EXECUTIVE SUMMARY

Fourth PICANet National Report January 2004 – December 2006

1   PICANet is a clinical audit of paediatric intensive care (PIC) activity in England and Wales aiming to improve patient outcomes through providing information on delivery of care to critically ill children and an evidence base for clinical governance. PICANet was established in 2001 and functions in close collaboration with members of the PIC clinical community.

2   The specific objectives of PICANet are to identify best practice, monitor supply and demand, monitor and review outcomes of treatment episodes, facilitate strategic health care planning, quantify resource requirements and study the epidemiology of critical illness in children.

3   The national PICANet dataset continuously records details of admission, discharge, diagnoses (coded using Clinical Terms 3 (The Read Codes)), medical history, physiology, interventions and outcome. The outcome information is adjusted by 'case mix' to provide reliable evidence on patients' outcomes for clinicians, managers, patients. From 2006 the casemix adjustment tool is the update Paediatric Index of Mortality 2.

4   Rigorous data quality procedures, incorporating iterative feedback loops between PICANet and the units, continue to ensure the dataset is of high quality.

5   PICANet are developing and expanding the core dataset in response to changes in the infrastructure and funding streams of the NHS. PICANet will provide the software for units to record the Paediatric Critical Care Minimum Dataset (PCCMDS) to support the Paediatric Critical Care Healthcare Resource Groups (HRGs) and Payment by Results (PbR). The flexibility for the collection of unit specific additional items will remain, whilst additional modules, such as that on retrievals, are under construction.

6   Data are presented on 42,221 paediatric intensive care admissions to 24 NHS trusts in England and Wales and the Royal Hospital for Sick Children, Edinburgh over the 3 year period January 2004 to December 2006. Detailed tables present information nationally, by Strategic Health Authority/Health Board (SHA), Primary Care Organisation (PCO) and named individual NHS trust. For the first time, data are available for downloading from the Web in spreadsheet format.

7   Children under 1 year comprise 48% of all admissions with an overall excess of boys (57%) compared to girls (43%). The majority of admissions (54%) are unplanned. Retrievals of 75% of children are by specialist paediatric intensive care teams.

8   Invasive ventilation procedures are recorded for 67% of admissions. This varies by trust between 6% and 95% over the three years.

9   A total of 242,997 bed days were delivered between 2004 and 2006. Length of stay has been calculated to the minute and presented as numbers of admissions by length of stay category ranging from less than an hour (0.8%) to 7 dyas or longer (16%). A 'bed census' has been calculated for children actually occupying a bed at 10 minutes past midnight on each day to provide a more accurate assessment of daily occupancy in the PIC service.

10 It is extremely rare for a child to die in paediatric intensive care and 95% are discharged alive. Risk-adjusted performance of all trusts fell within acceptable limits in each individual year and aggregated across the three year period.

11 The re-organisation of the NHS into Primary Care Organisations in 2006 is reflected in this report. Maps by SHA and PCO illustrate considerable variation in the geographical distribution of the volume of patients receiving paediatric intensive care and the percentage of children invasively ventilated.

12 PICANet acknowledge that data on status 30-day post discharge is incomplete for 57% of children discharged alive.

13 PICANet remains responsive to the needs of the clinical community and service providers and a number of new features are incorporated into this report.   Clinicians and commissioners have contributed chapters on specific topics. These include a clinician's commentary, information on the PCCMDS, the retrievals dataset, health informatics, PICU staffing and a commissioner's perspective. These all add information on the context and environment within which PICANet operates.

14 Twelve recommendations arising from this report are outlined in the next section.