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ABOLISHING FASTING TIMES IN PAEDIATRIC PATIENTS: LET THEM DRINK...!

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Background/Context:

In 2018, APAGBI released a consensus statement advocating a reduction in clear fluid fasting times before elective general anaesthesia from two hours to one.¹ Evidence suggests the benefit of reducing dehydration and catabolism associated with starvation, outweighs the risk of aspiration.^{2,3} As a cardiothoracic centre, our patient population is particularly prone to the potential complications of prolonged fasting, thus warranting review.

Problem:

An audit of our paediatric population in 2016 revealed a median clear fluid fasting time of 315 minutes – significantly longer than recommended. We conducted a quality improvement project to address this.

Strategy For Change:

Adopting the Model for Improvement approach, we aimed to reduce the median clear fluid fasting times to less than 90 minutes, over a 12-month period.

In the first plan-study-do-act (PDSA) cycle, existing fasting guidelines were updated; clear fluid fasting times reduced from two hours to one, whilst breast milk and solids remained unchanged at four and six hours respectively. The new guideline was implemented trustwide. Data was subsequently collected to determine adherence to the new guidelines. Using this information, and multidisciplinary team feedback, a second PDSA cycle was initiated.

The guideline was updated again with clear fluid fasting times further reduced: children were allowed unrestricted clear fluids until being sent for and those unable to self-regulate were given 3ml/kg of clear fluid hourly. A formal education staff package was delivered to staff. After a wash-in period, data collection was repeated. This include information relating to aspiration or unplanned PICU admission.

Measurement of improvements:

The first PDSA cycle in January 2019 saw a reduction of clear fluid fasting times to a median of 165 minutes. Ward staff feedback revealed children were still being starved for longer than necessary due to list order changes and unpredictable start times. Furthermore, confusion existed over what constituted clear fluids, and guideline applicability in patients undergoing enteral feeding.

The second PDSA cycle in December 2019 resulted in a significant fall - to a median of 80 minutes. All parents and staff found the fasting instructions clear and easy to follow. Over 72% of patients neither complained of nor demonstrated signs of thirst at the time of induction. There were no incidents of aspiration or unplanned PICU admissions.

Lessons Learned:

1. Abolishing clear fluid fasting times can be an effective method to improve the safety and quality of healthcare being delivered.
2. Whilst there were no adverse events in our cohort, data but must be interpreted cautiously due to small sample size and unique patient cohort.

Message for Others:

Our QI project demonstrates that modification of national guidelines to suit the local circumstances can help achieve more personalised care safely and effectively.

References

1. Thomas M, Morrison C, Newton R. Consensus statement on clear fluids fasting for elective pediatric general anesthesia. *Pediatr Anesth* 2018; 28: 411–4
2. Andersson, H. Zaren, B. Frykholm P. Low incidence of pulmonary aspiration in children allowed intake of clear fluids until called to the operating suite. *Pediatr Anesth* 2015; 25: 770–7
3. Newton RJG, Stuart GM, Willdridge DJ, Thomas M. Using quality improvement methods to reduce clear fluid fasting times in children on a preoperative ward. *Pediatr Anesth* 2017; 27: 793–800