



Saskatchewan
Health Authority

Nasogastric (NG) Tube Feed

Management at Home for Infants
and Children

TRAINING PURPOSES ONLY



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saskhealthauthority.ca

Table of Contents

Your Infant or Child’s NG Tube Information	3
What is an NG tube	4
Reasons Infants and Children May need an NG Tube	4
What to Feed	4
Feeding Plan	4
Water Flushes	5
Notes on Feeding Plan and Water Flushes	5
Feeding by Feeding Pump	6
Feeding by Gravity	9
Feeding Intolerance and Problem Solving	12
Medications and NG Tubes	13
What to do When the NG Tube is Accidentally Pulled Out	15
Reinserting the NG Tube at Home	16
NG Tube Care	17
Preventing the NG Tube from Clogging	18
Skin Care	19
Mouth Care	19
Finding and Buying NG Tube Feeding Supplies	19
Buying Enteral Nutrition Tube Feeding Formula	20
Notes	22

TRAINING PURPOSES ONLY

Your Infant's or Child's Nasogastric (NG) Tube

Date:

Type of tube:
Size of tube:
Length of tube (cm):
Tube measurement at the nose (cm):
Date the tube was last inserted:
Date the tube will be changed:

Date:

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Size of tube:
Length of tube (cm):
Tube measurement at the nose (cm):
Date the tube was last inserted:
Date the tube will be changed:



Note: The NG tube will be changed once a month. If it falls out within the month, please use the same tube for reinsertion.

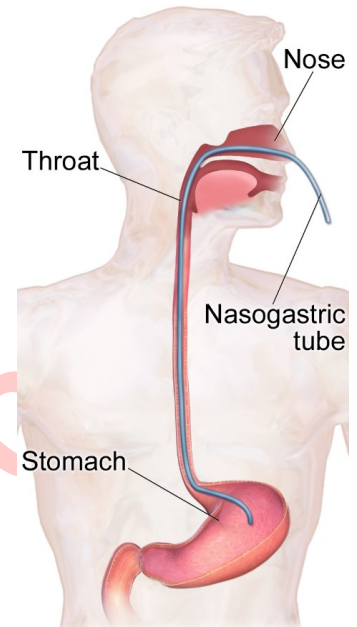
Transcribed information reviewed for accuracy and confirmed by healthcare provider

What is a Nasogastric Tube (NG) Tube?

A NG tube is a small, flexible, plastic tube that is placed through your infant's or child's nostril, down the throat and into the stomach.

Reasons Infants or Children May Need a NG Tube

A NG tube is often used for a short period of time to give medication or food and water to your infant/child when they cannot eat or drink by mouth. Your infant/child may need a NG because they may not be able to eat or drink enough by mouth or swallowing is difficult or unsafe.



"Nasogastric Intubation" by BruceBlaus, CC BY-SA 4.0, via Wikimedia Commons.

What to Feed

Infants may receive expressed breast milk and/or infant formula through their NG tube. Expressed breast milk and/or infant formula is the only food an infant needs for the first six months of life. Children one year of age and older receive liquid nutrition through their NG tube. This liquid nutrition is also called enteral feed. Enteral feed may completely replace or partially replace a balanced diet of regular food.

Feeding Plan

Formula	Amount	Time	Rate (if using pump)



NOTE: Your dietitian will meet with you to discuss your infant's or child's individualized feeding plan, including water flushes.

Other Information:

Transcribed information reviewed for accuracy and confirmed by healthcare provider

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Water Flushes

The NG tube must be flushed before and after each feed and each medication. Use sterile water for infants up to 4 months of age for both water flushes and preparing infant formula. For infants older than 4 months and children, use tap water that is room temperature.



*How to Sterilize Water:

- **DO NOT** use mineralized, carbonated or distilled water. Use tap water, well water approved for drinking, or bottled water. All water must be boiled.
- Fill a pot with water; place pot on stove; bring water to a rolling boil and let boil for 2 minutes.
- Pour boiled water from the pot into a sterile glass container. To sterilize the container, put it in a large pot and cover it with water. Bring water to a rolling boil and boil for two minutes.
Remove the container from the water and let it air dry on a clean counter.
- Let the sterilized water cool in the sterile glass container for about 30 minutes.
- Cover the container with cling wrap or a sterile lid and store in the refrigerator.
- Sterilized water can be stored in the refrigerator for 48 hours.

