Paediatric Critical Care and Specialised Surgery in Children Service Review

(including paediatric transport and Extracorporeal Membrane Oxygenation)

Terms of Reference

Context

1. Paediatric critical care has changed significantly over the last 20 years. In the 1990s, fragmentation of services was associated with excess mortality rates and inadequate provision of services, and many paediatric intensive care units (PICUs) lacked specialist expertise in caring for critically ill children.[1] Data now suggests that outcomes have improved; this follows centralisation of care. Deaths on PICUs are infrequent, and in 2015 over 90% of parents of children in PICUs rated the performance of doctors and nurses very highly.[2]

2. Despite these improvements, there are a number of challenges facing paediatric critical care – in particular capacity and demand - which need addressing now to ensure services are able to meet the needs of children and families in the future. Balancing pressures between elective and emergency admissions is often difficult, particularly when seasonal pressures are added. Services are facing increasing pressure as more children with complex and long-term co-morbidities are requiring treatment on PICUs, and the average length of stay is increasing. PICUs also need to be staffed safely and appropriately – in 2015, only 34% of PICUs met nursing establishment levels recommended by the Paediatric Intensive Care Society.[3] Though PICUs have expanded over the last few years, occupancy levels remain high. The expansion of services has occurred without a regional or national strategy aimed at ensuring the provision of sustainable, cohesive, high quality services across the country. This includes the paediatric transport service.

3. Specialised children's surgical activity has risen year on year, and over the last ten years a pattern has emerged where children under five are more likely to be transferred to specialist units for non-specialised surgery. This is because fewer surgeons and anaesthetists in local hospitals are trained to care for children for some emergency and elective procedures. They may also have insufficient or too infrequent exposure to maintain their skills. The impact on specialised activity is difficult to quantify.

4. It is thus difficult to plan pathways of care that take into account complex co-dependencies, co-location requirements and linkages between services. As a result care can be disjointed for children and families, and it can be difficult for commissioners to ascertain accurate activity levels and costs.

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[1] Pearson G, Shann F, Barry P et al. Should paediatric intensive care be centralised? Trent versus Victoria. *The Lancet;* 1997; 349(9060); 1213-1217.
[2] Forthcoming PICANET 2016 annual report, to be published late 2016 at: http://www.picanet.org.uk/Audit/Annual-Reporting/
[3] As above

Scope and Purpose

5. The review into paediatric surgery and paediatric intensive care will look at both the connected and distinct elements of each service. The review will ascertain the optimal models for the provision of sustainable, high quality, responsive paediatric critical care and specialised surgery in children in England, considering critical co-dependencies with other essential services.

6. In particular we will seek to address the following issues:

    - Clarify pathway linkages between paediatric critical care and specialised surgery in children;
    - How best to optimise use of paediatric intensive care beds, through consideration of different levels of critical care required to support stable and unstable children of different levels of acuity;
    - The potential role of networked models of care for children's specialised surgery and paediatric critical care, supporting care closer to patients home residence where possible;
    - The optimal national model of provision for (paediatric cardiac and respiratory) extracorporeal membrane oxygenation (ECMO) services;
    - How best to deliver comprehensive transport services for children requiring PICU admission, and in due course, repatriation; and
    - Critical linkages to other current and forthcoming service reviews, especially congenital heart disease (CHD), burns and neonatal intensive care.

Principles

7. In taking forward this work, we will:

    - engage widely, openly and transparently at all times with commissioners, clinicians, arm's length bodies, professional organisations and the public;
    - adopt an evidence-based approach, making use of available data to inform assessments of current landscape, issues and future requirements;
    - make strategic links with other key reviews and initiatives;
    - consider the costs, benefits and implementation challenges of proposals; and
    - seek to achieve a broad consensus around final proposals.

Timeframe

8. Early evidence and thinking will be published early in 2017, with a more detailed vision available in the autumn 2017 for further engagement and testing. We expect implementation to begin during 2018 (note: this has been updated since the launch of the review in October 2016).

Next steps

9. An expert stakeholder panel will be convened and meet for the first time in autumn 2016 to inform the development of a high-level vision for paediatric critical care and specialised surgical services.