Introduction

Gastroschisis is a congenital abdominal wall defect that allows herniation of abdominal content, most often including the intestines and stomach, outside of the body without a protective sac or layer. Worldwide, the incidence of gastroschisis has risen to approximately 2 to 5 infants per 10,000 live births. In most cases of simple, uncomplicated gastroschisis the outcomes are favorable, with high survival and low morbidity rates. However, standardized management of these infants in the postnatal period is key for several reasons, including: improving management of fluids and electrolytes, ensuring safe reduction of the defect, achieving earlier return of bowel function, and reducing infection risks. Importantly, each of these factors greatly influence the length of hospital stay in the Neonatal Intensive Care Unit (NICU).

This document was developed by an interdisciplinary group of clinician from SickKids to help guide the management of infants with gastroschisis in the NICU. The goal is to allow patients and families to: experience a smoother hospitalization; achieve the best outcomes; and support a timelier transition out of intensive care, an environment that is not conductive to optimal developmental care and parent-child bonding.

The clinical pathway was created, revised and finalized using research knowledge, clinical experience, and consensus agreement of a group of neonatal and surgical clinicians. The pathway is a general guideline and does not represent a professional care standard governing providers’ obligations to parents. Care must always be revised to meet individual patient needs.

Target Population

- Neonates admitted to the Hospital for Sick Children Neonatal Intensive Care Unit (NICU) with a diagnosis of uncomplicated Gastroschisis and a completed Gestation of >35 weeks.
- Neonates born prior to 35+0 weeks Gestational Age or found to have anatomical findings that may influence the care trajectory (i.e. several inflammation/mattng or intestinal atresia) should not have their NICU hospitalization guided by this pathway.

Target Users

- Registered Nurses, NP’s, Physicians, Surgeons and Dieticians involved in the care of identified neonates.

Recommendations
### Gastrostomia (uncomplicated neonates ≥ 35 weeks at birth)

#### GOALS
- Provide airway management
- Protection of exposed bowel
- Appropriate fluid management
- Application of stoma
- Establish baseline vital signs and late work
- Ensure appropriate respiratory support (if required)
- Reduction of bowel leak into abdomen via Silva
- Maintain adequate fluid balance and nutritional support
- Stable I&O access
- Engage parents in neonate’s care

#### ROUTINE MANAGEMENT
- Mount Stoma Initiative guide
- Mount Stoma team to follow postnatal management
- Preterm neonate
- Neonate transferred to SickKids as soon as possible after birth
- NICU medical team (NICU Admit Abdominal Wall)
- Define order set in Epic
- IV fluid management per NICU order
- Total fluid intake (TFT): 100-120 mL/kg/day
- Maintain NICU status, NCT in low-intensity position
- Complete admission labs as per NICU
- Neonate feeding before stool placed
- SickKids General Surgery team to complete surgical assessment and intervention
- Application of Silva by General Surgery team and documentation in chart
- Monitor bowel color and perfusion while stool is seen
- If primary closure possible on admission, follow orders as suggested by surgical team

#### COMMUNICATIONS
- Social Worker refers if indicated
- IOT consulted for PICC line insertion and residual line
- Otolaryngology consult
- Complete lateral view abdominal X-ray when possible

#### FAMILY SUPPORT
- Introduce team and review plan of care
- Attach Stoma placement, closure planning, need for PICC line and TPN
- Encourage pumping and storage of breast milk

#### DAY 0-4 POST BIRTH
- 1.2 Stoma reductions daily as per surgical protocol
- Initiate TPN orders (if not indicated on day of admission)
- Ensure PICC line is inserted by day 4
- Limit TFT to 100-120 mL/kg/day
- Prevents infections until abdominal wall closure
- Monitor and replace drainage from dressing and NG tube
- Stool not permitted to be held with Silva in place
- Follow-up on stool culture
- Monitor bowel color and perfusion continuously while stool is seen

#### DAY 5-7 POST BIRTH
- Surgical team to determine method of closure
- Bedside vs. operating room
- If plastic/fibrous closure: review parents of time
- Surgical team completes procedures when appropriate
- If definitive closure: ensure consent is obtained, intravenous access OR time, neonate has I&D bandage, change TPN to clear fluids, ensure parents are aware of OR time, complete pre-op labs, and give appropriate intravenous to OR team

#### DAY 8-14 POST BIRTH
- Monitor NG output daily (volume and color) while TPN
- Monitor feeding pattern
- Initiate fluids as soon as possible
- Liasise with surgical team regarding start and advancement of feeds, and advance with surgeon’s discretion
- Maintain PICC line until neonate able to tolerate full feeds and demonstrate weight gain
- General Surgery team to change dressing 5-7 days after plastic/abdominal closure
- Monitor for signs & symptoms of NICU when fluids commenced
- Include baseline UTIs included admission with TPN labs
- Medical team completes Advental Transfer Summary
- Nursing team completes Transfer Navigator

### Implementation of CPG
#### Facilitators to implementation
- Targeted LOS to be posted at each neonate’s bedside to remind staff of pathway utilization
- Surgical Nurses Interest Group will act as resources to implement pathway
- Neonatal NP Group will advocate for pathway utilization and remind team to review daily

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Organizational barriers to implementation
- Adoption by staff in early stages

Potential economic impact
- Decreased LOS and non-value add days in NICU

Key review criteria/indicators for monitoring and audit purposes
- LOS, non-value add days, patient experience

Related Documents
- Pain Management Guidelines for Post-op Patients in the NICU

References


Guideline Group and Reviewers

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Attachments:

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