

# Unclogging the Pipes: A Nurse Led Constipation Protocol

Anja Glassner BSN, RN, CPN, Kelli-Ann McIntosh BSN, RN, CPN,  
Supported by: Ana Bandin MSN, RN, CPN and Maryann Duva MBA, BSN, RN, CPN  
Nicklaus Children's Hospital, Miami, FL



## Background

Due to multiple providers on a pediatric medical surgical unit, different clean out protocols were ordered for a diagnosis of constipation.

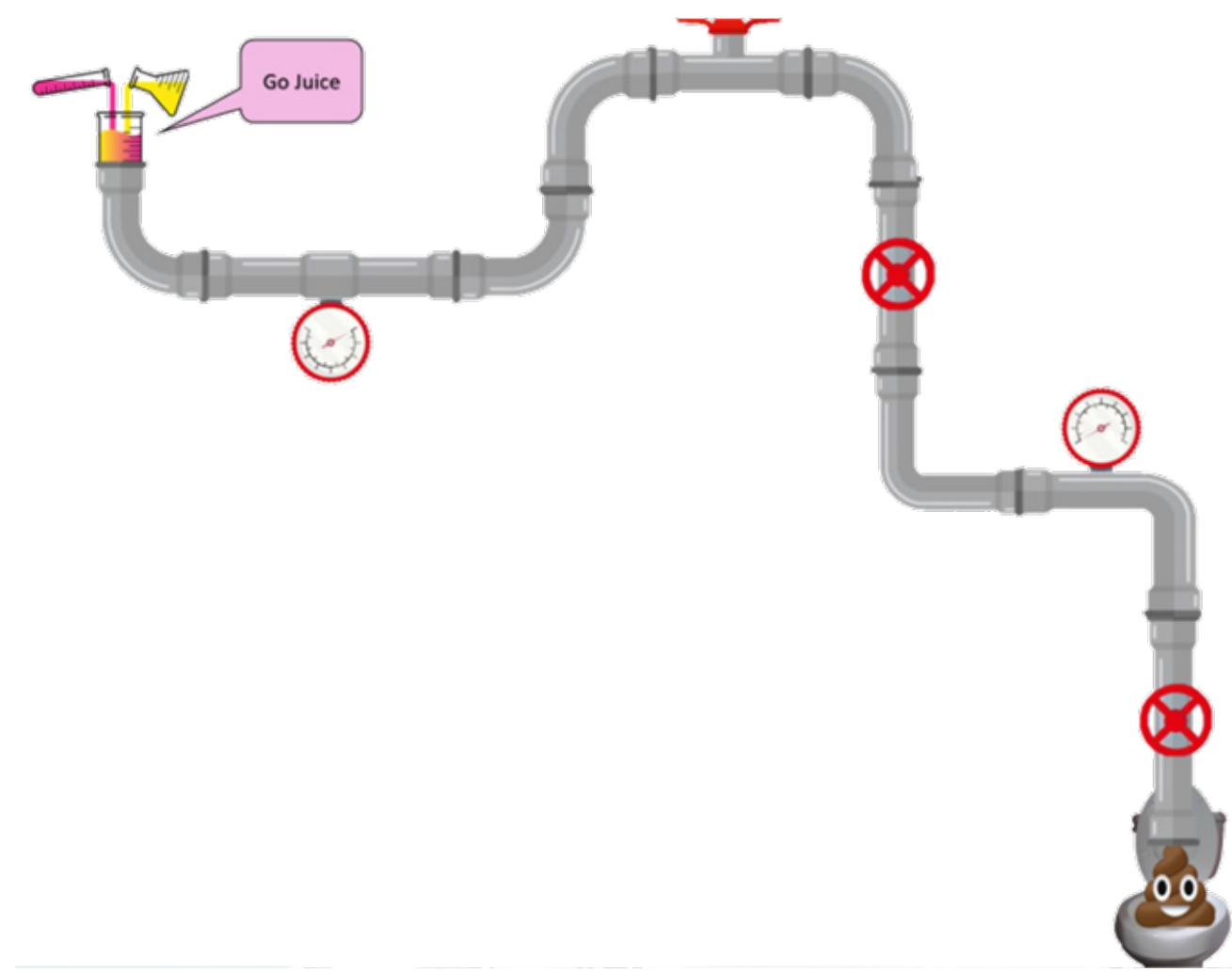
Some alternate clean-out methods were used over an extended amount of time.

