

Introduction-

- A. Nasogastric and percutaneous endoscopic gastrostomy tubes are the only way that medications and nutrition can be administered.
- B. Prevalent problems with tubes are blockages, leaking, and ulcerations
- C. Hospitalizations are longer and are costing more, due to additional supplies needed to replace the old tubing, or supplies needed to help reduce the patient's ulceration
- D. Multiple medications needed to be administered for some patients blocks the tubes
 - 1. Crushed medication obstruction and low Inservice training reported by 1,000 nurses
 - 2. Due to a blockage in a particular study, 7% of the patients suffered a total tube failure
 - 3. 60% experienced enteral tube blockage and had to use significant volume of fluid to unblock the tube
- E. Proper knowledge is needed by the nurse/caretaker to prevent these issues from occurring
 - 1. Less than 2/3 of familial caregivers given instruction on med administration
 - 2. 8% only received written information
- F. Modification was done to the medication a change from manufacturer's product
 - 1. 79% of participants reported modify medications
 - 2. 69% modified medications weekly
 - 3. 11% modify on a daily basis
 - 4. 54% modify from a solid to a liquid
- G. Time efficiency comparison of different routes
 - 1. 59% stated through feeding tube was more time consuming than oral or IV
 - 2. 19% felt little difference
 - 3. 22% felt other routes were slower
 - a. Out of all the participants 26% expressed need for additional support to administer medication via ET

Purpose- The goal is to make caregivers/nurses more aware of what kinds of medications that they are administering to their patients who have an ET tube, and what is the proper way to administer the medications. Healthcare workers should be able to develop a process that is safe but yet efficient when administering medications to their patients with enteral tubes. The formulations that are being administered to the patient should be readily available rather than

having to modify the medication when administration is going to occur. This will help to save time and mistakes from occurring.

Methods-

- A. Descriptive, exploratory design self reporting paper-based survey
- B. Audit-based study
- C. Participants
 - 1. Registered Nurses- working in ICU, cardiac ward, surgical and medical wards in the UK
- D. 150 voluntary questionnaire
- E. Study used SQUIRE 2.0 guidelines from EQUATOR network
 - a. Data analyzed using Microsoft Excel

Results-

- A. 73 nurses completed the questionnaire (48.7% response rate)
- B. 10 specialities in total
 - 1. 53 from medical specialty wards
 - 2. 7 critical care
 - 3. 13 surgical specialty wards
- C. Years experience administering meds via ET
 - 1. 64% more than 5 years
 - 2. 7% less than 1 year
 - 3. 63% giving meds via ET on weekly basis or more often
 - 4. 37% giving meds via ET monthly or less than monthly
- D. Training
 - 1. No training
 - a. 45% had not received training on med administration or preparing medications
 - 2. Received training
 - a. 44% had training over 5 years ago
 - b. 20% had training within last 12 months
 - 3. Method of training
 - a. Verbal advice and explanation (most common 63%)
 - b. Face-to-face (23%)
 - c. Simulation and supervised practice (9%)
 - d. Written information that they read or didn't read
 - e. Mixture of more than one method (29%)

4. Most common information resources
 - a. NHS trust guidelines (27%)
 - b. Pharmacy advice (22%)
 - c. BNF (17%)

5. Medications and administrations

1. Modification of meds (79%)
 - a. More often than weekly (69%)
 - b. Daily basis (11%)
2. Solid to liquid (54%)
3. Received liquid from pharmacy (10%)
4. Requesting a change of formula (16%)
5. Changed the route (10%)

6. Time efficiency

1. 59% reported ET feeding as more time consuming
2. 19% reported no difference
3. 22% report other routes were slower

Conclusion- In addition to the need for proper training and resources, the study also highlights the importance of minimizing the need to modify medications from the manufacturer's product. Modifying medications was reported by a significant proportion of participants and could result in errors and inefficiencies in medication administration. Overall, healthcare workers should prioritize developing a safe and efficient process for administering medications to patients with enteral tubes, with a focus on proper training and readily available resources and minimizing the need for medication modifications.

Reference:

Tillot, H., Barrett, D., Ruan, J., Li, V., Merrick, S., Steed, H., Morrissey, H., & Ball, P.A. (2020). Survey of nurses' knowledge and practice regarding medication

administration using enteral tubes. *Journal of Clinical Nursing*, 29(23-24), 4614-4622 <https://doi.org/10.1111/jocn.15498>