Validation of the Pediatric Index of Mortality 3 in a pediatric intensive care unit in Thailand: A prospective, single-center observational study

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Supplementary Table S1. Physiological PIM3 Variables Requiring Default Substitution

Variable	Default Value (per PIM3 rules)	Missing cases, n (%)	Reason for Substitution
Systolic Blood Pressure	120 mmHg	0 (0%)	NA
Pupillary Reactions	Unknown = 0	0 (0%)	NA
Base Excess	0 mmol/L	356 (57.7%)	Blood gas analysis was not clinically indicated
FiO_2/PaO_2 ratio	0.23	453 (73.4%)	Arterial blood gas analysis was not clinically indicated

Abbreviations: FiO_2/PaO_2 ratio, ratio of fraction of inspired oxygen (FiO_2) to arterial partial pressure of oxygen (PaO_2)

Supplementary Table S2. Sensitivity analysis of PIM3 model performance restricted to first PICU admissions

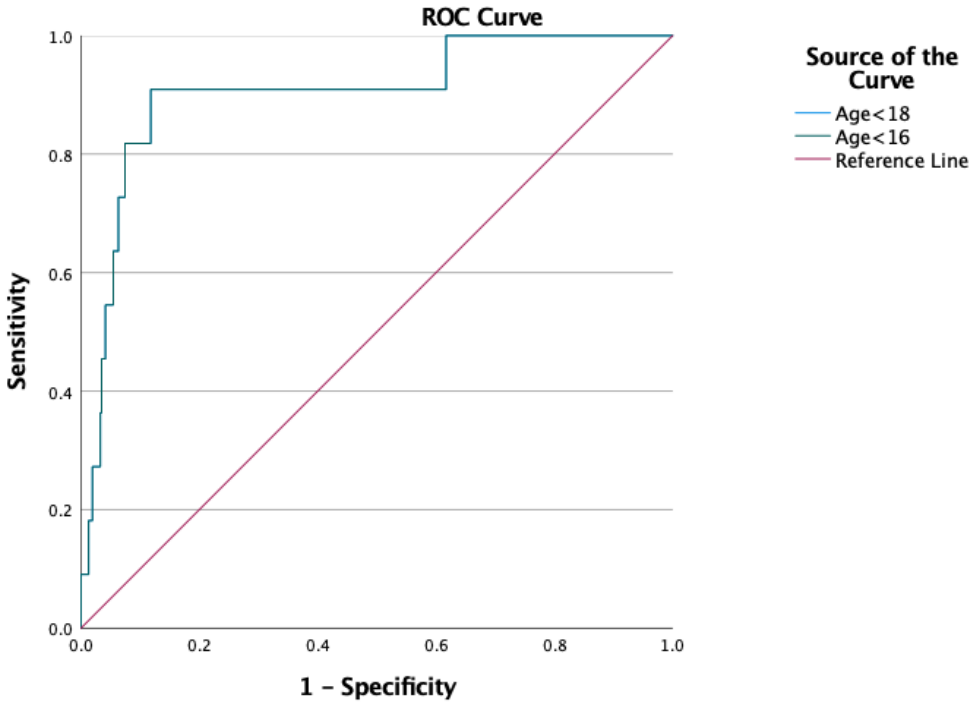
Performance Metrics	Sensitivity analysis (First Admission Only)	
	Age < 16 years n = 468	**Age < 18 years n = 486**
Mortality		
Observed, n (%)	11 (2.35)	11 (2.26)
Expected, n (%)	18.3 (3.91)	18.6 (3.83)
Discrimination		
AUROC (95%CI)	0.903 (0.803–1.000)	0.903 (0.803–1.000)
Calibration		
GOF $\chi 2$ test	7.266 (P-value = 0.508)	7.287 (P-value = 0.506)
Calibration Slope (95%CI)	0.568 (0.309–0.828)	0.574 (0.313–0.835)
Calibration Intercept (95%CI)	-1.755 (-2.694 to -0.816)	-1.769 (-2.710 to -0.828)
SMR		
SMR (95% CI)	0.60 (0.30-1.08)	0.59 (0.30-1.06)
Brier Score		
Brier Score (95%CI)	0.0268 (0.015–0.039)	0.0258 (0.0143–0.0373)

