

REFLECTION AND LEARNING FROM SIX YEARS OF MORTALITY REVIEWS: A DISTRICT GENERAL HOSPITAL'S EXPERIENCE

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Background

Neonatal and paediatric mortality has remained a challenge worldwide, despite significant improvements in antenatal, neonatal and paediatric care

Case reviews and acting on lessons learned remain a powerful training tool in paediatrics

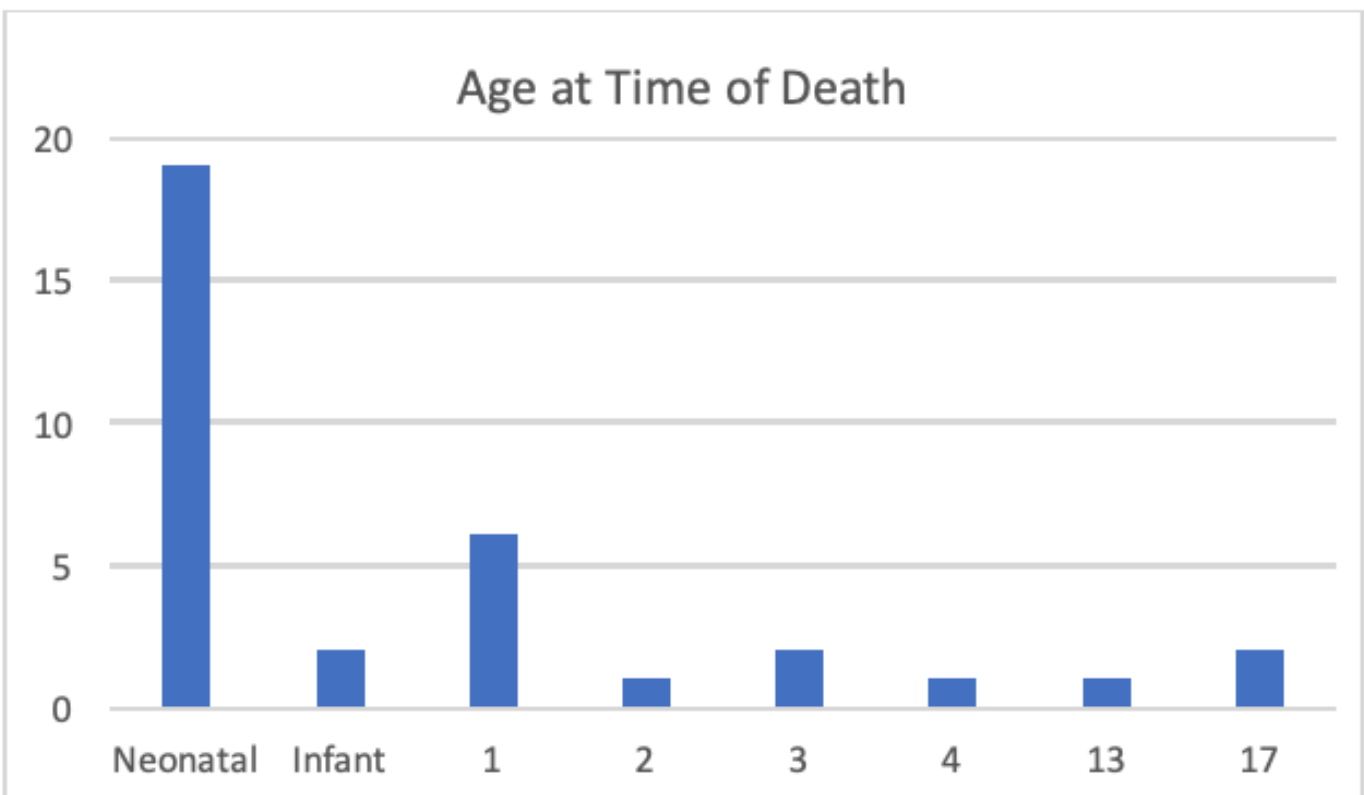
This is a single centre, retrospective review of all neonatal and paediatric mortality cases over 6.5 years from January 2017 to June 2023

In each case the patients age, cause of death and reported learning points were identified. The learning points were reviewed for each case to identify common risks, modifiable factors and learning points that contribute to these cases. Examples of good practice were also identified and promoted

