‘Data spotlight’ on paediatric critical care services aims to improve experience for both patients and NHS staff

Delivering more critical care for sick children beyond the intensive care unit – and developing a suitably skilled workforce to support this – can help to relieve pressure on services and ensure children are seen as close as possible to their family home, according to the latest report from the Getting It Right First Time (GIRFT) programme.

Improving the configuration of paediatric critical care (PCC) services to ensure a better flow and consequently better experience for young patients is a key focus of the new GIRFT national report for PCC.

Written by Professor Kevin Morris (paediatric intensive care consultant at Birmingham Women’s and Children’s NHS Foundation Trust) with Dr Peter-Marc Fortune (consultant paediatric intensivist at Manchester University NHS Foundation Trust), the report is based on deep-dive visits to all 23 paediatric intensive care units (PICUs) and 10 operational delivery networks (ODNs) in England, as well as questionnaires from 108 (of 128) spoke hospitals.

The report offers an unprecedented range of data to describe the current landscape of PCC services and how services are used at both provider and network levels.

Professor Morris said: “It is our hope that shining this ‘data spotlight’ will encourage critical review of services by local teams and, in turn, the development of improved services for critically ill children and their families.”

PCC is a specialised service that looks after sick children aged 0-16 years old in hospital – from stabilising an injured child on a general ward to highly specialist care (eg; life support) within a PICU. Around 8-10% of children admitted to hospital require high dependency care and 2% are admitted to PICUs. Around 16,500 critically ill children (aged 0-16) are admitted to PICUs every year, occupying more than 116,000 PCC bed days.

The GIRFT report makes a series of recommendations to help units improve the outcomes and care for these children, as well as supporting the workforce and enabling better data collection to inform improvements in the future.

Key areas for potential improvement include:

Improving patient flow to improve outcomes and experience: Cancelled surgery, out-of-area care and variation in workforce skills across units can negatively impact the experience of children and their families. For example, around 8% of elective operations are cancelled due to a lack of a PICU bed, which can cause added distress for children. In addition, the GIRFT review shows only 63% of children are admitted to their closest PICU, due to factors such as regional pathway arrangements/partnerships, capacity or unit strain.

Supporting a key principle of the NHS Long Term Plan, the GIRFT report recommends measures to ensure that every child requiring PCC can receive care as close to their family home as possible. This

includes the development of clear written criteria to determine the best destination for a child when they require urgent transfer.

Strategies for earlier detection when a child is deteriorating are also outlined in the report, including a call for a single early warning system to be developed and used across all hospitals in England.

Understanding and responding to capacity and demand: Just over half of admissions to PICUs are unplanned cases, making demand unpredictable, especially over the winter. Current metrics and reporting do not provide a full picture of demand and capacity across the country, and there is no national oversight of how many PCC beds are commissioned in each network or region.

Regional variation in PICU bed capacity can cause unintended blockages in the patient pathway and affect the fluid working of the 'step-up, step down' process (the safe movement of patients between critical and moderate care services), potentially delaying admission to the PICU for the most seriously ill children.

GIRFT's recommendations aim to improve capacity, encouraging a flexible approach to managing the number of L3 (advanced care) beds that can be opened, to improve winter surge capability. Regular reviews of demand and capacity are recommended to help identify when a L3 unit is under strain and take action.

Capacity can also be improved by ensuring that children in PICUs are discharged back to spoke hospitals whenever appropriate (repatriation) so that L3 beds are used most efficiently, and that critical care can be delivered beyond the PICU.

Clear and consistent reporting of bed occupancy metrics can also to help inform future improvements and planning.

Supporting and developing the PCC workforce: A robust and suitably skilled workforce is integral to delivering safe care, but the report highlights that there is work to do to improve staff retention and training and ensuring there is an adequate skills-mix among staff.

The report recommends the development of a well-defined educational strategy within regional networks, to help boost skills and staffing levels across PCC. In particular, it calls for more than 80% of registered nursing staff working in an HDU area to have completed a relevant HDU course, and all paediatric trainees to complete at least six months' training in PCC prior to becoming a consultant.

Report recommendations

The report makes **21** recommendations across **seven** areas of focus:

Configuration of paediatric critical care services

1. Develop and introduce a single early warning system for children across all hospitals in England.

2. Ensure that specialist paediatric pathways are more closely aligned, so that a child with multiple comorbidities receives coordinated care in one tertiary hub whenever possible.

3. Ensure that paediatric critical care provision across England is equitable and appropriate to local demand, so that every child requiring PCC can receive care as close to the family home as possible.

4. Increase the number of L2 beds across both hub and spoke hospitals, to reduce strain on L3 beds, improve efficiency, and improve value for money

5. Ensure that there is equitable distribution of 'core' resources across the ten PCC ODNs, which is sufficient for them to achieve the key performance indicators set out by NHS England and NHS Improvement in the PCC national review recommendations, and sufficient for them to deliver the recommendations contained in this review.

Access, capacity and strain

6. Adopt approaches to flex the number of L3 beds that can be opened, to better align staffing with predictable flux in demand, and improve winter surge capability

7. Ensure that monitoring is in place to identify a L3 unit that is under strain, so that a plan of remediation can be developed.

8. Make revisions to improve the reporting of 'refused' admissions

9. Ensure clear, consistent reporting of bed occupancy metrics

Pathways, flow and efficiency

10. Undertake research to develop a comorbidity index for children (research recommendation)

11. Develop network clinical pathways, which clearly describe aspects of care that are to be delivered within each spoke hospital, and implement regular monitoring of spoke activity and spoke to hub PICU transfers.

12. Ensure that L3 beds are used efficiently, with alternative pathways in place to minimise the use of L3 beds by patients who do not require L3 care.

13. Develop improved long-term ventilation (LTV) pathways, to deliver hospital care, when it is necessary, as close to the child and family home as possible.

14. Implement strategies to improve early detection of patient deterioration and ensure timely paediatric critical care intervention

15. Undertake work to enhance the reporting of PCC outcomes, and deliver improved metrics of unit performance

16. Deliver near real-time reporting of a set of core quality metrics relevant to critical care

Workforce

17. Ensure that clinical staff are available, in appropriate numbers and with relevant critical care expertise, and working to acceptable roster patterns.

18. Ensure that clinical staff working with critically ill children have access to appropriate PCC education and training.

Data capture and reporting

19. Improve the accuracy and completeness of PCC data capture and flow

Commissioning and funding

20. Ensure that there is a consistent approach to commissioning of PCC services across ODNs.

21. Ensure that there is up to date guidance to support a consistent approach to commissioning of PCC services

Litigation

22. Reduce litigation costs through application of the GIRFT programme's five-point plan