PICANet Annual Report March 2003 – February 2004: EXECUTIVE SUMMARY

- PICANet is an audit of paediatric intensive care activity in England and Wales aiming to provide information on effective delivery of paediatric intensive care and an evidence base for clinical governance. The design and implementation of PICANet has progressed in close collaboration with members of the paediatric intensive care clinical community.

- Specific objectives 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.

- For the first time in England and Wales data are available from all 29 designated PICUs (located in 24 NHS trusts). Findings are presented for England and Wales and for each individual (but unidentified) NHS trust. Each trust will be able to identify its position for comparison with the national benchmark.

- This report is based on a dataset of demographic and clinical information collected on all PICU admissions between 1st March 2003 and 29th February 2004.

- Data are collected using either bespoke PICANet software or other local clinical software programs. Data are transmitted via NHSnet, email or on disc to the secure central PICANet server using high grade encryption. Problems relating to information technology within hospitals have been a significant cause of delay in this process. Fewer difficulties have been encountered where the PICANet software is used.

- Data quality is addressed through visits to all participating units where systematic validation procedures are carried out. These have been extremely valuable exercises, well received by both unit staff and PICANet team members. Data validation reports have been returned to each unit to allow inconsistencies to be investigated and amended.

- The PICANet dataset includes admission and discharge data, as well as information on diagnoses, medical history, physiological measurements, interventions, occupancy and outcome.

- The primary reason for admission to paediatric intensive care is coded using Clinical Terms 3 (The READ Codes), according to recommendations from the NHS Information Authority (NHSIA).

- The Paediatric Index of Mortality (PIM) is the risk adjustment method used.

- Over the year March 2003 to February 2004, 13 805 admissions were recorded for children aged 0 – 15 years of age and 250 admissions for patients aged 16 years and above. Children under 1 year of age accounted for 48% of admissions, with 59% of these being male. Predictably, the same age group accounted for the vast majority of bed days.

- Overall, January 2004 and August 2003 were the busiest and least busy months respectively. A clear seasonal trend was observed for respiratory conditions.

- Paediatric intensive care services are available for both planned and unplanned admissions, but the prominence of unplanned episodes (59%) highlights the difficulties for resource allocation. A large proportion of unplanned admissions (47%) came from another hospital.

- Cardiac was the most common primary diagnostic group (31%), followed by respiratory (25%).

- The majority of retrievals were undertaken by the unit's own retrieval team (63%).

- Over half (58%) of all children admitted to paediatric intensive care were invasively ventilated.

- Median daily occupancy levels vary in accordance with unit size. The monthly occupancy levels do not vary significantly but do reflect the winter peak.

- The majority of children (94%) admitted to paediatric intensive care are discharged alive.

- Acquiring follow-up information 30 days post discharge proved difficult; 59% of those discharged alive had an unknown follow-up status.

- An additional remit of PICANet was to investigate PICU staffing levels. Two snapshot surveys were undertaken in September 2003 and in March 2004. Information was collected on the numbers and grades of nursing and medical staff working in paediatric intensive care.

- Recommendations have been made to facilitate the ongoing collection of high quality data in the paediatric intensive care environment. These include identifying a designated member of staff for data collection and entry and improving local IT infrastructure.