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## Assessment of Pediatric Logistic Organ Dysfunction (PELOD) score and its impact on mortality of pediatric intensive care unit patients in a tertiary government hospital: A prospective observational cohort study

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**Background:** Estimation of disease severity and probability of death are essential in determining the prognosis. An objective measurement tool is necessary to accurately communicate prognosis of critically ill children to their parents.

**Objective:** This study aimed to analyze the prognostic value of Pediatric Logistic Organ Dysfunction (PELOD) score in the presence of organ dysfunction.

**Design:** It is a prospective observational cohort study.

**Setting:** Pediatric Intensive Care Unit (PICU) of tertiary government hospital in the Philippines.

**Participants:** All prospective admissions from term newborn to <19 years of age were included from July 15, 2016 to July 14, 2017. A total of 149 patients admitted; sixty six (66) excluded due to consent denial (n=20), incomplete diagnostic work-ups (n=12), death within 8 hours of admission (n=12) and prematurity (n=22). Eighty three (83) subjects were enrolled.

**Main Outcome Measures:** PELOD score was calculated in the first 24 hours of admission with outcome measures as survival or non-survival.

**Results:** Of the 83 patients, 51 (61%) were male and 32 (39%) were female; with a mean age of 5 years old and median length of stay of 5 days. Mortality rate was 43.4%. PELOD scores of non-survivors 25.4 (22.4) was significantly higher ( $p<0.001$ ) than survivors at 4.9 (5.9). Fifty five percent (55%) had Multiple Organ Dysfunctions Syndrome (MODS) upon admission with 100% mortality rate for organ dysfunction of  $\geq 4$ . ROC curve analysis for predicting death was 0.827 (95% CI,  $P<0.001$ ) indicating a very good discriminatory ability. PELOD score of 15 correlated with 50% probability of death and risk ratio analysis ( $P<0.001$ ) reveals the risk of dying of patients with PELOD score  $>15$  is 3.3x that of with score  $\leq 15$ .

**Conclusion:** PELOD score is a reliable prognostic predictor of mortality. Cardiovascular and neurologic dysfunctions were highly associated with mortality. Increasing number of organ dysfunction was correlated with increasing PELOD scores and mortality rate.

### Biography

Bhupinder K Girm is a graduate of Doctor of Medicine from Far Eastern University-Nicanor Reyes Medical Foundation, Institute of Medicine. She took her Post-Graduate Internship at Rizal Medical Center and Pediatric Residency Training in the same institution.

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