Results

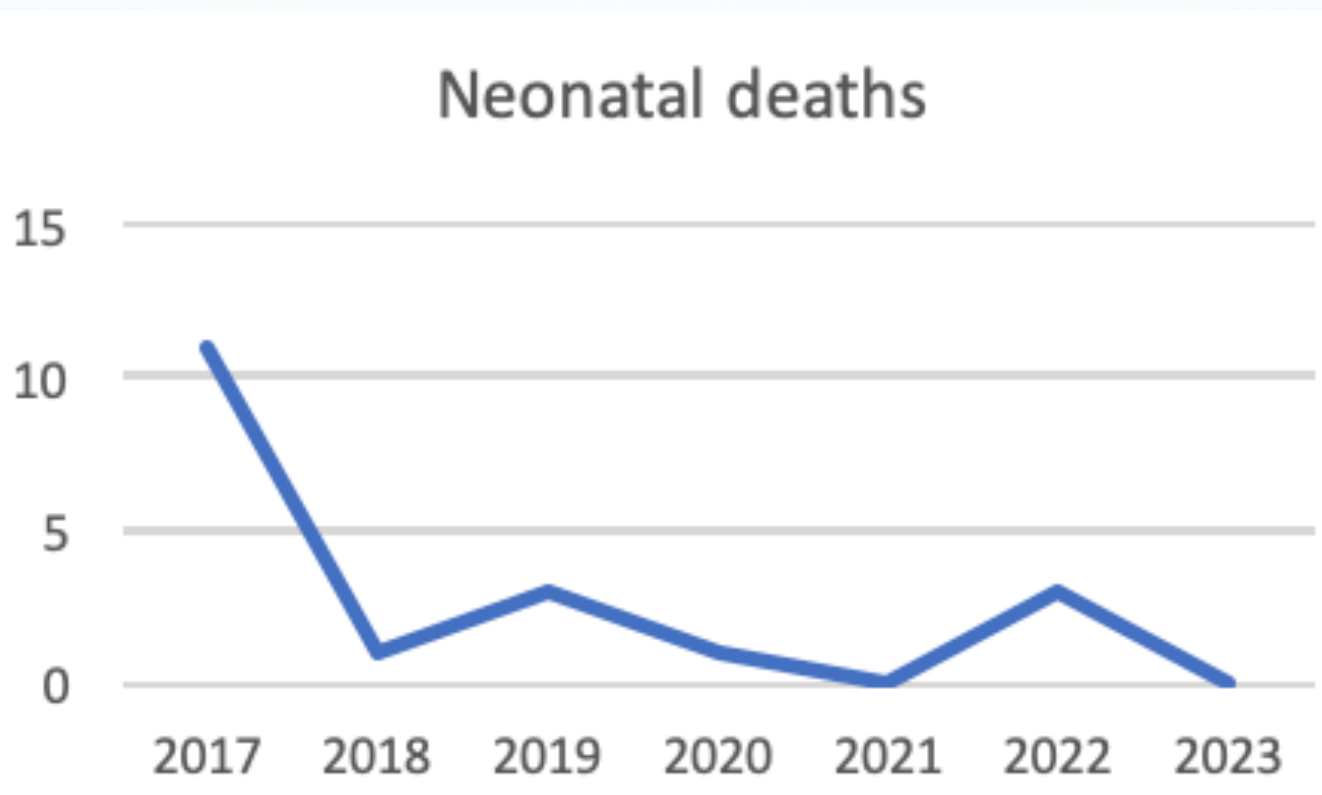
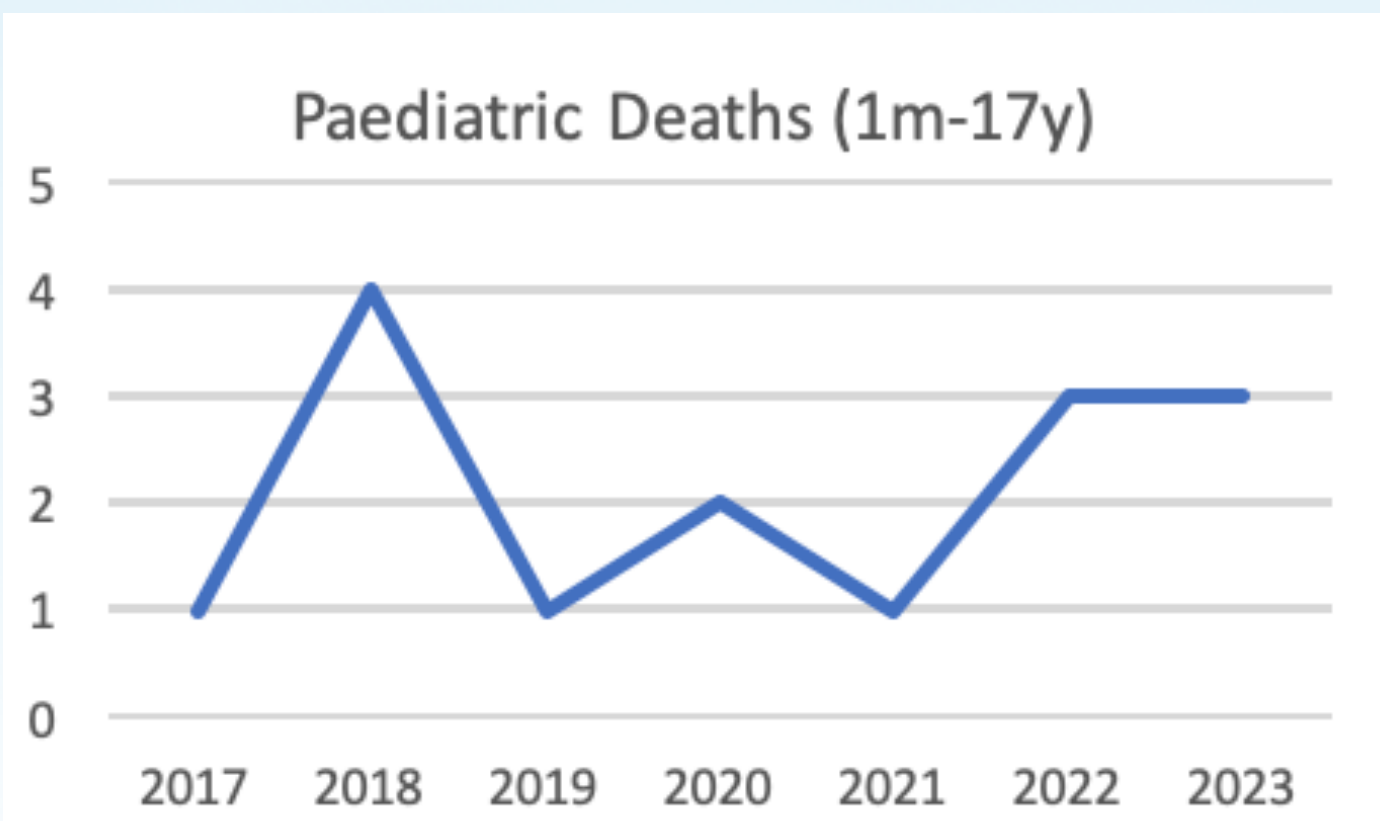
The cohort included 34 cases:
19 neonates (birth to 1 month)
8 infants (1 month to 2 years)
7 children (2 years to 18 years)

