

Abstract Title: Using a Dedicated Team of RN's to Place Dobhoff Feeding Tubes Using Real Time Tracing Technology

Authors: Lee Steere, RN; Hartford Hospital's IV Team

Purpose & Rationale: The purpose of this study was to examine the benefits of using a dedicated team for placing Dobhoff Tubes (DHT) for enteral feeding using electromagnetic technology (Cortrak). The goals of using a dedicated team: better patient outcomes; less nursing time spent traveling to and from the fluoroscopy suite. Using a dedicated team, we expected minimal complications; less radiation exposure verifying tube placement; less need for fluoroscopy guided tube placements.

Research Question: How will a dedicated group of RN's placing DHT's using Cortrak result in better patient outcomes?

Synthesis of Review of Literature: Nationally, dedicated teams of healthcare providers are being trained in the placement of DHT's using Cortrak. Current literature supports this method. Roughly 2% of feeding tubes placed blindly go into the patient's lung. Annually, this would be roughly 38 tubes at Hartford Hospital. 25% of these tubes will cause a collapsed lung. 10% will cause pneumonia, increasing the patient's LOS and cost to treat. Per the literature, blindly placed tubes average 1.5 x-rays/tube and 11.4% require fluoroscopy guided placement. Using a dedicated team and Cortrak, numbers drop to 0.5% x-rays/tube and only 2% require fluoroscopy. In 2014, 8% of Hartford Hospital's patients had tubes placed in the fluoroscopy suite (167).

Methods/Procedures: In 2013, a trial was conducted by clinicians evaluating the use of Cortrak. In 2015, a decision was made to purchase a Cortrak machine, keeping placement to a dedicated team of RN's, the IV Team. In June of 2015, training was performed. No increase in FTE's was needed. Adjustments were made in the department's workflow and more hours were allocated from days to evenings to assure coverage could be maintained late into the evening.

Results: Retrospective review of the 2013 trial revealed the following: 13 clinician tested the technology, placing a total of 14 DHT's. Out of the 14, no tubes were inadvertently placed in the lung. 93% had a success rate into the small bowel at the bedside on first attempt. Success rate increased to 100% when they were able to retrace the stylet and advance the feeding tube further in the patient they originally could not get post pylorus. Average placement time was 10.67 minutes with enteral feeding starting shortly post placement. One patient did require fluoroscopy guidance due to the presence of a large hiatal hernia.

Discussion/Application to Practice: After two weeks in June 2015, 6 members of the IV Team were trained. These 6 members continue to fine tune their skills using the technology. Since implementation, not one tube has ended up in the lung. There has been a reduction in x-rays as greater than 90% are verified at the bedside. 39% reduction in fluoroscopy placed tubes 6-months implementation compared to prior 6-month. Other improvements include the introduction of a tube retention system due to a documented 34% inadvertent removal rate with standard taping method.