Patient/Caregiver Notes on Feeding Plan and Water Flushes

Feeding by Feeding Pump

A feeding pump controls the flow and rate of the food from the feeding bag and tubing through the NG tube and into your infant/child's stomach.

Feeding pumps are useful when feeding larger volumes or when feeds need to run longer than 30 minutes.

Feeding by Feeding Pump		
Step 1	Get Ready	Page 6
Step 2	Check Placement	Page 7
Step 3	Positioning	Page 7
Step 4	Flush before Feeding	Page 7
Step 5	Start the Feed	Page 8
Step 6	Flush After Feeding	Page 8
Step 7	Clean Up	Page 8

Step 1 - Get Ready

1. Wash your hands well with soap and water.
2. Gather supplies:
 - Feeding bag and tubing
 - Feeding pump and IV pole
 - Appropriate sized syringe for water flushes
 - Breast milk, infant formula or enteral feed
 - Water for flushes
3. Prepare and warm breast milk, infant formula or enteral feed as instructed by your dietitian.
Check expiration dates.
4. Prepare water for water flushes.
 - Infants up to 4 months old use sterile water. See page 5.
 - Infants over 4 months old and children use tap water that is room temperature.







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Step 2 - Check the Placement

You must check the placement of the NG tube to make sure that it is in the stomach:

- At the time of placement; and
- Before every feeding; and
- Before giving medications; and
- If you are worried the NG tube has come out.

Wash your hands well with soap and water before checking the placement.

 You must see these 2 signs to confirm that the NG tube is in the stomach:	
The centimeter marking	<ul style="list-style-type: none"> • The tube was measured and marked at the spot where it should come out of the nose.  If the tube is in the right place, the mark is at your child's nose.
Stomach fluids	<ul style="list-style-type: none"> • Connect appropriate sized syringe to NG tube. • Pull back the plunger to bring up 0.5 mL to 1 mL of stomach fluids into the syringe.  If the tube is in the right place, the stomach fluid will look milky, cloudy, or yellow. It may also look like the feed. Gently push the stomach fluids back into the stomach.
 If these 2 signs are not confirmed, DO NOT feed. The NG tube will need to be re-inserted. <ul style="list-style-type: none"> • See page 15 for what to do when the NG tube is accidentally pulled out. • See page 16 for instructions on how to reinsert the NG tube. 	

Step 3 - Positioning

Position your infant or child to prevent aspiration (feed entering the lungs) and/or reflux.

Age	Positioning Suggestions
Infant who <u>can</u> NOT sit up on their own	<ul style="list-style-type: none"> • Hold and cuddle your infant during feeding. • Elevate infant's head to 30 degrees during the feed (the head should be higher than the stomach). • If feeds are given in bed, the head of the bed should be raised up to 30 degrees. • Burp infant after feeding and keep infant upright for at least 1 hour after each feed
Infant, toddler or child who can sit up on their own	<ul style="list-style-type: none"> • NG tube feed your infant/child during family mealtimes when possible. • Have infant/child seated in an upright and comfortable position in a high chair, wheelchair, or kitchen chair for the feeding. • Keep upright for at least 1 hour after each feeding.

Step 4 - Flush Before Feeding

1. Wash hands well with soap and water.
2. Draw up the required amount of water into an appropriate sized syringe.
3. Pinch the NG feeding tube, uncap the NG tube and attach it to the syringe.
4. Release the pinch and use the "push-pause" technique to flush water through the NG tube.
5. Pinch the NG tube, remove the syringe, and recap the NG tube.

Step 5 - Start the Feed

1. Gently shake infant formula or enteral feed. Gently swirl breast milk.
2. Wipe the top of the enteral feed container with a clean wet cloth.
3. Pour breast milk, infant or enteral feed into feeding bag.
4. If your child is on a continuous feed throw out any infant or enteral feed left in the feeding bag and replace with new feed every 4 to 6 hours or as directed by your dietitian. Breast milk should be replaced every 4 hours or as directed by your dietitian.
5. Hang the feeding bag on the IV pole if needed.
6. Plug in and turn on the feeding pump. Attach feeding bag to the pump as you were taught or refer to the pump's instruction manual.
7. Prime the tubing by letting the formula run to the end of the tube. This lets the air out of the tube so that air does not go into your infant/child's stomach.

