

Paediatric Intensive Care Unit (PICU) in Malaysia: A case series

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Background

The Paediatric Early Warning System (PEWS) is a scoring system that evaluates vital signs and clinical status to identify hospitalized paediatric patients at higher risk of deterioration. While PEWS has been widely implemented in paediatric wards and emergency department, its use in Paediatric Intensive Care Unit (PICU) setting remain underexplored. In PICU, timely identification of clinical deterioration in critically ill children is crucial for improving patient outcomes. An electronic version has been developed to provide a standardized, objective tool for early detection of clinical deterioration in PICU.

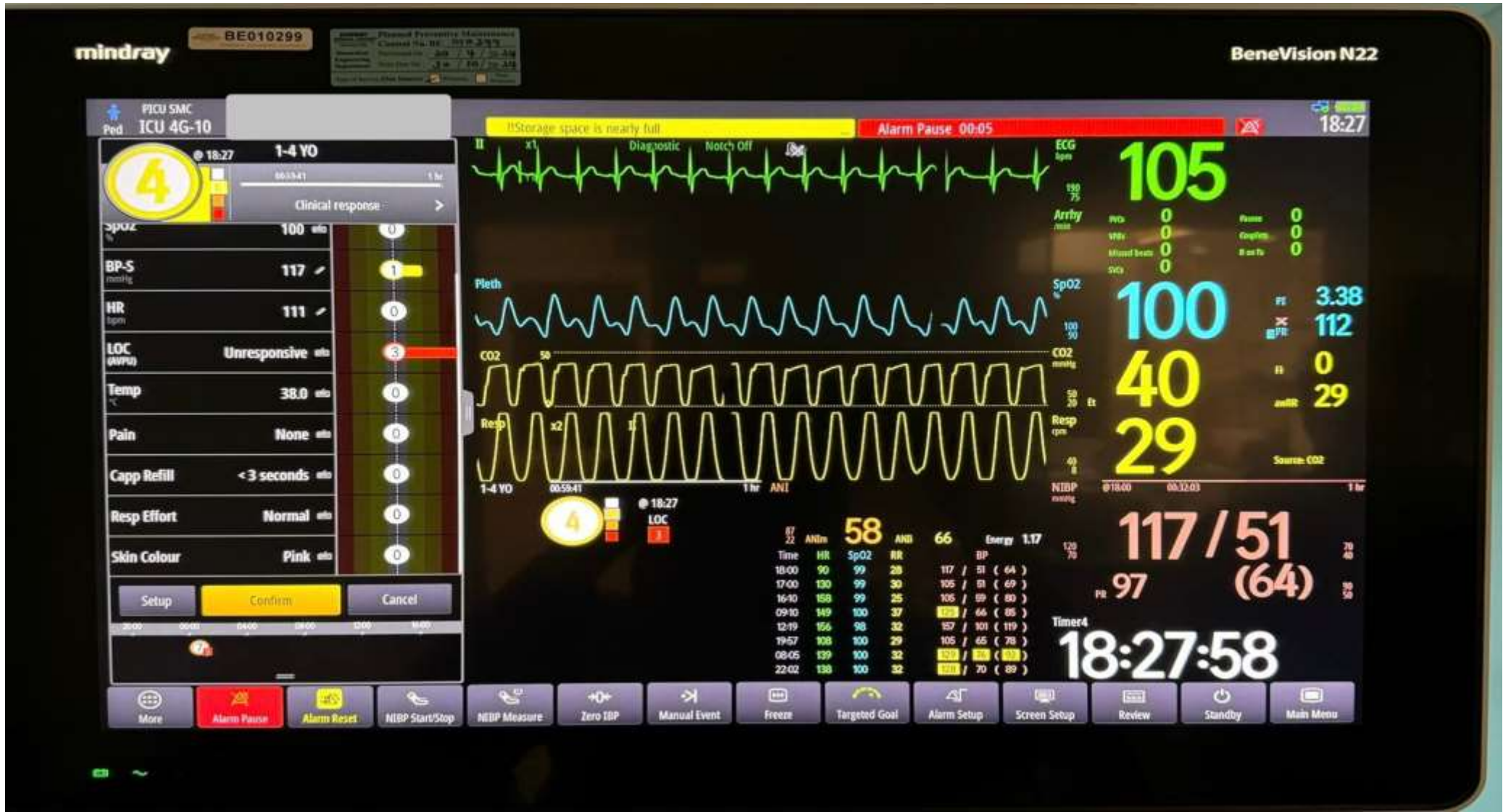
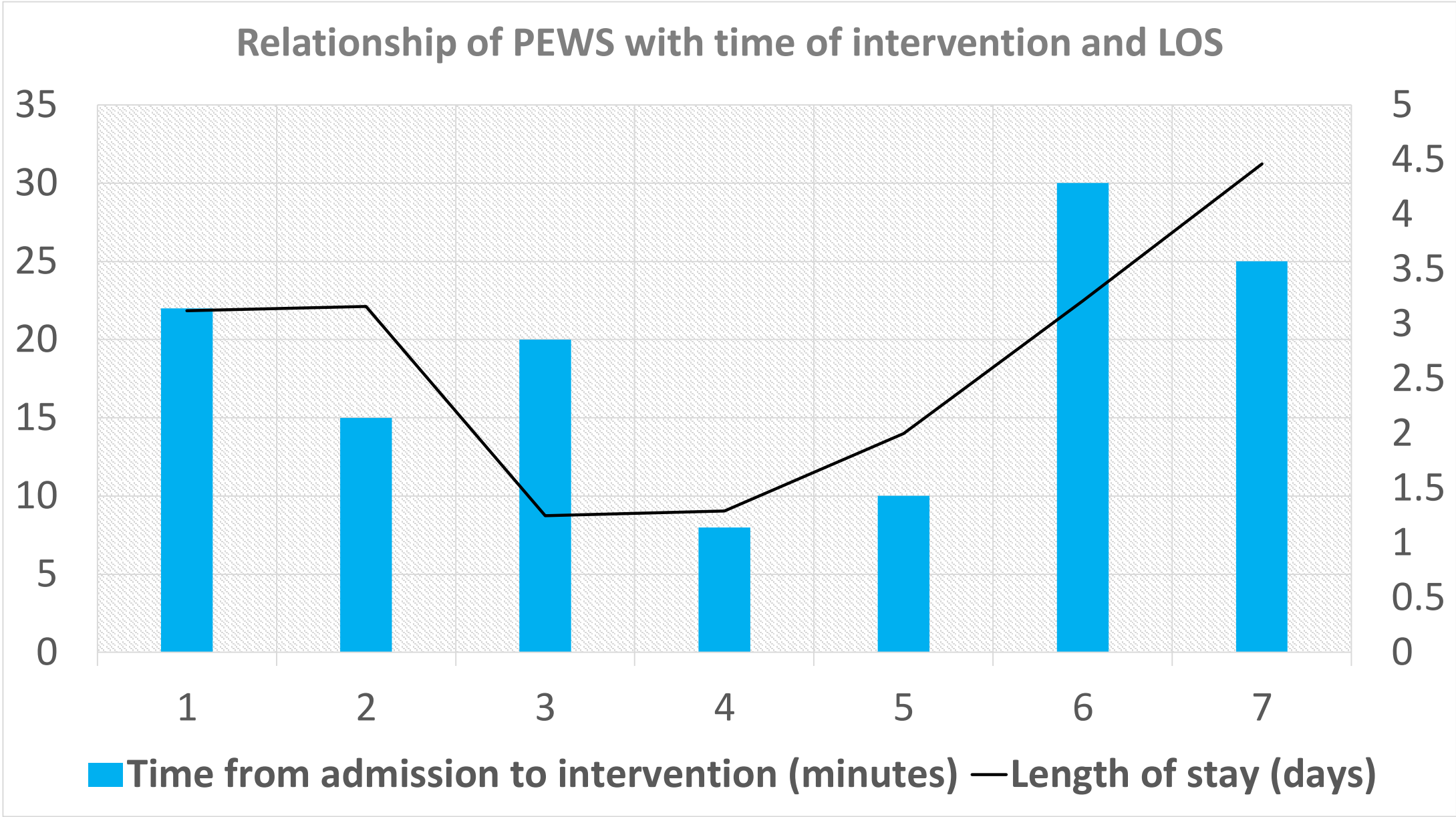
Objective

