]	33.00 [32.10, 33.90]	0.656
MCV (fL)	91 [87.00, 95.00]	91.00 [87.00, 95.00]	91.00 [87.00, 95.00]	0.852
RDW	13.9 [13.20, 15.10]	13.90 [13.20, 15.10]	13.90 [13.20, 15.00]	0.654
Creatinine (mg/dL)	0.9 [0.80, 1.20]	0.90 [0.80, 1.20]	0.90 [0.70, 1.20]	0.601
Treatment measures				
Vasopressor				0.382
No	1700 (95.5)	1194 (95.8)	506 (94.8)	
Yes	80 (4.5)	52 (4.2)	28 (5.2)	

Mechanical ventilation				0.642
No	1473 (82.8)	1035 (83.1)	438 (82.0)	
Yes	307 (17.2)	211 (16.9)	96 (18.0)	
Antibiotic				0.083
No	767 (43.1)	554 (44.5)	213 (39.9)	
Yes	1013 (56.9)	692 (55.5)	321 (60.1)	
RRT				0.660
No	1755 (98.6)	1227 (98.5)	528 (98.9)	
Yes	25 (1.4)	19 (1.5)	6 (1.1)	
Comorbidity				
Pulmonary infection				0.826
No	1594 (89.6)	1114 (89.4)	480 (89.9)	
Yes	186 (10.4)	132 (10.6)	54 (10.1)	
AKI				0.232
No	445 (25)	301 (24.2)	144 (27.0)	
Yes	1335 (75)	945 (75.8)	390 (73.0)	
Congestive heart failure				0.137
No	1541 (86.6)	1089 (87.4)	452 (84.6)	
Yes	239 (13.4)	157 (12.6)	82 (15.4)	
Chronic pulmonary disease				0.468
No	1539 (86.5)	1072 (86.0)	467 (87.5)	
Yes	241 (13.5)	174 (14.0)	67 (12.5)	
Renal disease				0.650
No	1558 (87.5)	1094 (87.8)	464 (86.9)	
Yes	222 (12.5)	152 (12.2)	70 (13.1)	
Liver disease				0.247

No	1656 (93.0)	1153 (92.5)	503 (94.2)
Yes	124 (7.0)	93 (7.5)	31 (5.8)

MBP, mean blood pressure; GCS, Glasgow Coma Scale; SOFA, Sequential Organ Failure Assessment; WBC, white blood cell; RDW, red cell distribution width; PTT, partial thromboplastin time; PT, prothrombin time; INR, international normalized ratio; BUN, blood urea nitrogen; MCH, mean corpuscular hemoglobin; MCHC, mean corpuscular hemoglobin concentration; MCV, mean corpuscular volume; RRT, renal replacement therapy; AKI, acute kidney injury