Note: When priming ENFit™ tubes, stop formula 1 inch before the end of the tube. This will help keep the connection clean.

8. Pinch the NG tube, uncap the NG tube and attach the tip of the feeding bag tubing to the NG tube.
9. Release the pinch and start the feeding pump as taught by your dietitian and/or refer to the pump's instruction manual.
 - Set the **RATE** and **DOSE** on the pump according to your Feeding and Flushing Schedule on pages 4 and 5.
 - Press the **START** button.

Step 6 - Flush After Feeding

1. Draw up the required amount of water into a syringe.
2. Pinch the NG feeding tube, remove the feeding bag tubing and attach the syringe.
3. Release the pinch and use the “push-pause” technique to flush water through the NG tube.
4. Pinch the NG tube, remove the syringe, and recap the NG tube.

Step 7 - Clean Up

1. After each feed throw out any breast milk, infant formula or enteral feed left in the feeding bag.

Note: Once the enteral feed can is open it may be covered and stored in the refrigerator for 24 hours.

2. Rinse the syringes and extension sets with clean warm water.
3. Rinse the feeding bag and tubing with clean warm water and allow it to flow through the tube until the tube runs clear.
4. Use a bottle brush or shake the bag back and forth several times to help remove breast milk or formula from the bag and tubing.
5. Allow supplies to air dry and store them in a clean dry place.
6. Keep the pump plugged in when not using to keep the battery charged.

Feeding by Gravity

A Gravity feeding is when the feed is placed in a syringe that is attached to the NG tube. When feeding by gravity, you can control the speed of the flow by raising or lowering the syringe above your infant/child's stomach. Raise the syringe to run the feed faster. Lower the syringe to run the feed slower.

Gravity feeding is useful when feeding smaller volumes or when feeds can be given in under 30 minutes.

Feeding by Gravity		
Step 1	Get Ready	Page 9
Step 2	Check Placement	Page 10
Step 3	Positioning	Page 10
Step 4	Flush before Feeding	Page 10
Step 5	Start the Feed	Page 11
Step 6	Flush After Feeding	Page 11
Step 7	Clean Up	Page 11

Step 1 - Get Ready

1. Wash your hands well with soap and water.
2. Gather supplies:
 - Feeding syringe and tubing
 - Appropriate sized syringe for water flushes
 - Breast milk, infant formula or enteral formula
 - Water for flushes

3. Prepare an warm breast milk, infant formula or enteral feed as instructed by your dietitian.

Check expiration dates.

4. Prepare water for water flushes.

- Infants up to 4 months old use sterile water. See page 5.
- Infants over 4 months old and children use tap water that is room temperature.







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Step 2 - Check the Placement

You must check the placement of the NG tube to make sure that it is in the stomach:

- At the time of placement; and
- Before every feeding; and
- Before giving medications; and
- If you are worried the NG tube has come out.

Wash your hands well with soap and water before checking the placement.

 You must see these 2 signs to confirm that the NG tube is in the stomach:	
The centimeter marking	<ul style="list-style-type: none"> • The tube was measured and marked at the spot where it should come out of the nose.  If the tube is in the right place, the mark is at your child's nose.
Stomach fluids	<ul style="list-style-type: none"> • Connect appropriate sized syringe to NG tube. • Pull back the plunger to bring up 0.5 mL to 1 mL of stomach fluids into the syringe.  If the tube is in the right place, the stomach fluid will look milky, cloudy, or yellow. It may also look like the feed. Gently push the stomach fluids back into the stomach.
 If these 2 signs are not confirmed, DO NOT feed. The NG tube will need to be re-inserted. <ul style="list-style-type: none"> • See page 15 for what to do when the NG tube is accidentally pulled out. • See page 16 for instructions on how to reinsert the NG tube. 	