To evaluate the impact of the E-PEWS scoring system on early detection of clinical deterioration, clinical decision-making, and patient outcomes (LOS) in PICU.

Methods & Materials

This study is a retrospective case series study to evaluate the effectiveness and implementation of the Early Warning Score (E-PEWS) system in Paediatric Intensive care. Our PICU is an 8 bedded mixed PICU/PHDU with yearly admission of 488 patients.

Results



Picture showing integrated ePEWS scoring in PICU cardiac monitor

Results

Patient List	Pre-Intervention PEWS score	Post-Intervention PEWS score	Time from admission to intervention (minutes)	Length of stay LOS (days)
A	9	4	22	3.12
B	8	3	15	3.16
C	7	2	20	1.25
D	10	2	8	1.29
E	7	3	10	2.00
F	9	2	30	3.21
G	7	3	25	4.46

Table 1. Relationship of PEWS with time of intervention and LOS  
\* Time includes admission bay preparation and machine setup

Discussion and Conclusion

This study has provided a diversity of insights on the use of e-PEWS system in a PICU with various background ICU nurses and a single PICU consultant. The system acted as a common platform of communication between nurses and consultant in an objective way. This has led to effective communication and improvement in timely intervention. The overall outcome is shown by a shorter LOS less or equal to 3 days (85.7%) for lower respiratory illness requiring Non Invasive Ventilation.

References

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