

IRISH PAEDIATRIC CRITICAL CARE AUDIT SUMMARY REPORT 2024

The Irish Paediatric Critical Care Audit (IPCCA) collects information about the care of critically ill children in Ireland. It is managed by the National Office of Clinical Audit (NOCA). The audit includes children cared for in paediatric critical care units (PCCUs) and children admitted to adult intensive care units, using data from the Irish National ICU Audit. NOCA works with the Paediatric Intensive Care Audit Network (PICANet) in the UK to collect and review these data.

Clinical audit checks whether care meets agreed standards and helps health services identify where care is working well and where improvements are needed.

Ireland has two dedicated PCCUs. Both are in Dublin: Children's Health Ireland (CHI) at Crumlin has 23 beds and Children's Health Ireland (CHI) at Temple Street has 9 beds. The units care for children from every county in Ireland. This report covers babies and children aged under 16.



1715

ADMISSIONS IN 2024
almost half (45%) were
babies aged under one year

68%

**MOST ADMISSIONS
WERE EMERGENCIES**



HOW PAEDIATRIC CRITICAL CARE SERVICES PERFORMED

WHAT IMPROVED IN 2024

The Irish Paediatric Acute Transport Service reached more critically ill children within the recommended timeframes:

The proportion of retrieval mobilisation times within the recommended one-hour target increased from **75%** to **86%**. This measures how quickly the specialist team can assemble and begin travelling when a patient needs to be transported from one hospital to another.

The proportion of transport teams reaching the patient's bedside within the recommended three-hour target increased from **65%** to **71%**. This reflects the time it takes between the specialist team's decision to transfer the child and arrival at the bed in the destination hospital.

Timeliness of audit data submission increased from **75%** to **92%**, supporting better monitoring.

PCCU bed occupancy decreased from **102%** to **90%** in 2024. However, demand continues to exceed the recommended level (85%). High bed occupancy means that most or all critical care beds are full most of the time.

WHAT STAYED THE SAME

There were 5.45 whole-time equivalent (WTE) qualified nurses for each critical care bed. The recommended level is 5.8 WTE. A whole-time equivalent combines the hours worked by full-time and part-time staff. Sufficient staffing is needed to keep beds open safely.

Emergency readmissions within 48 hours of discharge remained low at 1.5%. The proportion of children who died in critical care was 3%. These figures were broadly unchanged in 2024.

13% of children were discharged from PCCU outside normal working hours. This remained above the recommended maximum of 10%.



KEY FINDINGS

Irish Paediatric Critical Care Audit 2024

Many of the children admitted to PCCUs were newborn babies.
In this report, a newborn (or neonate) is a baby less than 29 days old.

CHI AT CRUMLIN

26% of admissions were newborn babies, and almost half were admitted because of heart conditions.

CHI AT TEMPLE STREET

17% of admissions were newborn babies, and around one-third were admitted because of breathing problems.



Heart conditions were the largest group of admissions at CHI at Crumlin, accounting for **40%** of all admissions.

A total of **447** children were admitted with heart conditions, most of which were present from birth. Nearly two-thirds required heart surgery.



Breathing problems were the most common reason for admission to paediatric critical care, accounting for **31%** of all admissions.

Four in ten of these children were under one year of age.

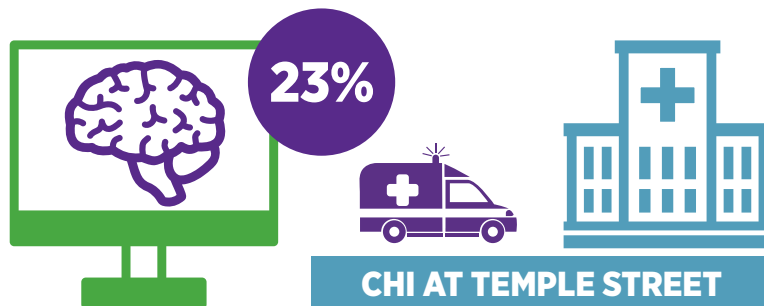


There was a **45%** reduction in admissions of newborn babies with serious breathing problems in 2024 compared with 2023.



The biggest reduction was seen in babies with respiratory syncytial virus (RSV). This suggests that the RSV immunisation programme is helping to prevent severe illness in infants and reducing pressure on critical care services.

Conditions affecting the brain, spine, or nervous system accounted for **23%** of admissions to CHI at Temple Street. Most of these admissions were emergencies. During 2024, 75 children required brain or spinal surgery. Most were being treated for brain or spinal tumours, while 17 had suffered a serious head injury.