Step 3 - Positioning

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Infant, toddler or child who can sit up on their own	<ul style="list-style-type: none"> • NG tube feed your infant/child during family mealtimes when possible. • Have infant/child seated in an upright and comfortable position in a high chair, wheelchair, or kitchen chair for the feeding. • Keep upright for at least 1 hour after each feeding.

Step 4 - Flush Before Feeding

1. Wash hands well with soap and water.
2. Draw up the required amount of water into an appropriate sized syringe.
3. Pinch the NG feeding tube, uncap the NG tube and attach it to the syringe.
4. Release the pinch and use the "push-pause" technique to flush water through the NG tube.
5. Pinch the NG tube, remove the syringe, and recap the NG tube.

Step 5 - Start the Feed

1. Pinch the NG tube, uncap the NG tube and attach to the feeding syringe.
2. While still pinching the NG tube, pour desired volume of breast milk, infant formula or enteral feed into the feeding syringe.
3. Release the pinch.
4. Raise the height of the syringe to speed up the flow. Lower the height of the syringe to slow down the flow.

Step 6 - Flush After Feeding

1. Draw up the required amount of water into a syringe.
2. Pinch the NG feeding tube, remove the feeding syringe and attach the syringe filled with water.
3. Release the pinch and use the “push-pause” technique to flush water through the NG tube.
4. Pinch the NG tube, remove the syringe, and recap the NG tube.

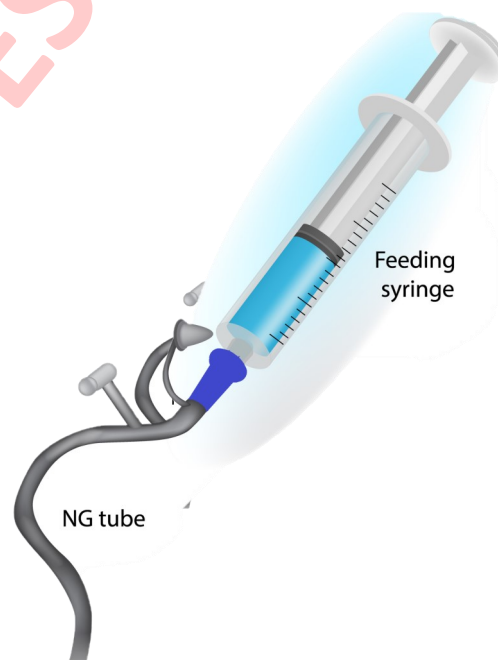


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Step 7 - Clean Up

1. Rinse the syringes with clean warm water and allow to air dry.

Feeding Intolerance and Problem Solving

Sometimes your infant/child may not tolerate their feed. Try these suggestions to help manage the symptoms. If the symptoms persist or if your infant/child is in pain, stop the feed and contact your infant/child's doctor or go to your local Emergency Department.

Sign or Symptom	How to Manage the Sign/Symptom
Problems breathing	<ul style="list-style-type: none"> • Immediately stop the feed. • Do a NG tube placement check. • Remove the NG tube if placement is not confirmed. • Call your infant/child's doctor. • CALL 911 and remove the NG tube if infant/child is in distress.
Cramping	<ul style="list-style-type: none"> • Provide formula at room temperature. • Give feeding over a longer period of time. • Open the cap on the tube or extension to let gas out of the stomach.
Throwing-up or gagging	<ul style="list-style-type: none"> • Give small feedings and feed more often. • Give feedings over a longer period of time. • Open the cap on the tube or extension to let gas out of the stomach. • Keep your infant/child's head higher than their body. • Keep your infant/child in an upright position for 60 minutes after feeding.
Diarrhea	<ul style="list-style-type: none"> • The most common cause of diarrhea is a virus. • A new formula may cause a change in the normal shape, colour, and amount of your infant/child's stools. • Your dietitian may be able to provide you with other options.
Constipation	<ul style="list-style-type: none"> • Water flushes may need to be reviewed. • For formula fed infants, ask your dietitian about adjusting the calorie concentration of the infant formula. • For children, ask your dietitian about formula containing fibre. • Constipation may be related to your child's medical condition. Ask the

Medications and NG Tubes

Tips for Giving Medication

Use the liquid form of a medication if possible.