56% of the mortality cases were neonatal and 44% were paediatric



The trend in paediatric deaths was between 1-4 deaths per year, with no clear change over time

Neonatal deaths were static apart from one surge. This related to an increased incidence of extreme premature deliveries in that year



The common modifiable factors identified in neonatal mortalities were:
delay in securing effective airway (42%)
hypothermia (26%)
delay in antibiotic administration (21%)

The main factor implicated in paediatric mortality was the **delay in recognition and acting upon shock or sepsis**.

Other learning points included:
inaccurate or incomplete documentation
difficulty in contacting the Coroner
delay in contacting Toxbase
not considering muscle relaxants in cases of ecstasy overdose

Conclusion

This study demonstrates that the neonatal period is the most vulnerable time for a child's survival

Technical and practical difficulties were not uncommon in neonatal deaths, including difficulty establishing a secure airway as well as establishing intravenous access to administer antibiotics in an appropriate timeframe

Clinical acumen and knowledge is needed for early diagnosis of shock and sepsis

Following policy, such as contacting Toxbase, or a Coroner, appropriately were identified learning points

Moving Forward

The department has introduced a **training program using simulation methods** and introduced **new equipment** such as a video laryngoscope and heating equipment to help reduce these identified risks and modifiable factors

Effective communication with maternity for **early transfer** of extreme preterms to a level 3 unit remains important

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