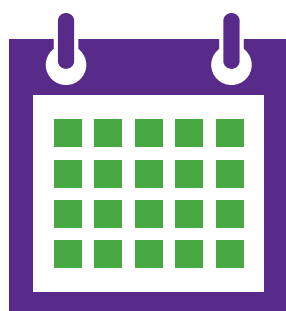
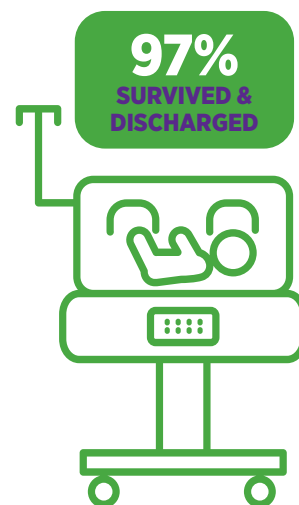
Fifteen babies and children at CHI at Crumlin received extracorporeal membrane oxygenation (ECMO), a specialised form of life support that temporarily takes over the work of the heart and lungs. Between 2022 and 2024, nine children required ECMO for severe lung failure. Seven of these children had to be transferred abroad because this service is not currently funded in Ireland.



128
2024

Children continue to be admitted to adult intensive care units in some parts of Ireland. In 2024, 128 children under 16 years of age were cared for in adult ICUs. Although most stays were short, this highlights the need for more specialist children's services closer to home.

Despite the units caring for many very sick and complex patients, outcomes remained excellent. Overall, **97%** of children survived and were discharged from critical care. There were 57 deaths in 2024, and more than two-thirds occurred in babies under one year of age. In most cases, treatment was withdrawn when it was no longer helping the child recover.



CHI AT CRUMLIN
2.9 DAYS
CHI AT TEMPLE STREET
1.7 DAYS

Children stayed in critical care for a relatively short period overall. Half of patients stayed less than **2.9** days in CHI at Crumlin and less than **1.7** days in CHI at Temple Street. A small number of children required a stay of more than 28 days.



Four children and infants donated organs or tissues in 2024, helping to improve or save the lives of others.



KEY RECOMMENDATIONS

RECOMMENDATION 1

Continue the RSV immunisation programme across Ireland, as it is helping to protect babies from serious respiratory illnesses and may reduce the number of children needing critical care. NOCA will continue to monitor its impact and inform future service planning.



RECOMMENDATION 2

Improve data systems and audit processes, supported by dedicated data management staff, to provide better information about the care of critically ill children and support service planning and quality improvement.



In response to recommendations previously made by NOCA, work is ongoing to strengthen children's critical care services in Ireland. This includes planning for additional specialist doctors, nurses, and allied health professionals to support the safe operation of the critical care unit in the new National Children's Hospital, as well as the appointment of an Organ Donation Nurse within CHI. Progress is slowly being made in developing regional high dependency services for children and extending specialist paediatric transport services to operate 24 hours a day, 7 days a week. These actions remain in progress and have not yet been fully completed. However, no significant progress has been made to date on the development of a national paediatric extracorporeal life support (ECLS) programme.

OSCAR'S STORY

Oscar's story began with a prenatal diagnosis of congenital diaphragmatic hernia (CDH) at 18 weeks' gestation, leading to a complex pregnancy that included fetal surgery in Belgium to improve his chances of survival. Born at 34 weeks in the Rotunda Hospital, Dublin, Oscar was transferred to PCCU at CHI at Crumlin, where he faced a prolonged critical care journey. Oscar's resilience, combined with the compassion of staff and the involvement of his family in his care, laid the foundation for the next stage of his remarkable journey.



SCAN THE QR CODE TO
READ OSCAR'S FULL
STORY ON PAGE 20.



A MESSAGE FROM OUR PATIENT AND PUBLIC INTEREST REPRESENTATIVE

As I read this report, I am so delighted to see one of NOCA's recommendations regarding RSV vaccinations coming to a successful conclusion, reinforcing the importance of data collection and audits to support sound decision-making and positive action to improve health services for the children and families of Ireland. The vaccine is offered at no cost to newborns in maternity hospitals since winter 2024. It is so encouraging to see the resulting reduction in RSV activity, and the recommendation outlined is welcomed. This helps reduce the numbers of babies getting so sick they need critical care. This is great news for all children as more babies stay healthy and this frees up resources for all sick children who need to be admitted to the paediatric ICUs. It is hoped that this positive trend will continue. However, the lack of progress regarding access nursing provision for NCHI and a national ECMO service remains very disappointing. These are complex and well-known issues that require strong leadership, resources, and timely action. The report clearly demonstrates that no meaningful progress has been achieved in this area, highlighting an ongoing issue that requires urgent attention and action at all levels of the health system.

Fiona Fallon, Patient and Public Interest Representative, Irish Paediatric Critical Care Audit



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