Nurses did not have standardized workflow; therefore, the length of stay for patients greatly varied.

Nurses use discretion on oral administration volume or flow rate of the feeding pump for nasogastric (NG) administration of laxative.

NG tube placements were confirmed with x-rays without an aspiration attempt, which lead to further delays in the start time of clean-out.

Novice nurses did not feel comfortable in administering cleanout protocols.



## Description

- Length of stay (LOS) was decreased through the implementation of a standardized protocol for patients between the age of 2 years to 20 years, admitted for constipation.
- The patient arrives in the ER with a diagnosis of constipation.
- Protocol starts in the Emergency Department (ED) by administering a mineral oil enema. If patient defecates, patient can be discharged home to continue clean-out with oral medications.
- If no large stool is passed, patient is admitted to the medical surgical unit where a normal saline enema is rectally administered. A 2-hour oral trial of a stimulant and laxative is given at a volume of 25ml/kg/hour. Patient is placed on IV fluids and a clear liquid diet
- If PO trial is unsuccessful, NG-tube is placed, confirmed and enteral laxative is given at a rate of 25ml/kg/hour. (max. 800ml/hour). Since volume of enteral laxative can exceed the maximum volume for one feeding pump, two feeding pumps can be used by utilizing the medication port on NG-tube as the second feeding pump's access. Enteral laxative is given for 4 hours with a 2-hour break. Cycle is repeated until patient has clear stool output. Stimulant Laxative is given PO daily during cleanout.
- Presence of discomfort, distention and/or vomiting will halt protocol and continued as per patient's condition. Patient is discharged home with bowel clean-out regimen once clear stool output is achieved.