- **For capsules:** open capsule and place contents in a cup and dissolve in a small amount of warm water as directed by your pharmacist.
- **For tablets or pills:** place pill or tablet between 2 spoons and crush or use a pill crusher. Place contents in a cup and dissolve in a small amount of warm water as directed by your pharmacist.



- **Do not** mix medications together.
- If your infant/child is on multiple medications, flush water between each medication as directed by your healthcare team.

Giving Medication to your Infant/Child with NG Tube		
Step 1	Get Ready	Page 13
Step 2	Check Placement	Page 14
Step 3	Flush before Medication	Page 14
Step 4	Give the Medication	Page 14
Step 5	Flush After Medication	Page 15

Step 1 - Get Ready

1. Wash your hands well with soap and water.
2. Gather supplies:
 - Syringe
 - Water for flushing
 - Medication
3. Prepare the medication.
4. Prepare water for water flushes.
 - Use sterile water for infants and children. See page 5.







Image: Adobe Stock – SHA Licensed

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- Before every feeding; and
- Before giving medications; and
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	If these 2 signs are not confirmed, DO NOT feed. The NG tube will need to be re-inserted. <ul style="list-style-type: none">• See page 15 for what to do when the NG tube is accidentally pulled out.• See page 16 for instructions on how to reinsert the NG tube.

Step 3 - Flush NG Tube Before Giving Medication

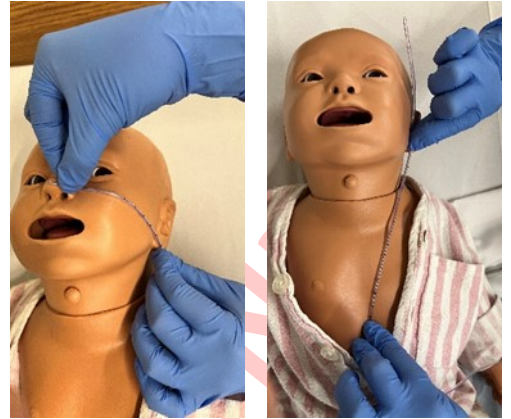
1. Wash hands well with soap and water.
2. Draw up the required amount of water into an appropriate sized syringe.
3. Pinch the NG feeding tube, uncap the NG tube and attach it to the syringe.
4. Release the pinch and use the “push-pause” technique to flush water through the NG tube.
5. Pinch the NG tube, remove the syringe, and recap the NG tube.

Step 4 - Give the Medication

1. Pinch the NG tube, uncap the NG tube and attach to the medication syringe.
2. Release the pinch and use the “push-pause” technique to push the medication into the NG tube.
3. Pinch the NG tube, remove the medication syringe and recap the NG tube.

Reinserting the NG Tube at Home

1. Gather supplies:
 - Nasogastric tube
 - Water soluble lubricant as Mucogel™ or KY™ jelly
 - Adhesive for securing the tube
 - Syringe
 - Water
2. Wash your hands well with soap and water.
3. Wash the skin around the nose and cheek gently with soap and water and allow to dry completely.
4. Determine appropriate length of feeding tube to be inserted:
 - a. Infant/Child: Measure from tip of nose to earlobe, to the point halfway between the xiphoid process and umbilicus.
 - b. Mark the estimated length of tube your child will need.
 - c. Do not insert tube further than maximum length measured by landmarks.
5. Lubricate tip of the tube with water or lubricant.
6. Swaddle or bundle the infant or child to prevent excessive movement.
7. To assist in the advancement of the NG tube, offer a soother to your infant and encourage older children to swallow.
8. Inset the clean NG tube into the nostril and push down gently until the marked length is reached.
9. Check the placement of the tube to ensure it is in the stomach (see page 7).
10. Use adhesive to secure NG tube to the face.



Pediatric NG Measuring.
SHA [Neonatal Intensive Care Unit, JPCH] 2024.



Pediatric NG Securement. SHA [Neonatal Intensive Care Unit, JPCH] 2024.

