



### **Administering Medication through Nasogastric Tube via Syringe Training Procedure**

Wisconsin Statute 118.29 notwithstanding nursing, medical, dentistry and pharmacy practice acts allows school bus operators, school employees or volunteers authorized in writing by the school administrator to administer medication to students. These school bus operators, school employees or volunteers must receive training approved by the Department of Public Instruction to administer medication via a nasogastric tube in order to comply with the statute and be immune from civil liability.

The Department of Public Instruction maintains that the insertion, verification of placement, and/or care of nasogastric tubes prior to and after medication administration are separate procedures from the administration of medication via nasogastric tubes and remains under the authority of nursing, medical, dentistry and pharmacy practice acts. Training is provided “how to administer medication” via an intact nasogastric tube after proper placement of the tube has been verified by a parent, registered nurse, or registered nurse delegating such procedure to licensed practical nurses or “less skilled assistants” per Wisconsin Statute 441.001(4)(d).

Registered nurses or parents may use this training procedure along with the required demonstration of skill performance competency to fulfill the requirement for medication administration training as approved by the Department of Public Instruction.

#### **Things to consider:**

- The most significant risk with giving liquids via a nasogastric tube is possible aspiration into the lungs. Proper placement of nasogastric tube must be confirmed immediately prior to inserting medication. Additionally, to prevent aspiration be sure the student is positioned properly with head elevated at least 30 degrees.
- Be sure to take steps to ensure patient privacy when performing procedure.
- Encourage the student to assist in the procedure as much as he/she is able to help the student learn self-care skills
- Enteric-coated tablets must not be crushed or dissolved because there is a risk of gastric irritation if the distal tube is in the stomach. Sustained release or anti-neoplastic tablets must not be crushed or dissolved, as there is a risk of increased toxicity. Buccal or sublingual preparations should not be altered. These medications are not designed for absorption in the gastrointestinal tract.
- Medications should be given as a bolus and separated from enteric feedings. Medications may be given via push or gravity as per medication order.

**Supplies:**

Prescribed medication

Student's medication order

Individual pill crusher or mortar and pestle, if needed for crushing pills

Pill cutter, if needed to cut pills

Syringes, oral or catheter- tipped (appropriately sized for drawing up prescribed medication and flushes, 10 to 50 mL unless small volume of medication to be administered)

Medication cup

Warm tap water or other appropriate diluent

Towel or wash cloth

Non-sterile gloves

**Procedure:**

1. Check for authorization forms/record
  - a. Medication Administration Form
  - b. Medical provider
  - c. Parent/guardian
  
2. Review student's medical order including:
  - a. medication name, dosage and form (liquid or crushed pills)
  - b. time of administration. For medications to be given on empty stomach stop any feedings 30 minutes before scheduled dose.
  - c. amount of water used to flush the tube.
  - d. medication administered via push or gravity
  
3. Check for the Five Rights
  - a. Right student
  - b. Correct time
  - c. The medicine container matches authorization forms and medication administration record.
  - d. The dose on medication container matches authorization form and records.
  - e. The medication is in the correct route as identified on medication container, authorization forms and medication record.
  
4. Ensure that the medication has not expired.
  
5. Gather equipment and place on clean surface.
  
6. Wash hands, put on gloves.
  
7. Prepare medication for administration. If the medication is dispensed as a liquid it is in a form ready for administration. Medications in pill or capsule form must be modified to liquid.
  - a. score the tablet properly or pour the correct number of tablets into pill crusher or clean mortar
  - b. crush solid medications that are not sustained release preparations into a fine powder with the pestle or pill crusher