## Methods

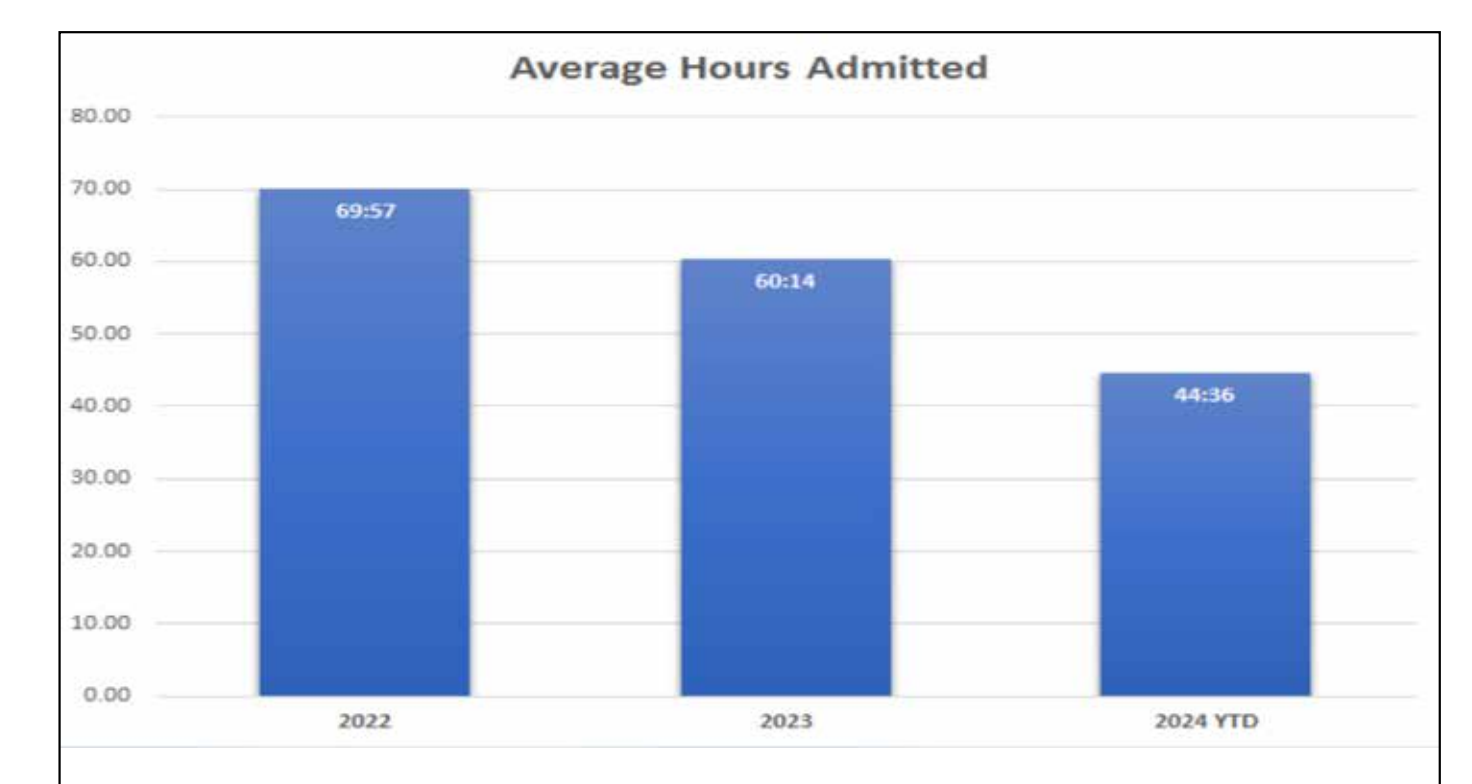
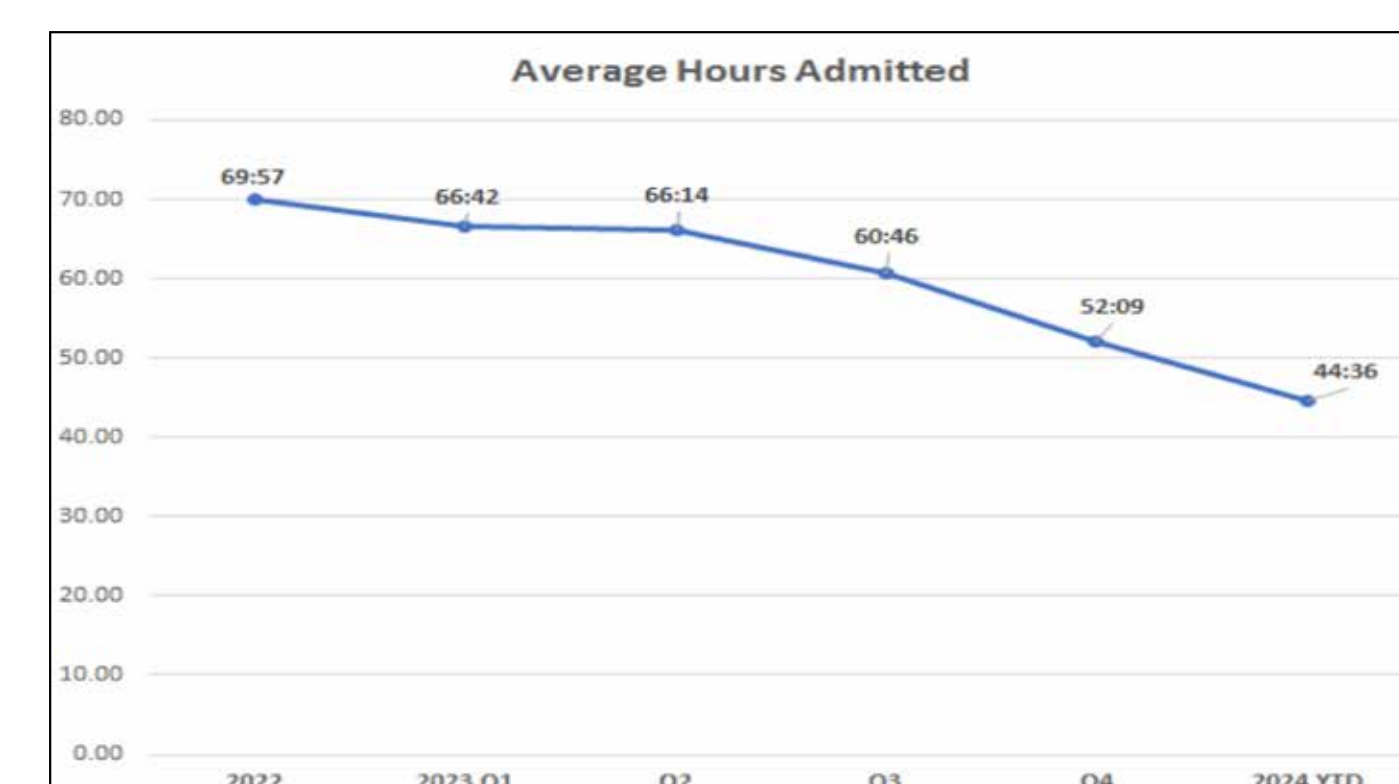
- An interdisciplinary group including Gastroenterologists from different groups, hospitalists, nursing, pharmacy and child life collaborated to create the constipation pathway. Nurses on the medical surgical unit collaborated with the group to develop the nursing protocol.
- Data was gathered and reviewed from 2022-2023 to assess for LOS and NG tube placement time.
- Nurses developed protocol based on the constipation pathway.
- A pre-survey assessing knowledge on treatment of constipation was done, followed by post survey after education.
- A video showing the steps on how to set up double feeding pumps was done by the clinical nurses and utilize as an education tool.
- Multimodal education was done with the nurses.
- Optimization of electronic medical record (EMR) was done to accurately document nasogastric tube placement verification.
- Child life collaborated on creating a road map for patient education and to decrease patient/caregiver anxiety. They are involved in the placement of NG tube, as well as peripheral line for fluids.
- "On the go kits" were created to have supplies readily available and save time on NG tube placement.
- Providers and nurses communicate with patient/caregiver treatment, ensure comfort and facilitate access to bedside commode, diapers and easy access to bathroom.
- Diversional activities to keep the patient entertained are provided.