NG Tube Care

1. Gather supplies:
 - Sterile water for infants 0 to 4 months or clean tap water for infants older than 4 months and children
 - Gauze
 - Brush (clean toothbrush or ENFit™ specific cleaning tool)
 - ENFit™ feeding Tube
2. Wash your hands well with soap and water.
3. Rinse brush with tap water.
4. Fill syringe with water.
5. Plug center hole of feeding tube port with brush bristles.
6. Forcefully flush moat with water.
7. Rotate brush in bottom of moat.
8. Rinse cap with clean tap water.
9. Insert bristles into feeding tube cap and rotate brush in cap to clean.
10. Wipe feeding tube port and cap with gauze.
11. Clean supplies and allow to air dry.

**Cleaning ENFit™ Feeding
Ports [Cardinal Health]**



Preventing the NG Tube from Clogging

- Flush the NG tube with water before and after feeding.
- Flush the NG tube with water before and after giving medication.
- Flush the NG tube with water every four to six hours with continuous feeds.
- If the feeding tube becomes clogged do not insert any objects into the tube. This could result in puncturing the tube.
- If the NG tube clogs often, you may not be flushing the tube frequently enough. Ask the dietitian to review your child's flushing schedule.
- Some medications can clog the tube. Talk to your pharmacist before giving a new medication to ensure it will not clog the NG tube.

If the NG Tube Clogs

Attach an empty syringe to the NG tube and gently pull back on the plunger. If you are unable to unclog the NG tube:

1. Remove the NG tube and reinsert new tube if trained to do so.
2. If you are unable to reinsert the NG tube at home, tubes can be reinserted in:



Bring all supplies needed to reinsert the NG tube with you.

Transcribed information reviewed for accuracy and confirmed by healthcare provider

Skin Care Around the NG Tube

- Keep the skin around the nose and cheek clean and dry.
- Tape NG tube flat against cheek as it leaves nostril.
- The NG tube must not be pulled up against tip of nostril or nasal mucosa where it can cause irritation and tissue breakdown.
- Check the skin your infant/child's nose and taped areas.
- If the skin is red or broken down, move the tape or the NG tube may need to be changed to the other nostril.

Mouth Care with NG Tube

- Good mouth care must be maintained at all times, even if your child does not eat by mouth.
- For infants, use a wet wash cloth to wipe gums, lips, and tongue 2 times each day.
- For children, brush teeth 2 times each day.
- If you are unable to brush your child's teeth, rinse their mouth 2 times a day. Use 1 teaspoon of baking soda in 2 cups of warm water to rinse. Swish and spit out.



[Image by Bru-nO from Pixabay](#)

Finding and Buying NG Feeding Supplies

Your dietitian will help arrange access and coverage for NG feeding supplies.

For information on when and where to get more supplies, refer to the Supplies Checklist on page 21.

Infants/children with treaty status

- With valid treaty status most NG feeding supplies are covered through Non-Insured Health Benefits (NIHB).
- A parent's treaty status can be used until one year of age. After one year of age your child will need to have their own number.

Infants/children without treaty status

- Children without treaty status have some of their NG feeding supplies covered through the Saskatchewan Aids to Independent Living (SAIL) program.
- For information on when and where to get more supplies, refer to the Supplies Checklist on page 21.

Supply Checklist

N/A = Not applicable

✓	Supplies	When to Change	Who to Contact	Where to Buy
	ENFit™ NG Tube	Once a month		N/A
	Syringes (one each) for water flushes, gravity feed and medication	Once a week		N/A
	Pharmacy Cap for each medication bottle	As needed		N/A
	EnFIT™ Straw for drawing up medication	As needed		N/A
	Hypafix® Tape	N/A		Medical Supply Store
	Comfeel® Dressing	N/A		Medical Supply Store
	Water Based Lubricant	N/A		Medical Supply Store
	Feeding Bags	Once a day		
	Feeding Pump	One on loan		
	Backpack	One on loan		
	IV Pole	One on loan		

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Healthy People, Healthy Saskatchewan

The Saskatchewan Health Authority works in the spirit of truth and reconciliation, acknowledging Saskatchewan as the traditional territory of First Nations and Métis People.

PIER—Patient Information and Education Resource

JANUARY 2025