



**Service Priorities and Programmes**  
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**Implementation of Integrated Observation chart with Paediatric Early Warning Score (PEWS) – a useful assessment tool for early recognition of deterioration of Paediatric patients**

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**Introduction**

An integrated observation chart with Paediatric Early Warning Score (PEWS) helps nurses to identify paediatric patients at risk of clinical deterioration. In July 2011, Monaghan's PEWS was adopted by PEWS working group and its use was endorsed by SAG(Paed). PMH Paed department has developed 5 sets of multi-colored integrated observation chart with PEWS in December 2011. Implementation of the use of PEWS in the whole paediatric department since Feb 2012 facilitates early detection of patient's clinical deterioration.

**Objectives**

To implement PEWS as an assessment tool for the early recognition of deterioration of Paediatric patients in PMH.

**Methodology**

Endorsement and support were sought from Paediatric Management subcommittee. With the support from COS & DOM, a working group was developed to work on the implementation plan. Integrated observation charts with PEWS and action pathway were developed to suit local needs. Moreover, printing of multi-colored PEWS forms were supported by top management. Before full implementation, 5 training sessions were held to brief 92 nurses. The program has been implemented in Paediatric department since Feb 2012. Coordinators of each paediatric ward help to collect staff feedback and implementation issues as well as subsequent staff training in order to sustain the changes. Staff survey and PEWS audit were performed in July 2012 & Sept 2012 respectively to evaluate staff's acceptance on the use of PEWS as well as compliance on PEWS documentation and effectiveness. Another PEWS evaluation on PEWS documentation and triggering system were done in April 2014.

**Result**

In 2012, 6 months after implementation, nurses gave positive feedback on the use of integrated charts with PEWS. Over 70% nurses (N=79) agreed that PEWS was

helpful to alert on patient deterioration. Documentation audit (N=9) showed 89.9% compliance on PEWS documentation. Nurses were able to trigger interventions such as increased frequency of observation, adding of monitors, inform doctors according to PEWS action pathway (100%). Nurses verbalized increased confidence in initiating nursing actions and felt easy to use the PEWS charts. During the audit, retrospective chart review also evaluated whether PEWS was an early indicator for patient deterioration and leading to PICU admission (N=5). Three patients (60%) had a critical PEWS (score 4 or a domain score of 3) 3 to 5.5 hours before admission to PICU. Nurses were able to recognize subtle early changes in observations with PEWS score 1 or 2 and initiated appropriate nursing actions. Besides, PEWS action pathway was evaluated in July 2013 with nurses, consultant and frontline resident. It was concluded that nurses informed doctor appropriately without creating extra workload to doctors. PEWS was a common language for communicating patient's condition. In summary, Integrated observation chart with PEWS is an effective tool to facilitate early recognition of deterioration of paediatric patient and is well accepted by Paediatric nurses and doctors in PMH. In April 2014, 2 years after full implementation, the program was evaluated. PEWS charting (320 nos.) from 49 patients' medical records were audited. Compliance on documentation and trigger of appropriate interventions according to PEWS action pathway was 99.9% and 95% respectively. Staff survey (N=23) showed acceptance of the use of PEWS (100%), easy to use (100%) and help alert patient deterioration.