

Predicting Long-term Neurocognitive Outcome after Pediatric Intensive Care Unit Admission - Exploring the Potential of Machine Learning

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eTable 1. Complete list of the extracted patient and PICU-related characteristics of the included children.

Patient and PICU-related characteristics	Mean (SD), median (IQR) or number (%)
Age at follow-up (years), mean (SD)	8.1 (1.2)
Sex (female), n (%)	26 (40.0)
Socioeconomic status, mean (SD)	5.3 (1.2)
Gestational age (weeks), median (IQR) *	38.1 (36.3-39.9)
Birth weight (grams), mean (SD)	3083 (968)
Bronchopulmonary dysplasia, n (%) **	3 (4.6)
Mother cigarette smoking during pregnancy, n (%) **	6 (9.2)
Mother drinking of alcohol during pregnancy, n (%) **	2 (3.1)
Breastfed in past, n (%)	42 (64.6)
Age at PICU admission (days), median (IQR) *	43.0 (23.5-79.5)
Weight at PICU admission (grams), mean (SD)	4634 (1662)
PIM 2 score, median (IQR)	1.4 (1.1-2.1)
Duration of invasive mechanical ventilation (hours), mean (SD)	169.5 (88.6)
Length of PICU stay (days), median (IQR) *	7.4 (5.7-9.0)
Respiratory syncytial virus positive, n (%) **	56 (86.2)
Reintubation, n (%) **	4 (6.2)
Tracheostomy, n (%) **	2 (3.1)
ECMO, n (%) **	1 (1.5)
CPR, n (%) **	2 (3.1)
Readmission at the PICU, n (%) **	7 (10.8)
Nitric oxide, n (%) **	3 (4.6)
Cardiostimulants, n (%) **	5 (7.7)
Antibiotics, n (%) **	56 (86.2)
Sepsis, n (%) **	1 (1.5)
Septic shock, n (%) **	0 (0.0)
Meningitis, n (%) **	0 (0.0)
Glucose (mmol/L), mean (SD) *	6.1 (0.8)
Number of times glucose < 3 mmol/L, median (IQR) **	0.0 (0.0-0.0)
Number of times glucose > 10 mmol/L, median (IQR)	0.0 (0.0-1.0)
Number of times pCO ₂ > 6.4 kPa, median (IQR) *	12.0 (7.5-19.5)
Number of times pCO ₂ < 4.7 kPa, median (IQR)	1.0 (0.0-2.0)
Number of times pH > 7.45, median (IQR)	6.0 (4.0-11.5)
Number of times pH < 7.35, median (IQR)	2.0 (0.0-4.0)
Number of times lactate > 2.1 mmol/L, median (IQR) **	0.0 (0.0-1.0)
Number of times SpO ₂ < 90%, median (IQR)	1.0 (0.0-2.0)
Number of times SpO ₂ < 85%, median (IQR) *	0.0 (0.0-1.0)

Minimum FiO ₂ (%), median (IQR)	26.0 (25.0-30.0)
Maximum FiO ₂ (%), mean (SD)	88.6 (17.0)
Mean SpO ₂ /FiO ₂ ratio, mean (SD)	2.5 (0.5)
Minimum SpO ₂ /FiO ₂ ratio, mean (SD) *	1.1 (0.3)
Number of times etCO ₂ < 3.5 kPa, median (IQR)	1.0 (0.0-4.0)
Number of times etCO ₂ > 6.5 kPa, median (IQR)	5.0 (1.0-14.0)
Difference between PIP and PEEP (cmH ₂ O), mean (SD)	15.9 (2.5)
Mean airway pressure (cmH ₂ O), mean (SD) *	13.4 (1.8)

Note. CPR = cardiopulmonary resuscitation; etCO₂ = end-tidal carbon dioxide; ECMO = extracorporeal membrane oxygenation; FiO₂ = fraction of inspired oxygen; PEEP = positive end-expiratory pressure; PICU = pediatric intensive care unit; PIP = positive inspiratory pressure; PIM2 score = Pediatric Index of Mortality 2 score; PIP = positive inspiratory pressure; SpO₂ = oxygen saturation.

There were no missing data except for the variables: mother cigarette smoking during pregnancy, mother drinking of alcohol during pregnancy, birth weight and breastfed in past ($\leq 3.1\%$ missing at random). * Variable eliminated in the Linear Regression and k-Nearest Neighbors models due to multicollinearity. ** Variable eliminated in all models due to less than 10 occurrences per event.