



## Service Priorities and Programmes Electronic Presentations

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### **Analysis of PICU Admission Data Over 1 Year in QEH**

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#### **Introduction**

The Paediatric Intensive Care Unit (PICU) of Queen Elizabeth Hospital receives patients from various paediatric and surgical units and provides critical care and post-operative support for children with a wide range of medical and surgical conditions.

#### **Objectives**

(1) To describe the demographics of PICU admission (2) To identify PICU service spectrum and (3) To evaluate the outcome of PICU admissions in terms of mortality, duration of PICU stay and duration of hospital stay in QEH

#### **Methodology**

A standard data collection form has been used to collect information for each PICU admissions. Data recorded includes patient demographics, primary diagnosis, pre-morbid conditions, admission source, mortality, PICU stay duration, hospital stay duration and various clinical data for calculation of the Paediatric index of Morality 2 (PIM2) score. Data form of patients admitted from 1st April 2015 to 31st March 2016 were retrieved and all data in the form were collected for analysis.

#### **Result**

There were altogether 296 PICU admissions during the study period and a total of 285 (96%) data forms were successfully collected. There were 156 (54.7%) male and the median age on admission was 72months (Interquartile range [IQR] 124 months). 70.9% of admissions were emergency admissions whereas 29.1% were clinical admission. The spectrum of conditions requiring PICU admission include 61.8% medical diagnosis, 13.7% neurosurgical conditions, 11.6% paediatric surgical conditions, 8.4% other surgical conditions (including Ear, nose and throat problems, orthopaedics and cardio-thoracic surgical condition) and 4.6% trauma. The median

(IQR) duration of PICU stay and hospital stay in the whole cohort was 2 (5) days and 11 (31) days respectively. Children with medical conditions had significantly longer median duration of PICU stay (3 days vs 2 days,  $p=0.006$ ) and hospital stay (14 days vs 9 days,  $p=0.022$ ) than children with non-medical conditions. There was significantly different median PIM2 score for admissions of various conditions (medical conditions 1.2 (3.6)%, neurosurgical conditions 0.8 (1.1)%, paediatric surgical condition 0.1 (0.4)%, trauma 0.9 (1.1)% and other surgical condition 0.3 (0.97)%,  $p<0.001$ ). The total observed mortality rate was 1.69%.

The PICU of QEH received patients from a wide spectrum of conditions. The overall mortality was low and children with medical conditions had higher PIM2 score on admission, longer duration of PICU and hospital stay compared to non-medical causes.