## Outcomes

Reduced length of stay:

- 2022 constipation LOS = 69.58 hours (2.9 days)
- LOS Q1-23: 66.42 hours (2.8 days)
- LOS Q2-23: 66.14 hours (2.75 days)
- LOS Q3-23: 60.46 hours ( 2.5 days)
- LOS Q4-23: 52.09 hours (2.1 days)
- Implementation of universal cleanout protocol in Sep.2023
- January 2024 LOS: 44.39 hours (1.8 days)

### Average hours patients were admitted to the hospital



### Two pumps can be used for larger volume through NG tube



## Conclusion

- The implementation of a standardized cleanout protocol proved to be effective in reducing LOS by 1.1 days.
- Interdisciplinary collaboration, including child life was key in the success of the protocol by way of increased communication between care team and caregivers/parents
- "On the go NG-tube kits" facilitated nursing workflow
- Evidence based practice verification of NG tube placement by way of pH testing, positively impacted the start time of protocol as well as decrease in x-rays

## Implication for Practice

- The standardization of a clean-out protocol proved positive outcome for patients as well as for the organization. Reducing the LOS by 1.1 days, improved the quality of life for the patients and caregivers, also prompts for interventions starting in the emergency room to potentially avoid an unnecessary admission. The "on-the-go kits" leaned out nursing workflow, therefore allowing nurses to spend more time to focus on the patient.

## References

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