We extend the healing ministry of Christ by caring for those who are ill and by nurturing the health of the people in our communities.

Ileus Prevention for the Post-operative Spine Population

OrthoColorado Hospital
Holly Cook, RN, BSN
Annie Schwarz, RN, BSN

11/02/2018
We are on a Mission!
To use evidenced based practice to improve our patient’s experience and their surgical outcome.
Disclosures:

We do not have any conflict of interests to declare.
Just to clear the air:
The spelling of Ileus in the pleural form is ileuses.
What is an ileus?

Post-Op Ileus is *paralysis or partial paralysis* of the intestinal muscles, resulting in “air dilation,” distention, abdominal pain, nausea and vomiting.
Potential causes of an ileus

- Post-Op Opioids
- Decreased post-op mobility
- General Anesthesia
- Delayed post-op oral intake
- Surgical manipulation of intestines
WHY the concern:

The incidence of an ileus can potentially delay healing, affect the patient’s experience, and extend their length of stay.
This problem focused trigger was identified as a priority for our organization.
Our colleagues presented the “P.O.I.N.T. Protocol” Post-Operative Ileus Nursing Trial, at this same conference, back in 2015.

**P.O.I.N.T. Protocol 1.0 included:**

- GI assessment 2x per shift
- Ambulation 4 times per day
- "Surgical Soft" diet
Our response to the new data:

Work started, to understand and implement evidence based practice…

P.O.I.N.T. Protocol 2.0
Who:

The Stakeholders are the multidisciplinary team:

Dr. Keri Blum, MD, Hospitalist
Dr. Lucy Kras, MD, Hospitalist
Dr. Ryen Fons, MD, Anesthesia
Lauren Seeley, NP, Pain Management Team
Sarah Sheets, PA-C, Orthopedic Surgical Team
Cathy Ramierz, PA-C, Orthopedic Surgical Team
Caroline Corich, RN, MSN, Chief Nursing Officer
Holly Cook, RN, BSN, Nurse Navigator
Susan Grosso, RN, In-Patient Nurse
Annie Schwarz, RN, BSN, Patient Educator
An initial review of literature was conducted using terms:

- Ileus prevention and spine surgery
- Post-operative complications
- Early recovery after surgery
Relevant Articles

- JOANNA BRIGGS
- SPINE
- THE AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS
- THE JOURNAL OF GASTROINTESTINAL SURGERY
- WORLD JOURNAL OF SURGERY
- TAIWANESE JOURNAL OF OBSTETRICS & GYNECOLOGY
- SPINE DEFORMITY
- GASTROINTESTINAL NURSING
- CLINICAL SPINE SURGERY
- COCHRANE DATABASE OF SYSTEMIC REVIEWS
- BMC PREGNANCY AND CHILDBIRTH
Articles critiqued, and evidence addressed

- The articles were critiqued for their level of evidence, based on the study type, validity and reliability.

- Considerations were made for the populations studied, for instance, the pediatric population was not given the same weight as adults and multiple surgery types were included.
This literature review supported:

- Previous intervention of early ambulation
- Frequent GI assessment
- A variation on our early feeding methods
- The new intervention of chewing gum
Our clinical question:

Can chewing gum three times a day, decrease the incidence of ileuses in our spine population, any more than the standard care of Protocol 2.0 alone?
P.O.I.N.T. Protocol 2.0 includes...

- **Ambulation** 4 times per day
- **GI assessment** 2 times per shift
- **Gum chewing** 3 times per day, to patients with a RASS score of 0-+1
- **Clear protein shake** twice per day, starting POD #0
- Once flatus has been passed, **small, frequent meals** throughout the day
Additional Method:

• **Chewing Gum** three times per day, to stimulate GI motility

• To decrease the concern for GERD, fruit flavor only is recommended
Revised Method:

• **Advancing diet early**, as tolerated, gradually with small portions.

• To assist with this process:
  • **Clear liquid protein** shake twice a day starting POD#0
  • ½ **portion diet** while transitioning to solids
Timeline of P.O.I.N.T. Protocol:

- P.O.I.N.T. Protocol 1.0, 2015-2017
- Change in trend of ileuses, December 2017
- Multidisciplinary meeting, January 2018
- Introduction of gum chewing, February 2018
- Clear liquid diet and oral supplementation introduced, May 2018
- Gum chewing tracking, August 2018
Education:

POINT Protocol 2.0
Post Operative Ileus Nursing Trial

Presented by: Susan Gracik, Holly Cook, and Annie Schwarz

**PURPOSE AND GOAL**

**Purpose Statement:**
- The occurrence of ileus can delay healing and cause discomfort to the patient. As well as cause an increase in LOS and discontinue patient satisfaction scores.
- To reduce the incidence of post operative ileus at OCH

**ACTION PLAN for IMPROVEMENT**

- Early nutrition:
  - Encourage oral fluid and solid food when possible.
  - Provide clear liquid protein shakes starting POD 3.
  - Offer low residue foods, limit fiber, iron, and calcium supplements.

- Oral intake:
  - Offer fluids and clear liquids.

- GI assessment:
  - To be documented at admission and weekly.
  - Document first flatus.

- Avoid long acting narcotics whenever possible.

**MEASURE of IMPROVEMENT**

- The weight of evidence from current research suggests the interventions outlined will reduce the prevalence of ileus cases in our spine population.
- Spine team nurses are reported monthly by decision support to the quality department.
- We are working with nursing informatics to assist us to track time of surgery completion to time of first flatus.
- We are tracking gram distribution based on patient, POD, and nurse.

- With consistent implementation of these interventions, we should see reductions in our ileus occurrences.

**RESULTS**

- OCH Post-op Ileus Surgery (Sx), FY18

**NEXT STEPS**

- With the help of all medical and nursing staff, we hope to continue our ileus prevention efforts for the benefit of our patient and ensure our research efforts justify the interventions of this trial.
- Come to the 11th Annual Centura Health (EHR) Research and Innovation Conference on November 2-3, 2018, to listen to Holly and Susan present our research and data.
Process and Outcome Measurement:

PROCCESS
• We are monitoring nursing, dates and gum check-out.

OUTCOME
• The co-diagnosis of a spine surgery, as well as an ileus diagnosis, found in the ICD-9 or ICD-10 codes.
Analysis:

PROCESS
• We have been tracking our gum administration to spine patients.

OUTCOME
• Our current data has shown the incidence of a co-diagnosis of ileuses and spine surgery to decrease.
Current Data:

OCH Post-Op Spine Surgery Ileus, FY18

- Rate
- Goal 7%

- Jul'17: 4%
- Aug'17: 6.10%
- Sep'17: 7.30%
- Oct'17: 6%
- Nov'17: 15%
- Dec'17: 8%
- Jan'18: 7%
- Feb'18: 8%
- Mar'18: 8%
- Apr'18: 8%
- May'18: 5%
- Jun'18: 0%
Conclusion:

• We implemented a low cost, low risk intervention, supported by literature and have observed positive results.

• The limitations of the literature and intervention analysis.

• We have work to do, to embed P.O.I.N.T. Protocol 2.0, into our current nursing practice.

• We hope that our future work indicates if this change is appropriate for adoption into Centura orthopedic practice.
We would like to thank Virginia “Ginger” Morris and Carrie McDermott for their time, expertise, and support.
Thank you for your interest.

Any questions?