- c. pour the powder into a small medication cup
  - d. draw up 1-10 ml of warm diluent (e. g. formula or water as ordered) into a syringe and mix into medication cup to dissolve the medication
  - e. draw up the medication from the cup into a syringe and clear syringe of excess air. Label syringe as containing the medication.
  - f. Draw up a small amount of diluent flush solution (1-10 ml -as ordered) into a separate syringe and label appropriately.
8. Explain the procedure to the student at his/her level of understanding.
9. Position child either sitting or supine with head up at least 30 degrees.
10. Put a towel or washcloth under student's nasogastric tube.
11. Inspect nares for discharge or irritation, or skin breakdown.
  - a. Report any concerns to parent or school nurse.
  - b. Care of NG tube is not part of medication administration procedure.
12. **Assessment of proper NG placement must be done by the parent or a Registered Nurse immediately prior to medication administration. NG tube placement is not addressed in Wis. Stat. sec. 118.29. NG tube placement and care is addressed in Wis. Stat. 441 and N 6.**
13. To continue with NG tube medication administration via push method:
  - a. Remove cap/plug.
  - b. Attach syringe labeled with medication to tube port and slowly instill diluted medications into the NG tube by slowly and steadily pushing on the plunger.
  - c. Follow administration of medication with 1-10 ml of diluent as ordered.
  - d. When multiple medications are administered at one time, it is desirable to flush with water or other solution as indicated by order between medications to help reduce potential drug interactions. Follow medical orders.
14. To continue with NG tube medication administration via gravity method:
  - a. Remove cap/plug.
  - b. Attach 60 ml syringe with plunger removed to NG tube.
  - c. Pour medication into syringe and allow to flow in by gravity. Syringe should be held 6 inches above head or at prescribed height.
  - d. Follow administration of medication with 1-10 ml of diluent as ordered.
  - e. When multiple medications are administered at one time, it is desirable to flush with water or other solution as indicated by order between medications to help reduce potential drug interactions. Follow medical orders.
15. Disconnect syringe.
16. Clamp NG tubing for 30 minutes after medication administration if the tube is not in continuous use.

17. Make sure NG tube is secured to face and appropriately secured to clothing to prevent dislodgement.
18. Keep the child in upright position for at least 30 minutes after completing medication administration.
19. Wash syringe with soap and warm water. Catheter tip syringe can be used repeated times for up to 24 hours.
20. Remove gloves and perform hand hygiene.
21. Document who verified tube placement, medication administration, other interventions and outcomes in student's healthcare record.
22. Follow up, as needed, with parents/guardian and healthcare provider.

### References:

Bowen, Vicky R. and Cindy Smith Greenberg, Eds. 2012. "Medication Administration: Enteral." In *Pediatric Nursing Procedures 3<sup>rd</sup> ed.* 415-420. Philadelphia: Lippincott Williams & Wilkins.

Glynda Rees Doyle and Jodie Anita McCutcheon. 2015. "Chapter 6. Non-parenteral Medication Administration. 6.3 Administering Medications by Mouth and Gastric Tube." In *Clinical Procedures for Safer Patient Care*. Victoria, BC: BCcampus. Available at: <https://opentextbc.ca/clinicalskills/chapter/6-2-oral-and-gastric-medication/>

Porter, Stephanie M., Dorothy Page, Healthier Engholm, and Carrie Somppi. 2019. "Students Supported by Medical Technology." In *School Nursing a Comprehensive Text*, 3<sup>rd</sup> ed. Edited by Janice Selekman, Robin Adair Shannon, and Catherine Yonkaitis. 725-728. Philadelphia: F. A. Davis.

The Royal Children's Hospital Melbourne. 2017. *Clinical Guidelines (Nursing) Enteral Feeding and Medication Administration*. Available at: [https://www.rch.org.au/rchcpg/hospital\\_clinical\\_guideline\\_index/Enteral\\_feeding\\_and\\_medication\\_administration/](https://www.rch.org.au/rchcpg/hospital_clinical_guideline_index/Enteral_feeding_and_medication_administration/).

### Resources:

Porter, Stephanie M, Patricia A. Branowicki, and Judith S. Palfrey, eds. 2014. *Supporting Students with Special Health Care Needs; Guidelines and procedures for schools*. Baltimore: Paul H. Brooks Publishing Co. Inc.

University of Wisconsin Hospitals and Clinics. 2016. Health Facts for You. *Nasogastric Tube Feedings at Home*. Available: <https://www.uwhealth.org/healthfacts/parenting/7223-1.html>

Williams, Nancy Toedter. 2008. "Medication Administration Through Enteral Feeding Tubes." *American Journal Health System-Pharmacy*. 65, no.24: (2347-2357). Available at <https://www.medscape.com/viewarticle/585397>.

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