Leading through Evidence-Based Practice Change: Implementing Closed-System pH Testing to Confirm Feeding Tube Placement

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Introduction and Problem Statement

- Feeding tubes are often a necessary tool used in many NICUs as a bridge to provide enteral feeds while an infant learns to eat by mouth or transitions off IV fluids
- The gold standard for feeding tube placement confirmation is via x-ray imaging
- In 2022, there were 1983 x-rays completed over 7 months in the NICU for feeding tube placement confirmation
- The frequency of imaging is associated with increased cumulative radiation exposure to vulnerable neonates as well as increased workload for the multidisciplinary clinical team
- This prompted the creation of a workgroup to evaluate viable alternatives

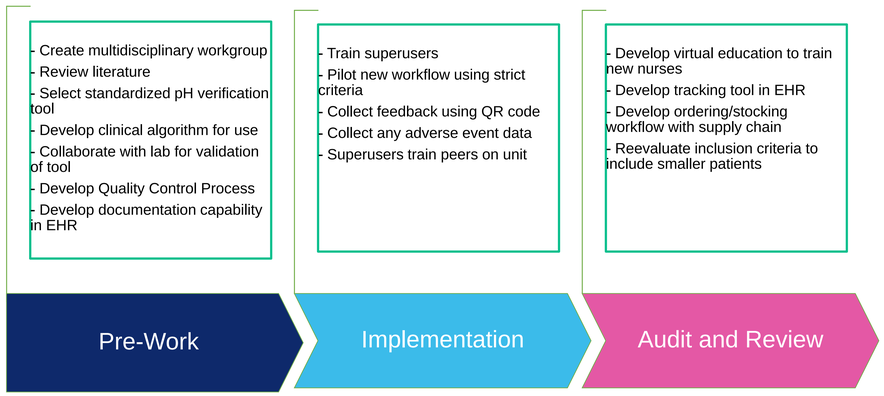
PICO Question

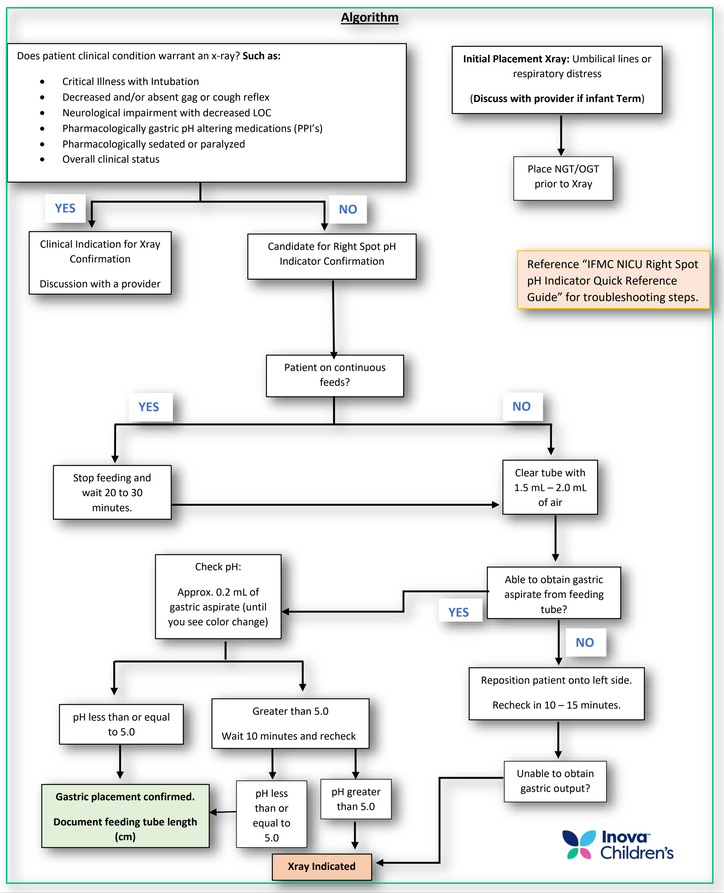
- In neonates in a 108-bed NICU, does point-of-care gastric pH testing for feeding tube placement verification, compared to routine x-ray verification, reduce radiation exposure, improve workflow efficiency, and result in cost savings while maintaining accurate placement?

Project Goals

- This project aimed to change the method of feeding tube placement verification from routine x-rays to point of care (POC) gastric pH testing, in conjunction with a standard measurement of nose-ear-mid umbilicus (NEMU) to reduce radiation exposure, improve workflow efficiency, and lower costs while maintaining accurate placement for vulnerable neonates in a 108-bed NICU.

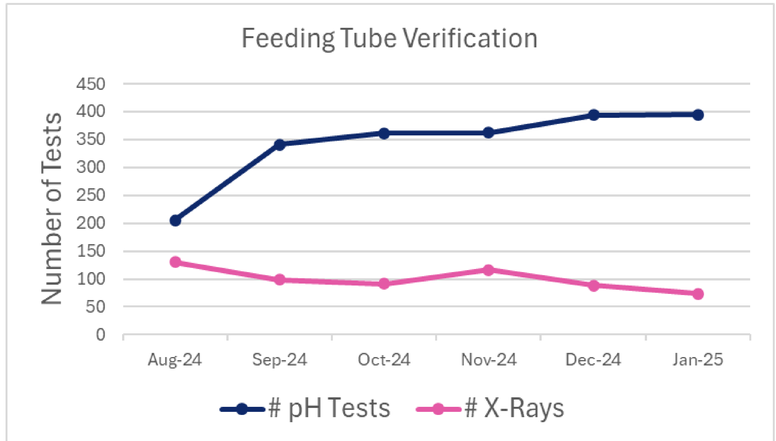
Intervention-Improvement Methods





Improvement Achieved - Outcomes

- 2,058 POC tests performed in first six months = >$80,000 cost savings
- POC testing now unit standard for infants >24 weeks corrected gestational age



Recommendations

- Expand utilization to other units further enhancing clinical practice and reducing unnecessary radiation exposure, offering valuable insights for improvements in care delivery.
- As staff grow more comfortable with the tool, edit algorithm to include infants >22 weeks

References

Please scan the QR code for a complete list of references

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