

Supplementary File:**Method: Sensitivity analysis for multiple imputation**

Based on the assumption of “missing at random”, we performed multivariate imputation by chained equations (MICE) method to generate 10 copies of imputed datasets using predictive mean matching and calculated the coefficient and standard error using logistic model. Then, we generated the pooled crude and adjusted OR with 95%CI of the body temperature (BT) for the mortality based on the Rubins’s rule. We used the R studio with “mice” package.¹

Method: Sensitivity analysis for restricted cubic spline

The restricted cubic spline was made using 5 knots at prespecified locations according to the distribution of BT (the 5, 27.5, 50, 72.5, and 95% percentiles) and with multivariable logistic regression model adjusted by confounders as same as the primary analysis in the complete case dataset. The reference was set on 36.5°C. We used the R studio with “rms” package.²

Table 1. Crude OR and Adjusted OR with 95% CI for In-hospital mortality

Variables	Crude OR	95%CI	Adjusted OR	95%CI
Sex				
Female	Reference		Reference	
Male	1.11	[0.83 - 1.49]	1.10	[0.72 - 1.67]
Age (y.o)				
12-15	Reference		Reference	
6-11	0.92	[0.67 - 1.27]	1.54	[0.98 - 2.44]
2-5	1.17	[0.79 - 1.74]	0.97	[0.52 - 1.83]
<2	2.22	[1.42 - 3.45]	1.15	[0.55 - 2.40]
Type of injury				
Penetrating	Reference		Reference	
Blunt	4.47	[0.62 - 32.03]	2.42	[0.17 - 34.32]
Respiratory rate				
Normal range	Reference		Reference	
Bradypnea	17.62	[12.29 - 25.27]	4.03	[2.34 - 6.93]
Tachypnea	1.83	[1.23 - 2.72]	1.03	[0.63 - 1.68]
Unknown	2.35	[1.40 - 3.93]	1.96	[0.97 - 3.98]
Heart rate				
Normal range	Reference		Reference	
Bradycardia	82.15	[56.02 - 120.47]	10.68	[5.63 - 20.26]
Tachycardia	3.95	[2.79 - 5.59]	2.28	[1.47 - 3.53]
Unknown	6.03	[2.94 - 12.37]	3.68	[1.25 - 10.86]
Consciousness				
Minor (GCS 15-13)	Reference		Reference	
Moderate (12-9)	6.18	[2.55 - 14.94]	3.44	[1.21 - 9.79]
Severe (≤ 8)	173.91	[94.30 - 320.73]	39.75	[17.76 - 88.99]
Unknown	8.73	[3.37 - 22.63]	9.17	[2.85 - 29.58]
Time of transport(min)	0.98	[0.97 - 0.99]	0.99	[0.98 - 1.00]
ISS(/point)	1.12	[1.11 - 1.13]	1.07	[1.05 - 1.08]

GCS: Glasgow coma scale, ISS: Injury severity score, OR: Odds ratio, CI: Confidence interval.

Table 2. Analysis of the association between BT and outcomes with multiple imputation

Variables	Crude OR	95%CI	Adjusted OR	95%CI
BT <36.0°C	3.64	[2.77-4.80]	1.62	[1.11-2.37]
BT=36.0-36.9°C		Reference		
BT ≥37.0°C	1.08	[0.75-1.54]	1.19	[0.78-1.82]

BT: Body temperature, OR: Odds ratio, CI: Confidence interval. Adjusted by sex, categorized age, categorized body temperature, type of injury (blunt or penetrating), categorized vital signs (respiratory rate, heart rate, and Glasgow Coma Scale), time of transportation and injury severity score.

Reference

1. Buuren Sv, Groothuis-Oudshoorn K. mice: Multivariate imputation by chained equations in R. *Journal of statistical software* 2010:1-68.
2. Harrell Jr FE, Harrell Jr MFE, Hmisc D. Package 'rms'. *Vanderbilt University* 2019;229