

# Lay Report

## Paediatric Intensive Care (PIC) in the United Kingdom and Ireland – the picture for 2014



children admitted to PICU every day

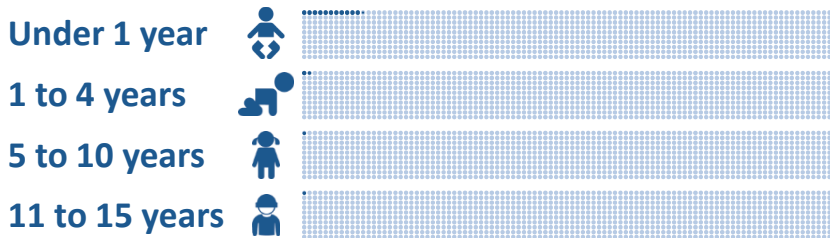
There were **19,760** admissions of children aged under 16 to a Paediatric Intensive Care Unit (PICU) in 2014.

For every 1,000 children **under one year** of age, **eleven** needed admission to PICU.

Older children were much less likely to need PICU, with less than **1 per 1,000 children over 5 years** of age needing PICU each year.

Amongst the **youngest children** admitted to PICU, nearly **60% were male**. But at **11-15 years** of age, the **numbers of boys and girls** admitted were almost equal.

### Number admitted per 1,000 population



### Boys Girls

Age Group	Icon	Boys	Girls
Under 1 year		59%	41%
1 to 4 years		57%	43%
5 to 10 years		56%	44%
11 to 15 years		49%	51%

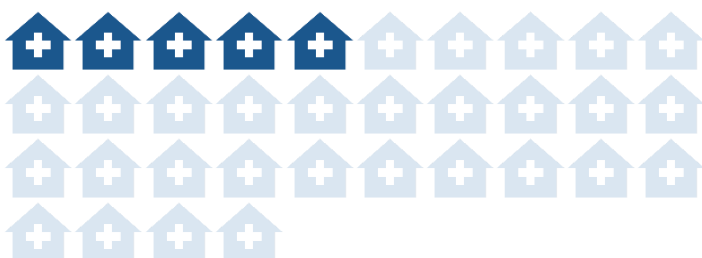


**Paediatric intensive care is getting busier** – during the last three years there has been no increase in the number of children admitted to PICU, but these children are staying longer.

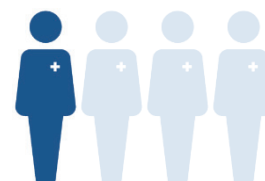
Beds were occupied for **131,268 days** in 2014 – an **increase of 2,748 bed days** compared with 2013.

### Staffing

Only **5 of 34 PICUs** met current **nurse staffing standards** in 2014.



In the annual staffing census, on a Sunday night in November, in London a **quarter of nursing staff** on duty were employed through an **agency** or the **nurse bank**.










## Why were children admitted to PIC?

The most **common conditions** requiring admission to PICU are those affecting the **heart and lungs**. Also, for those aged **11-15 years**, **20%** will be admitted with conditions involving **bones and muscles**, such as severe injury from accidents or after spinal surgery.

**39% of the babies** admitted aged **under 1 year** are treated for conditions relating to their **heart and circulation**, such as a congenital heart defect. Another **31%** have conditions affecting their **breathing** such as bronchiolitis and pneumonia.

### Percentage of children admitted with conditions affecting different systems of their body

		 Under 1 year	 1 to 4 years	 5 to 10 years	 11 to 15 years
Cardiovascular		39%	24%	22%	15%
Respiratory		31%	31%	24%	17%
Musculoskeletal		1%	3%	6%	20%



**Two thirds** of children receive **invasive ventilation** to help with breathing during their stay on PICU.

**High flow oxygen** is now being used more frequently. In 2015, PICANet started collecting data about children receiving high flow oxygen. This will help doctors understand the use and benefits of this treatment.

