

Figure S1 Differences in critical illness scores. Letters a, b, c, d and e show statistically significant differences between variables. For all variables with the same letter, the difference between the means is not Statistically significant. If two variables have different letters, they are significantly different.

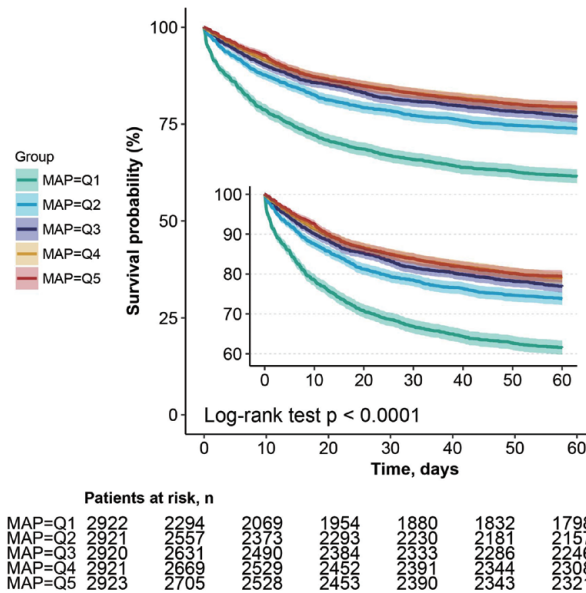


Figure S2 Kaplan-Meier survival curves for day 60 in sepsis patients.

Table S1 Percentage of missing data in the variables of interest

Variables	MIMIC-III (n=14,607)
Participants	
Age	0%
Sex, n (%)	0%
Female	0%
Male	0%
Weight	2.79%
30-day mortality	0%
Service unit, n (%)	
MICU	0%
SICU/TSICU	0%
CCU/CSRU	0%
Severity of illness	
SOFA	0%
SAPS II	0%
Oasis	0%
Vital signs	
Heart rate (bpm)	0%
Mean bp (mmHg)	0%
Respiratory rate (bpm)	0.10%
Temperature (°C)	1.41%
SpO ₂	0.07%
ELF	
RRT use, n (%)	0%
MV use, n (%)	0%
Vasopressor use, n (%)	0%
Comorbidities, n (%)	
CHF	0%
Cardiac arrhythmias	0%
Hypertension	0%
Stroke	0%
COPD	0%
Diabetes mellitus	0%
Renal failure	0%
Liver disease	0%
Malignancy	0%
Coagulopathy	0%
Laboratory tests	
WBC (×10 ⁹ /L)	0.55%
Hemoglobin (g/dL)	0.46%
Platelet (×10 ⁹ /L)	0.49%
Hematocrit (×10 ⁹)	0.32%
Inr	8.74%
PT (seconds)	8.74%
APTT (seconds)	8.94%
Bun (mg/dL)	0.28%
Creatinine (mg/dL)	0.27%
Sodium (mmol/L)	0.24%
Potassium (mmol/L)	0.21%
Bicarbonate (mmol/L)	0.44%
PH	23.90%
PO ₂ (mmHg)	26.26%
PCO ₂ (mmHg)	26.25%
Lac (mmol/L)	28.42%
Anion gap (mmol/L)	1.21%

MICU, medical intensive care unit; SICU, surgical intensive care unit; TSICU, trauma surgical intensive care unit; CCU, coronary care unit; CSRU, cardiac surgery unit; SOFA, Sequential Organ Failure Assessment; SAPS, II Simplified Acute Physiology Score II; OASIS, Oxford Acute Severity of Illness Score; MV, mechanical ventilation; RRT, renal replacement therapy; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; MAP, mean arterial pressure; WBC, white blood cell; PO₂, partial pressure of oxygen; PCO₂, partial pressure of carbon dioxide.

Table S2 Relationship between mean arterial pressure and 30-day mortality

Exposure	Non-adjusted		Adjust I		Adjust II		Adjust III	
	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value	HR (95% CI)	P value
MAP mmHg	0.97 (0.97–0.98)	<0.001	0.97 (0.96–0.98)	<0.001	0.98 (0.97–0.99)	<0.001	0.98 (0.97–0.99)	0.001
MAP quintiles								
Q1(≤67.4)	Reference		Reference		Reference		Reference	
Q2 (67.4-72.5)	0.59 (0.53–0.65)	<0.001	0.62 (0.56–0.69)	<0.001	0.63 (0.57–0.7)	<0.001	0.63 (0.56–0.72)	<0.001
Q3 (72.5-77.6)	0.49 (0.44–0.55)	<0.001	0.53 (0.48–0.59)	<0.001	0.58 (0.52–0.64)	<0.001	0.53 (0.47–0.61)	<0.001
Q4 (77.6-84.6)	0.42 (0.38–0.47)	<0.001	0.47 (0.42–0.52)	<0.001	0.56 (0.5–0.63)	<0.001	0.55 (0.48–0.63)	<0.001
Q5 (≥84.6)	0.42 (0.38–0.47)	<0.001	0.49 (0.44–0.55)	<0.001	0.68 (0.61–0.77)	<0.001	0.61 (0.52–0.7)	<0.001
P for trend	<0.001		<0.001		<0.001		<0.001	

Non-adjusted: no covariates were adjusted; Adjust I model adjusted for age and gender; Adjust II adjusted for adjust I + heart rate, SOFA, SAPS II, OASIS; Adjust III adjusted for adjust II + congestive heart failure, hypertension, vasopressor use, hemoglobin, BUN, sodium, bicarbonate, pH, lac; MAP, mean arterial pressure; SOFA, Sequential Organ Failure Assessment; SAPS, II Simplified Acute Physiology Score II; OASIS, Oxford Acute Severity of Illness Score; BUN, blood urea nitrogen.