

Educating on Post pyloric Feeding Tube Insertion in the Pediatric Population

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Educating on Post-pyloric Feeding Tube Insertion in the Pediatric Population

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BACKGROUND

- “Nurses had expressed concern about the (unknown) radiation burden of children having repeated tube insertions and position checks with no idea when they should be concerned, and no easy alternatives” (Rollins, 2018).
- In the PICU, post-pyloric feeding tubes are often placed and are usually placed due to the patient’s respiratory status.. The nurses and parents have raised concern on the process of the NJ tube placement.
 - Inconsistency with results and insertion techniques
 - The same method can be used by the same nurse and can sometimes take one insertion attempt and other time take 3 insertion attempts.
 - Frequent patient radiation exposure
- 100 % of the staff nurses in the PICU were re-educated and given the supplemental education, all education was finished 12/31, this is also when the first data sheet was removed and new data sheet was placed. Data was finished being collected 2/17/20/

PICO

- **P:** PICU/Pediatric Intermediate care nurses
- **I:** Education on post-pyloric feeding tube insertion prior to insertion
- **C:** No additional education on post-pyloric placement methods
- **O:** Impact radiation exposure

The purpose of this evidence-based project is to impact radiation exposure to the pediatric patient population by education pediatric nurses with supplemental education on post-pyloric feeding tube placement techniques.

EVIDENCE

- “Blind placement of post-pyloric feeding tubes necessitates the least technology compared to other techniques, but may require more expertise and increase the risk of complications” (Skillman, 2008)
- “Placement of a post-pyloric tube at the bedside has a high failure rate, increased exposure to X-rays and is time consuming” (Jha et. al., 2019)
- “The placement of transpyloric feeding tubes can be a challenging task in the critically ill pediatric patient... many techniques are not technically feasible or easily accomplished in the critically ill or injured child in the PICU setting” (Phipps, et. al., 2005)

OUTCOMES

- Data sheet posted at the AP (nurses were made aware of location via email) on the PICU **before** supplemental education
 - 15 tubes placed that were recorded
- Data sheet posted at the AP desk on PICU **after** additional education and also re-educated on placement techniques
 - 100 % of nurses in the PICU were given the additional education and also re-educated on placement techniques
 - 12 tubes placed that were recorded

Before Education:

Patient	Number of insertion attempts	Number of X-ray taken
1	1	1
2	1	1
3	3	2
4	2	2
5	1	1
6	1	1
7	1	1
8	1	1
9	2	2
10	1	1
11	2	2
12	1	1
13	1	1
14	3	2
15	1	1

Barriers:

- Nurses not consistently recording on data collection sheets
- Starting project in summer verses the winter, limited number of patients who needed to receive post-pyloric feeding tubes. (largest patient population requiring post-pyloric placement is those experiencing respiratory compromise)
- Attending preference NJ vs. NG
 - Tube left NG after multiple NJ placement attempts
 - Providers willingness to use NG tubes more frequently

After Education:

Patient	Number of insertion attempts	Number of X-rays taken
1	1	1
2	1	1
3	2	2
4	1	1
5	4	2
6	2	2
7	2	2
8	1	1
9	1	1
10	1	1
11	1	1
12	1	1

IMPLEMENTATION

- Collected data from PICU nurses on NJ tubes placed on the units before any supplemental education.
 - The data included:
 - Patient demographics
 - Number of insertion attempts
 - Number of X-rays performed
 - Techniques used
- Re-educated the PICU nurses on proper placement techniques
 - Provided a PowerPoint which was distributed as a TLC assignment.
 - Provided a handout of insertion techniques on the PICU for reference.
 - Evaluated the data collected on the PICU and followed up with nurses.
- After supplemental education a data collected sheet was put out a second time for any NJ tubes placed.
 - The data collected the second time was compared to the data collected before any supplemental education.

NEXT STEPS

Data was compared pre-education and post-education

- Moving forward, we will continue to educate and re-educated the PICU/IMC nurses on post-pyloric feeding tube insertion techniques.
- Due to the data not showing re-education lessens the amount of X-rays taken, we will research other placement methods.
- One possible alternative placement method is using an electromagnetic placement device to help guide the post-pyloric feeding tube insertions.
 - “Feeding tube placement with an EMPD (Electromagnetic placement device) demonstrates a high safety profile through early recognition...The use of EMPD also decreases the need for patients to travel to radiology for the procedure... resulting in a more timely placement without complications”(Powers, et. Al., 2011).

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