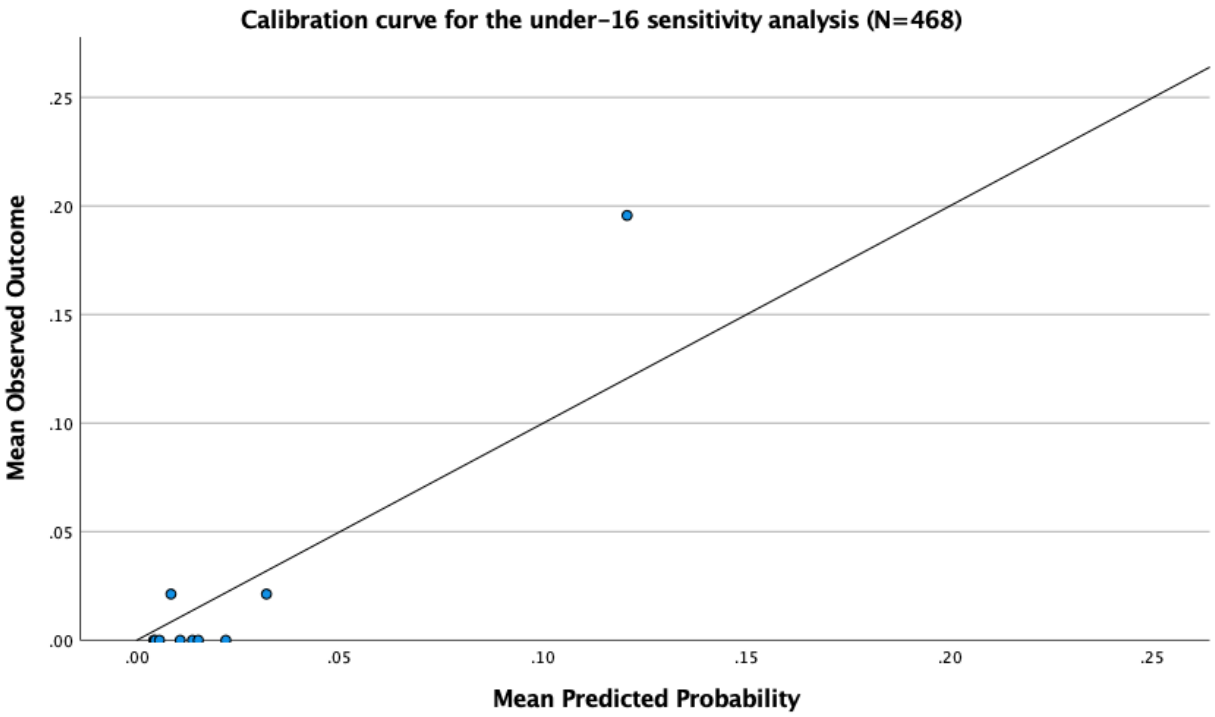
Abbreviations: AUROC, area under the receiver operating characteristic curve; CI, confidence interval; GOF, goodness-of-fit; H-L, Hosmer–Lemeshow; *n*, number of patients; PIM3, Pediatric Index of Mortality 3; SMR, standardized mortality ratio

Supplementary Fig S1 Receiver operating characteristic curves for PIM3 discrimination of mortality in patients aged < 16 years and < 18 years

