

Outline Resource 2: Complex ICU outcome in septic patients (n=757)

| Category, N (row %) | Non-Complex ICU N=575 (76%) | Complex ICU N=182 (24%) | Bivariable | | Multivariable ² | |
|---|--------------------------------|----------------------------|-------------------|------------------|----------------------------|------------------|
| | | | OR (95% CI) | P-Value | OR (95% CI) | P-Value |
| Age at ICU Admission (years) ¹ | 4.9 (1.4, 12.5) | 4.5 (1.3, 11.5) | 0.97 (0.84, 1.11) | 0.622 | | |
| Gender | | | | | | |
| Male | 298 (74.7%) | 101 (25.3%) | 1.16 (0.83, 1.62) | 0.388 | | |
| Female | 277 (77.4%) | 81 (22.6%) | Reference | | | |
| Weight at ICU Admission (kg) ¹ | 16.6 (9.9, 40.7) | 15.1 (9.5, 32.8) | 0.97 (0.94, 1.01) | 0.112 | | |
| Any Comorbid Conditions | 483 (75.2%) | 159 (24.8%) | 1.32 (0.81, 2.15) | 0.272 | | |
| Admission Diagnosis | | | | | | |
| Shock | 320 (71.4%) | 128 (28.6%) | 1.89 (1.32, 2.70) | 0.001 | | |
| Medical Cardiac | 11 (47.8%) | 12 (52.2%) | 3.62 (1.57, 8.35) | 0.003 | 5.32 (1.27, 22.3) | 0.022 |
| Respiratory Failure | 239 (67.7%) | 114 (32.3%) | 2.36 (1.67, 3.32) | <0.001 | 3.22 (1.88, 5.52) | <0.001 |
| Post-Surgical/Minor Trauma | 46 (80.7%) | 11 (19.3%) | 0.74 (0.38, 1.46) | 0.385 | | |
| CNS Dysfunction | 122 (77.7%) | 35 (22.3%) | 0.88 (0.58, 1.35) | 0.565 | | |
| Pain/Sedation Management | 11 (73.3%) | 4 (26.7%) | 1.15 (0.36, 3.66) | 0.810 | | |
| PRISM-III | 4 (0, 9) | 10 (5, 19) | 1.12 (1.08, 1.17) | <0.001 | | |
| PIM-2 | 1 (1, 3.5) | 4 (2, 16) | 1.08 (1.04, 1.13) | <0.001 | | |
| PELOD | 10 (1, 12) | 12 (11, 21) | 1.08 (1.04, 1.12) | <0.001 | | |
| Any Severity Score >75 th Percentile | | | | | | |
| Yes | 56 (50.4%) | 55 (49.6%) | 4.71 (2.86, 7.73) | <0.001 | 4.57 (2.69, 7.78) | <0.001 |
| No | 206 (82.7%) | 43 (17.3%) | Reference | | Reference | |
| History of Transplant | 41 (73.2%) | 15 (26.8%) | 1.17 (0.63, 2.17) | 0.618 | | |
| Sepsis and AKI Status | | | | | | |
| Sepsis and AKI (4) | 201 (65.5%) | 106 (34.5%) | 2.60 (1.85, 3.65) | <0.001 | 2.79 (1.64, 4.73) | <0.001 |
| Sepsis and No AKI (2) | 374 (83.1%) | 76 (16.9%) | Reference | | Reference | |

ICU = Intensive Care Unit, AKI = Acute Kidney Injury, PRISM-III = Pediatric Risk of Mortality 3, PIM-2 = Pediatric Index of Mortality 2, PELOD= Pediatric Logistic Organ Dysfunction, CNS = Central Nervous System, MV = Mechanical Ventilation, CRRT = Continuous Renal Replacement Therapy, ECMO = Extracorporeal Membrane Oxygenation

¹OR increments in units of 5; ²Multivariable ROC = 0.76 and sample size = 360, due to list-wise deletion

³Mortality, CRRT, ECMO, ICU and MV covariates were not included as they comprise the definition of complex ICU