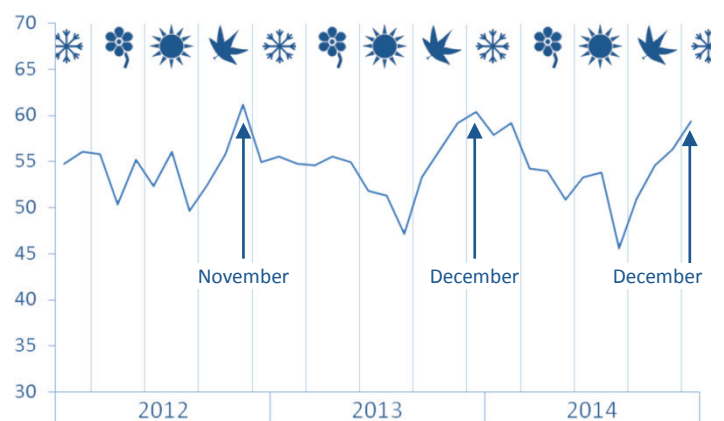
## The pattern of admissions to Paediatric Intensive Care

Every year there is a similar pattern for admissions to PICU with **more admissions per day** in Autumn (🍂) and Winter (❄️) than in Spring (🌸) and Summer (☀️).

The seasonal variation in the number of children receiving PICU is mostly due to more children being admitted with **respiratory illnesses** such as bronchiolitis and needing ventilation.

The busiest months for PICUs are **November, December** and **January**.

### Admissions per day



## Transport to PIC



Some children require transfer from their local hospital to another hospital with a PICU. Over **6,000 very sick children** were **transported to PICU in 2014**, 77% by specialist paediatric intensive care transport teams.

The PICANet referral and transport dataset collects information about the paediatric intensive care provided to very sick children before they reach PICU.

## How did the PICUs perform in 2014?

There are **34 PICUs** in the **UK and Republic of Ireland** who report to PICANet. The **largest unit had 1,345 admissions** whilst **14 units** had fewer than **500 admissions** in 2014.

In total, over **96% of children were discharged alive** from their stay in PICU. **Deaths** remain low at **3.7%**.

PICANet reports on the **“risk adjusted”** performance of each PICU. This takes into account how **sick** the children are **at the time of admission** to paediatric intensive care.

PICANet has found that there is **no statistical reason** to be concerned about the performance of any of the PICUs reporting to PICANet in 2014.



### Length of stay in PICU



Just over a **quarter of children** admitted to PICU stay **less than 24 hours**, another third stay between one and three days. Only **19%** of patients stay on the **same PICU** for **seven or more days**.

### Discharge outcome



**96%** of children admitted to paediatric intensive care **survive to discharge**

### Readmission



**1.8%** of children discharged from PICU require **readmission within 48 hours**

## Recommendations

- Commissioners should work closely with PICUs to ensure adequate staffing levels as recommended in the UK Paediatric Intensive Care Society Standards for the Care of Critically Ill Children (\* see below)
- PICUs need to think about new ways of using their nursing staff in order to improve the recruitment and retention of staff and reduce the need and cost of agency and bank nurses
- The report recommends that all PICUs and specialist transport services provide complete and accurate information to PICANet. This is important so that the information can be used to help find the best ways to treat and care for children who are very ill, and to plan and provide paediatric intensive care services for the future
- PICANet needs to work with clinicians to identify new ways of measuring the outcome of paediatric intensive care. Because the number of deaths in PICU remain low, it is important to identify new ways of measuring the progress of these very sick children after receiving different types of treatment



**Complete and accurate information** is vital for PICANet to help doctors, nurses and commissioners to improve paediatric intensive care services

## What is PICANet?



The Paediatric Intensive Care Audit Network (PICANet), which is run jointly by the Universities of Leicester and Leeds, collects information about all children admitted to the paediatric (children's) intensive care service in the United Kingdom and Ireland.

PICANet collects exactly the same information on all children cared for in paediatric intensive care units and by the specialist paediatric intensive care transport services. This information is used to help find the best ways to treat and care for very sick children and to plan and provide future paediatric intensive care services.

Additional information about PICANet and the 2015 Annual Report is available at [www.picanet.org.uk](http://www.picanet.org.uk)

This lay report was written in **November 2015** by Shelley Marsh, Lay Representative, PICANet PIC Families Group; Hannah Bemand and Leanne Cooper from WellChild; and members of the PICANet team

\* The UK Paediatric Intensive Care Society (PICS) produces a set of Standards for the Care of Critically Ill Children (currently under revision) that cover the whole patient pathway including referral, specialist transport and admission to PICU. PICANet works closely with PICS to measure standards which relate to the referral, transport, admission and staffing datasets and also the care of the child and family during paediatric intensive care.