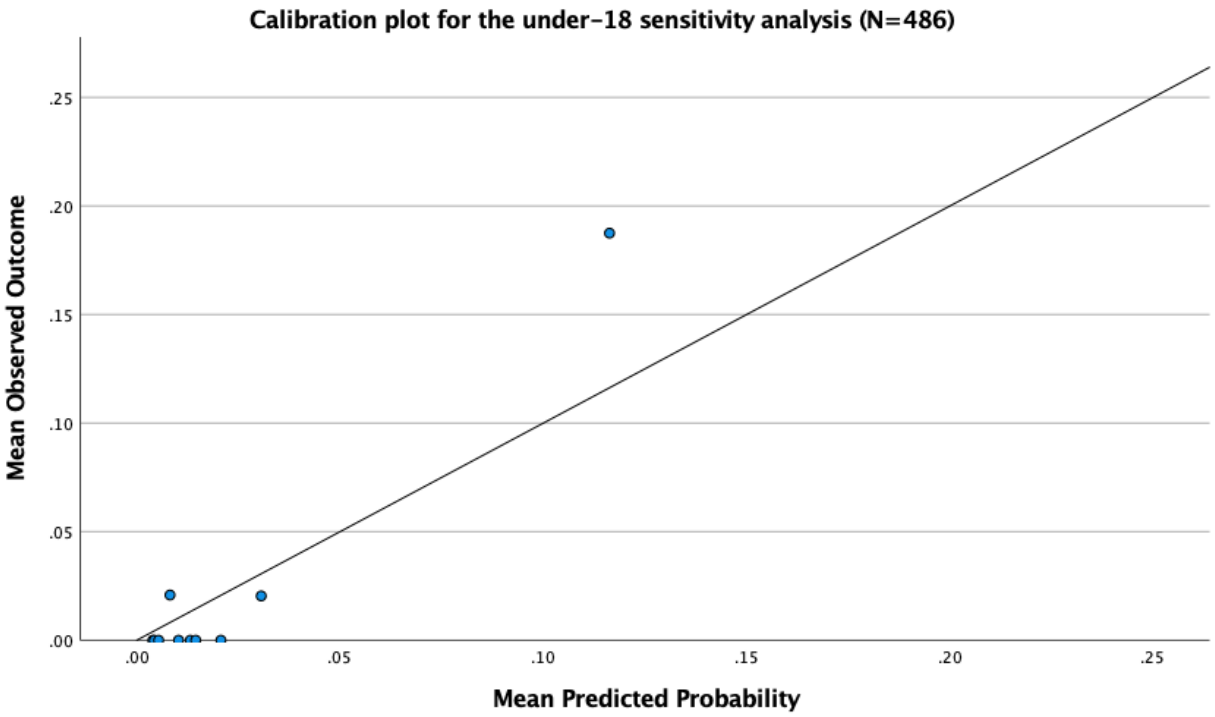
The ROC curves illustrate the discriminative ability of PIM3 in predicting mortality. Both age groups demonstrated identical and excellent discrimination. The AUROC for both < 16 years (n = 468) and < 18 years (n = 486) was 0.903 (95% CI 0.803–1.000); the values are identical as no deaths occurred in the 16–18-year age range. The diagonal reference line represents an AUROC of 0.50 (no discriminative ability). An AUROC > 0.80 is generally considered excellent discrimination.

Abbreviations: AUROC, area under the receiver operating characteristic curve; CI, confidence interval; *n*, number of patients; PIM3, Pediatric Index of Mortality 3; ROC, receiver operating characteristic





Supplementary Fig S2 Calibration Plot of the sensitivity analysis of the PIM3 Model for Predicted versus Observed Mortality from subjects under 16 years. The calibration slope was 0.568 (95%CI 0.309–0.828), and the calibration intercept was -1.755 (95%CI -2.694 to -0.816).
Abbreviations: CI, confidence interval; *n*, number of patients; PIM3, Pediatric Index of Mortality 3



Supplementary Fig S3 Calibration Plot of the sensitivity analysis of the PIM3 Model for Predicted versus Observed Mortality from subjects under 18 years. The calibration slope was 0.574 (95%CI 0.313–0.835), and the calibration intercept was -1.769 (95%CI -2.710 to -0.828).
Abbreviations: CI, confidence interval; *n*, number of patients; PIM3, Pediatric Index of Mortality 3